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THE ENVIRONMENTAL PROTECTION AGENCY'S SPILL PREVENTION CONTROL AND COUNTERMEASURE PROGRAM

HEARING

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

DECMBER 14, 2005

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THE ENVIRONMENTAL PROTECTION AGENCY'S SPILL PREVENTION CONTROL AND COUNTERMEASURE PROGRAM

WEDNESDAY, DECEMBER 14, 2005

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The committee met, pursuant to notice, at 9 o'clock a.m. in room 406, Senate Dirksen Building, Hon. James M. Inhofe (chairman of the committee) presiding.

Present: Senators Inhofe, Isakson, Murkowski, Jeffords, Voinovich, Vitter, Thune, Carper.

OPENING STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator Inhofe. Our meeting will come to order. We have a policy, at least in the 3 years that I have chaired this committee, that we start on time even if no one else shows, even including witnesses. You are all here, so I appreciate that.

We are here to discuss the EPA's Spill Prevention, Control, and Countermeasures Rule. As many of you know I have been following this rule for several years and have written to the Agency numerous times, mainly to express concern with the direction the program is taking. It is very important that we look at this program objectively. No one in this room wants more oil spills. In fact, those who are with us today to express their concerns about this rule lose money when there are oil spills. They either sell it as a commodity or have bought it to run their businesses. All they ask for are reasonable regulations that address real problems and can be implemented with minimal but justifiable costs. They don't think that is too much to ask of the Federal Government.

This program is the worst of the one size fits all Government. There are certainly measures that should be taken at large facilities that are equal to the risks associated with a potential spill from those facilities. Why would we apply the same standard to a small facility with a very small risk of spilling? Why would we apply the same standard to completely different industries?

Part of the problem with the rule is that the EPA is trying to cover virtually every industry someone can think of with one rule, and it is making for very bad Government and bad policy. What is most egregious about the rule is the utter lack of data to back it up. There is simply no data to defend the inclusion of farms and the air transport industry under the rule. Further, there is limited

data to justify many of the proposed changes that affect other industries.

Again, no one here today is seeking to have more spills. We simply want the Federal regulations to address real, identifiable, proven problems. The 2002 rule does not do that. The 1973 rule didn't do it. That is why the EPA has proposed the rule it did today which is an incomplete but appropriate step in the right direction.

The rule correctly extends the compliance deadline for farming operations with a storage capacity of less than 10,000 gallons. However, that extension is limited to the 2002 requirements, leaving in place the onerous 1973 rule for farmers. The approach to farmers has been the exact opposite of how our Government should work. We should first identify a problem, then write a law or a regulation. Instead, the EPA wrote a regulation to cover farms and is now trying to identify the problem.

The proposed rule does correctly provide much needed relief to the air transport industry. The sized secondary containment requirements do not make sense at airports. They could create safety and fire hazards and would unnecessarily cause logjams on runways.

Unfortunately, the rule does little to assist the small oil producers. First, by reinterpreting its wastewater treatment exemption, EPA will bring under the rule for the first time natural gas wells by arguing that produced water is, in fact, an oil. Second, the 10,000 gallon threshold outlined today does nothing to help small producers who often have storage capacities far above that which they have at the present time. If a producer was producing a lot more oil in the past, then, of course, they would have containers to take care of that. However, that may not be appropriate today. In essence, you would be saying you would have to get rid of a perfectly good storage tank and replace it with a much smaller one just because you are not using the full capacity of the big one.

Yet, some might be narrow in incorrectly arguing today that we are trying to make it easier to have oil spills, but family farmers do not want oil spills because they live on the land, and they are paying for a lot of fuel. Brent Cummings from Oklahoma runs a family owned business with eight employees. He certainly doesn't want more oil spills. People like Mr. Cummings lose money when they lose oil.

We simply must have reasonable regulations at reasonable costs that can be thoroughly defended with sound data. To date, that has not been the case with the SPCC programs.

I do apologize to you folks today. I just got back from my tenth trip to Iraq last night, and I am kind of zonked out still. When you ride around in a C–130 at nighttime up there, you come back with a cold no matter what precautions you take. I would say, though, that along that line, I thought we might wait just a few minutes for some of our members to attend.

It is incredible the successes that are taking place in Iraq today. It is just not believable. Each time I go, and it is about once every month or so, I come back just shocked at how good things are. The Iraqis now are up to 214,000 security forces. They know what they are doing. Out of that 200, that is 112 divisions. Out of the 112 divisions, 30 of them can stand alone. They don't need any help.

Right now, half of the city of Baghdad is completely under the control of the Iraqis taking care of themselves. We are not even supporting them.

We expected to have a spike in the insurgence activities before the vote. The election is taking place tomorrow. That didn't happen. We had an election of the Iraqi security forces on Monday. So I was in Fallujah yesterday observing that, and it could not have gone better; not one incident occurred. Much to the chagrin of many politicians who want to use this as their road to the White House, it ain't gonna work.

Let us go ahead. We will start with our witnesses. Mr. Sullivan and Mr. Dunne, I appreciate very much your being here. Mr. Sullivan is the Chief Counsel for Advocacy, the Office of Advocacy in the U.S. Small Business Administration, and Thomas Dunne is the Acting Assistant Administrator, the Office of Solid Waste and Emergency Response for the EPA. We appreciate both of you being here.

Why don't you start, Mr. Sullivan? This panel, as well as the next panel, we will keep all of your entire statement and it will be made part of the record. You may abbreviate it or try to keep it under about 5 minutes.

[The prepared statement of Senator Inhofe follows.]

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Today we are here to discuss the EPA's Spill Prevention Control and Countermeasure rule. As many of you know, I have been following this rule for several years and have written to the Agency numerous times, mainly to express concern with the direction the program was taking. It is very important that we look at this program objectively. No one in this room wants more oil spills. In fact, those who are with us today to express concerns about this rule lose money if they spill oil. They either sell it as a commodity or have bought it to run their businesses. All they ask for are reasonable regulations that address real problems and can be implemented with minimal but justifiable costs. I honestly don't think that is too much to ask of the Federal Government.

This program is the worst of one-size-fits all Government. There are certain measures that should be taken at large facilities that are equal to the risk associated with a potential spill from those facilities. Why would we apply the same standard to a small facility with a very small risk of spilling? Why would we apply the same standard to completely different industries? Part of the problem with this rule is that EPA is trying to cover virtually every industry someone can think of with one rule and its making for very bad Government and very bad policy.

What is most egregious about this rule is the utter lack of data to back it up. There is simply no data to defend the inclusion of farms or the air transport industry under the rule. Further, there is limited data to justify many of the proposed changes that affect other industries. Again, no one here today is seeking to have more spills. We simply want Federal regulations to address real, identifiable, proven problems. The 2002 rule does not do that. The 1973 rule does not do that.

That is why the EPA has proposed the rule it did today which is an incomplete but appropriate step in the right direction. The rule correctly extends the compliance deadline for farming operations with a storage capacity of less than 10,000 gallons. However that extension is limited to the 2002 requirements leaving in place the onerous 1973 rule for farmers. The approach to farmers has been the exact opposite of how our Government should work. We should first identify a problem and then write a law or a regulation. Instead EPA wrote a regulation to cover farmers and is now trying to identify the problem.

The proposed rule does correctly provide much needed relief to the air transport industry. The sized secondary containment requirements do not make sense at airports. They could create safety and fire hazards and would unnecessarily cause logjams on the runways.

Unfortunately, the rule does little to assist small oil producers. First, by reinterpreting its wastewater treatment exemption, EPA will bring under the rule for the first time natural gas wells by arguing that produced water is in fact an oil. Secondly, the 10,000 gallon threshold outlined today does nothing to help small producers who often have storage capacity far above that because these wells at one time produced far more oil. I look forward to working with EPA to address the concerns of the small producers that make up the backbone of the Nation's energy industry.

Again, some might be narrow in incorrectly arguing today that we are trying to make it easier to have oil spills. Family farmers do not want oil spills because they live on the land and are paying a lot for fuel. Brent Cummings from Oklahoma runs a family owned business with eight employees. He certainly doesn't want more oil spills. People like Mr. Cummings lose money when they lose oil. We simply must have reasonable regulations at reasonable costs that can be thoroughly defended with sound data. To date, that has not been the case with the SPCC program.

STATEMENT OF THOMAS SULLIVAN, CHIEF COUNSEL FOR ADVOCACY, OFFICE OF ADVOCACY, U.S. SMALL BUSINESS ADMINISTRATION

Mr. Sullivan. Thank you, Chairman Inhofe. I will try to abbreviate my lengthy written statement.

Good morning. Thank you for giving me the opportunity to appear before the committee. My name is Tom Sullivan. I am the Chief Counsel for Advocacy at the Small Business Administration. Because my office is an independent entity within the U.S. Small Business Administration, and I am charged with solely representing the views of small business, my testimony does not necessarily reflect the position of the Administration or the SBA.

SPCC regulations were initially promulgated by EPA in 1973 as the chairman described in his opening statement. Because of the complexity and cost of the Spill Prevention and Countermeasure plans, many small businesses found it difficult to comply with the 1973 requirements. The regulated community was particularly surprised by the 2002 revisions, given that the stated purpose of those amendments was to reduce, not increase, regulatory burdens.

In response to small businesses' reaction to EPA's 2002 revisions, my office worked with EPA to identify small business concerns related to the rule. Those concerns were formally suggested in June 2004, in a letter from my office to Tom Dunne. Our letter was supplemented by a contractor's report we commissioned on the subject. EPA's notice of data availability issued last September and the rule recently proposed by EPA relied heavily on the report and the recommendations contained in our June 2004 letter.

My office continues to believe that the overall SPCC compliance would improve with a simpler, less expensive program that is tailored to small facilities. In the June, 2004 letter I sent to EPA, there were four general areas we recommended for reform. Comments by the small business community were obviously taken seriously by EPA because many were included in the proposed rule. The four areas my office focused on were: small facilities, integrity testing, motive power and oil-filled equipment, and asphalt and hot-mix cement.

From the small facility recommendations, professional engineer review and certification in EPA's proposal allows for model plans to be written by trade associations that can be readily adapted for small facilities as was successfully done for the Accidental Release Program under Section 112(r) of the Clean Air Act. Our June 2004

letter included farms in the universe of reforms covering small facilities, and my office is supportive of the EPA's proposal to extend the compliance date for farms, pending greater analysis of any oil spill risks that may be associated with the agricultural community.

For integrity testing, my office recommended that EPA allow visual inspection without the need for obtaining a costly PE certification for small tanks and containers under specified conditions. We are pleased with EPA's proposal for additional flexibility in integrity testing by allowing facilities to consult and rely upon industry inspection standards for small facilities without employing a PE.

We expect that small businesses will want to expand EPA's proposal because an expansion, even to the 10,000 gallon threshold, will not present additional hazards because all small facilities would be required to have release barriers and secondary containment.

For motive power and oil-filled equipment, EPA realized that it did not make sense for the SPCC rules to cover retail dealerships selling tractors or to include construction sites under the rule. The Agency found that it just wasn't practical to require containment around vehicles that regularly move about the site. This step in EPA's proposal will provide relief at thousands of facilities.

My office is also supportive of EPA's proposed reduced requirements for oil-filled equipment. The proposal moves away from the more expensive secondary containment requirement and allows facilities to substitute an oil contingency plan and a written commitment of manpower to remove any oil that may be discharged. That provision reflects the fact that such equipment has a low spill rate.

As a result of substantial concerns raised by the construction industry, my office advocated for the exclusion of asphalt cement and hot-mix asphalt from all SPCC-related requirements in our letter of June, 2004. My office based this on the observation that asphalt cement and hot-mix asphalt are solid to semi-solid at normal, outdoor temperature would not flow very far, and therefore would not pose a risk to navigable waters.

We are hopeful that more flexible options remain under consideration in EPA's efforts to further reform SPCC. On behalf of small business, my office commends EPA for listening to small business concerns while drafting their amendments.

Congress realized the importance of small businesses when the Regulatory Flexibility Act and Small Business Regulatory Enforcement Fairness Act were enacted into law. Under those two laws that my office oversees, we look for ways to reduce small business burdens without compromising the regulatory objectives intended by the regulating Agency. We believe that EPA's regulatory reform efforts for SPCC can achieve those same objectives.

Thank you for allowing me to present these views, and I would be happy to answer any questions.

Senator Inhofe. Thank you, Mr. Sullivan.

Mr. Dunne, before you start, let me ask Senator Isakson and Senator Murkowski, if either one has an opening statement they would like to give at this time?

Senator Isakson. Not now, Mr. Chairman. Thank you.

OPENING STATEMENT OF HON. LISA MURKOWSKI, U.S. SENATOR FROM THE STATE OF ALASKA

Senator Murkowski. Mr. Chairman, I just want to thank you for holding this hearing on the proposed EPA rule changes on the oil spill contingency planning. When you keep in mind that you have had regulations in place for about 34 years, it is probably timely that we look to updating these spill prevention rules. Certainly from Alaska's perspective, we have a great deal of interest in this.

I am pleased to have with us today, at least on the second panel here, from Alaska, Riki Ott from Cordova, a wonderful fishing community. She has been very actively involved in oil spill cleanup over the years in connection with the *Exxon Valdez* oil spill in Prince William Sound about 16 years ago. So we certainly have firsthand experience on this topic.

I welcome the efforts by the EPA to make oil spill prevention plans more workable and more effective, and I appreciate the Agency's efforts to really better standardize the inspection and the enforcement efforts with that.

Mr. Chairman, I appreciate again your holding this hearing and allowing me a chance to make a statement.

Senator Inhofe. It is hard to believe it has been 16 years since *Exxon Valdez*.

Senator Murkowski. Yes, a long time.

Senator Inhofe. Mr. Dunne, you are recognized.

STATEMENT OF THOMAS P. DUNNE, ACTING ASSISTANT ADMINISTRATOR, OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, U.S. ENVIRONMENTAL PROTECTION AGENCY

Mr. Dunne. Thank you, Mr. Chairman and members of the committee for inviting me today to discuss EPA's Oil Spill Prevention, Control, and Countermeasure Program.

My testimony will address issues regarding EPA's recent efforts to streamline SPCC requirements, to extend the compliance dates for modification and implementation of SPCC plans, and to provide guidance to EPA inspectors on the SPCC requirements. I will just summarize my statement and provide the written statement to you.

First, a little history, the Federal Water Pollution Control Act of 1970 required the President to issue regulations that would establish procedures, methods, equipment, and other requirements to prevent discharges of oil from vessels and facilities and to contain such discharges. In 1973, EPA originally promulgated the SPCC regulations under the Clean Water Act. The regulations established spill prevention procedures, methods, and equipment requirements for non-transportation-related, onshore and offshore facilities with aboveground storage capacity of greater than 1,320 gallons. Regulated facilities were also limited to those that could reasonably be expected to discharge oil in harmful quantities into the navigable waters of the United States or adjoining shorelines.

The fundamental requirement established by this rule that has not changed in nearly 30 years is that facilities covered by these regulations are required to prepare an SPCC plan, and that plan must be certified by a licensed professional engineer.

Moving forward several decades, EPA in 2002 published final amendments to the original SPCC regulations. After publication of this rule in 2002, several members of the regulated community filed legal challenges to certain aspects of the rule. All of these issues raised in the litigation have been settled except for the definition of navigable waters. Since then, EPA has extended the dates for revising and implementing SPCC plans several times.

EPA recently issued a proposal rule to extend the dates by which facilities will need to amend and implement an SPCC plan to October 31, 2007. EPA has taken this action to allow time for the Agency to finalize amendments to the SPCC requirements that were recently proposed. We also want sufficient time for facilities to understand these modifications, to review and understand the guidance we recently issued, and to make appropriate changes to the facilities and to their SPCC plans as a result of the rule modifications and the guidance.

EPA also proposed a rule containing substantive revisions of SPCC requirements. This proposed rule represents our efforts to strike the right balance between protection of the environment and our Nation's valuable water resources and common sense regulatory flexibility. I am certain that we share the same goal, to safeguard the environment by preventing spills before they damage the environment. I truly believe that in this instance, an ounce of prevention is worth a pound of cure. It is much more costly to clean a spill than to prevent one, and once a spill occurs, cleanup is difficult and there is often little we can do to prevent damage to water resources and wildlife.

I will give a brief summary of some of the different changes in EPA's proposed rule.

EPA has proposed to provide small facilities, those handling less than 10,000 gallons of oil, the option to self-certify their plans. In addition, we are proposing additional flexibility for these smaller facilities with respect to tank integrity inspections and facility security.

EPA is also proposing greater flexibility for airport mobile refuelers which will no longer be subject to sized secondary containment requirements. All of our airports will still need to meet general secondary containment requirements. EPA believes that the general secondary containment requirements are much more flexible and reflect the kinds of active and passive fuel spill protection measures already used by many airports in their fueling operations.

In addition, EPA is proposing to extend the 2002 compliance dates for all facilities, including farms, until October 31st, 2007, and to extend the 2002 rule compliance dates indefinitely by farms storing 10,000 gallons of oil or less. EPA is committed to work with USDA and farm representatives to determine how to properly address farms under the SPCC regulation.

Further, EPA is proposing a streamlined regulatory option for oil filled equipment. A facility owner or operator can choose to satisfy the SPCC requirements through inspection and monitoring systems and contingency planning, rather than through general containment requirements. In doing so, the proposal provides electric utili-

ties and other industrial facilities with an additional prevention option for this unique equipment.

In addition, EPA recognizes that in most cases, the SPCC requirements are not practical for motive power containers on onboard vehicles at SPCC regulated facilities. The types of vehicles and facilities that are potentially subject to the SPCC requirements, solely because of the oil or fuel contained onboard the vessels, are buses at terminals or depots, recreational vehicles parked at dealerships, earth removing equipment at construction sites, aircraft, and large farming and mining equipment. Consequently, EPA is proposing to exempt them from all coverage under SPCC.

Finally, the EPA has issued the SPCC guidance for regional inspectors, and this guidance is intended to assist regional inspectors in reviewing a facility's implementation of the current SPCC rule. The document provides a better understanding of how the rule applies to various kinds of facilities and to help clarify the role of the inspector in the review and evaluation of the performance-based requirements. Another reason for the guidance is to respond to stakeholders' requests for consistent National policy on several SPCC-related issues.

As to the oil exploration——

Senator Inhofe. Try to wrap up, if you would, Mr. Dunne.

Mr. Dunne [continuing]. I will. I want to make the point on oil exploration and production facilities.

We are trying to identify additional areas where regulatory reform may be appropriate. For the smaller areas and facilities, we still will give the same breaks as to small business. Without going into anything more on oil production, we are willing to work with that sector, Mr. Chairman, on what other requirements exist to increase compliance and therefore reduce the amount of oil spilled.

Thank you very much. We hope that we have struck the right balance. We expect to hear from the regulated community in the public comment period. You have my commitment and the Administrator's commitment that we will take the comments that we see during the public comment period very seriously, and these comments will guide us to move forward on SPCC problems.

Thank you, Mr. Chairman.

Senator Inhofe. That is good. Well, thank you, Mr. Dunne. We would expect that, and we will appreciate that very much.

A witness for the next panel claims in her testimony that the rulemaking weakens the facilities' liability under the Clean Water Act. It is my understanding that that is already covered under the Clean Water Act and the Oil Pollution Act. I will just ask you, Mr. Dunne, in any way do you know that this rule will weaken the liability?

Mr. Dunne. I don't believe so, unless somebody thinks because if you are self-certifying in smaller facilities, it could weaken your liability. I don't. It is not contemplated under this rule that would be true, and if that is a concern, we certainly would address that when the comments come in.

Senator Inhofe. As you understand it right now, it would not?

Mr. Dunne. It would not.

Senator Inhofe. All right.

In the rule, it states that it has heard of spills from mobile refuelers at airports. I am a little frustrated by this. I must admit I have some bias on this. I have been an active pilot for 50 years, and I am pretty familiar with how these units work. We have made requests for information to show actually that there is an exposure there from the mobile refuelers at airports, and when we got the response back, they talked about the airport facilities. Now this could include a McDonald's or anything else. Specifically on just the refueling trucks, we don't have anything, any of the statistics, and apparently you do because you are writing rules and making input.

I would like to ask you if you have anything currently that just identifies the spills from the refueling trucks as opposed to an airport facility, and if not, when we could get that information.

Mr. Dunne. Mr. Chairman, I will go back to the data we see from the National Response Center where we have spills, both hazardous and oil reported, and see what kind of data that we have there. I know that there is some anecdotal data from inspectors that go out and have visited airports. Will provide whatever we can to you as soon as possible.

Senator Inhofe. What I would like to do is take advantage of the fact that this is in the hearing and ask that you supply us with that data in the next 2 weeks if you have it.

Mr. Dunne. Thank you, Mr. Chairman. We will.

Senator Inhofe. All right.

Mr. Sullivan, the OIPA, Oklahoma Independent Petroleum Association is, in their letter to the EPA regarding the argument about the 10,000 threshold. You heard me in my opening statement talk about the fact that we are very sensitive to this. Our margin of producers in Oklahoma, at one time, having started in that business myself so I am little bit familiar with it, where that they had a lot of storage on their site, and they have 10,000 gallon containers, and yet they may be only using 1,000 or even less of that.

Now you heard me in my opening statement the problem that I think is a problem anyway, that if you are producing, you are storing only a very small amount just because you are storing it in a container with a larger capacity. That doesn't make any sense to me. Do you have any comments about that?

Mr. Sullivan. Well, I think in the integrity testing reforms that the EPA has proposed there is some room for expansion. I think the visual inspection requirements deserve another look at whether or not the scenario you lay out does pose any additional risks. The small businesses that seek my office's help with this regulation and others——

Senator Inhofe. Are you suggesting maybe it isn't a problem?

Mr. Sullivan [continuing]. Well, right now, there is the distinction between 5,000 and 10,000 gallons, and small businesses would, I think, like the visual inspection component of integrity testing to be expanded all the way to the 10,000 gallon threshold. I think that that is an area that may cover some of the scenario that you laid out.

Senator Inhofe. OK, Mr. Cummings is in the audience and will be on the second panel. I would like to have you give some thought

to that because we may be wanting to pursue that a little bit. Thank you very much.

We have been joined by our Ranking Member, Senator Jeffords.

Senator Jeffords, would you have any opening statement you would like to make?

Senator Jeffords. Yes, I do.

Senator Inhofe. You are recognized.

OPENING STATEMENT OF HON. JAMES M. JEFFORDS, U.S. SENATOR FROM THE STATE OF VERMONT

Senator Jeffords. Thank you, Mr. Chairman. I welcome this opportunity today to conduct oversight on the EPA's Spill Prevention, Control, and Countermeasures Program.

This program was adopted in 1972 with the passage of the Clean Water Act in the wake of the Torrey Canyon oil spill in England. Nearly 100,000 gallons of crude oil spilled there, killing over 20,000 seabirds and contaminating 70 miles of beaches.

People often say that an ounce of prevention is worth equals a pound of cure. This program is the epitome of that saying. According to the EPA, the United States has 250 billion gallons of oil and petroleum products each year. At every point in the production, distribution, and consumption process, oil spills may occur. Oil spills wreak havoc on the environment in local communities. In the short term, they contaminate drinking water and cause large deaths of marine life. They foul beaches and destroy local economies. In the longer term, oil spills affect the health and the viability of marine animals, reptiles, birds, animals, and plants. Local fishing economies may struggle to recover after an oil spill. Recent studies of the *Exxon Valdez* spill have demonstrated that oil has persistent and long term harmful effects in aquatic ecosystems.

I ask unanimous consent to include the record of the study of this topic which appeared in Science Magazine, 2003.

Senator Inhofe. Without objection.

[The referenced material can be found on page 104.]

Senator Jeffords. Even extremely small spills can cause serious harm. We must do everything we can to prevent them.

With that introduction, I am concerned about the overall state of the SPCC program. This program appears to have been largely neglected since its adoption in 1972. Since that time, the GAO and others have leveled some serious criticisms of the program that went unaddressed from EPA in many years. I will be submitting those materials, as well as an update the GAO prepared for the record of today's hearing.

[The referenced material can be found in the committee file.]

In May I asked the GAO to review the current program and determine if any progress has been made. I look forward to the results of that review as I consider today's proposed rulemaking.

In 2002, the EPA overhauled the SPCC program, but since the Bush administration took office, the Agency has postponed the effective date of these changes three times for a total of 4 years, making the current effective date 2007. Industry has since used the 2002 regulations as an opportunity to further lobby the Administration to roll back Clean Water Act protections by changing the definition of navigable waters.

Today, the SPCC program stands basically as it was in 1972. We have surely learned something about oil spill prevention over the last 35 years.

It is imperative that we have a strong program in place with good enforcement. It is with this in mind that I will be listening to today's witnesses and ask: Does the EPA proposed rule and guidance document take us forward or backward in our efforts to protect our Nation's waterways from oil contamination?

Thank you, Mr. Chairman.

[The prepared statement of Senator Jeffords follows:]

STATEMENT OF HON. JAMES M. JEFFORDS, U.S. SENATOR FROM THE STATE OF VERMONT

Mr. Chairman, I welcome this opportunity today to conduct oversight on the EPA's Spill Prevention Control and Countermeasures program.

This program was adopted in 1972 with the passage of the Clean Water Act, in the wake of the Torrey Canyon oil spill in England.

Nearly 100,000 gallons of crude oil spilled there, killing over 20,000 sea birds, and contaminating seventy miles of beaches.

People often say that an ounce of prevention equals a pound of cure. This program is the epitome of that saying.

According to the EPA, the United States uses 250 billion gallons of oil and petroleum products each year.

At every point in the production, distribution, and consumption process, oil spills may occur.

Oil spills wreak havoc on the environment and local economies. In the short term, they contaminate drinking water and cause large-scale deaths of marine life. They foul beaches and destroy local economies.

In the longer term, oil spills affect the health and viability of marine mammals, reptiles, birds, animals, and plants.

Local fishing economies may struggle to recover after an oil spill. Recent studies of the *Exxon Valdez* oil spill have demonstrated that oil has persistent and long-term harmful effects in aquatic ecosystems.

I ask unanimous consent to include in the record a study on this topic, which appeared in Science magazine in 2003.

Even extremely small spills can cause serious harm. We must do everything we can to prevent them.

With that introduction, I am concerned about the overall state of the SPCC program. This program appears to have been largely neglected since its adoption in 1972.

Since that time, the GAO and others leveled some serious criticisms at the program that went unaddressed by EPA for years.

I'll be submitting those materials, as well as an update that the GAO prepared for the record of today's hearing.

Today I asked the GAO to review the current program and determine if any progress has been made. I look forward to the results of that review as I consider today's proposed rulemaking.

In 2002, the EPA overhauled the SPCC program, but since the Bush Administration took office, the Agency has postponed the effective date of those changes three times, for a total of four years, making the current effective date 2007.

Industry has since used the 2002 regulations as an opportunity to further lobby the Administration to roll back Clean Water Act protections by changing the definition of navigable waters.

Today, the SPCC program stands basically as it was in 1972. We have surely learned something about oil spill prevention over the last 35 years. It is imperative that we have a strong program in place with good enforcement.

It is with that in mind that I will be listening to today's witnesses and ask, does the EPA proposed rule and guidance document take us forward or backward in our efforts to protect our Nation's waterways from oil contamination?

Thank you, Mr. Chairman.

Senator Inhofe. Thank you, Senator Jeffords.

We will continue in our questioning with the early bird rule. They will be in this order: Senator Isakson, then Senator Jeffords, then Senator Murkowski, and Senator Voinovich.

Senator Isakson.

Senator Isakson. Thank you, Mr. Chairman.

Mr. Dunne, I have heard from a number of agribusiness interests in the State and my State's agribusiness council with regard to the agricultural exemption. They are appreciative of the farm exemption but are wondering if, and to what extent, did you look at agribusiness from a standpoint of exemptions from the rules?

Mr. Dunne. I am not too sure what you mean by agribusiness as opposed to farms.

Senator Isakson. Well, I would say, for example, a crop dusting operation, a small crop dusting operation, or other support operations and businesses that might support farming but are not directly in the farming business.

Mr. Dunne. I don't think we looked at that as a specific industry by itself. I think we are looking at farms in general with the caveat that remembering that since 1973, any facility that stored 10,000 gallons or more, or over 1,320 gallons was subject to this rule. It has been true for 32 years. I don't think we dissected the agribusiness separately.

Senator Isakson. How is the farm exemption explained? How do you define farming in the rule exemption?

Mr. Dunne. We use the USDA definition where I believe it says that over $1,000 worth of sales a year. I can send you the actual definition.

Senator Isakson. If you would, I would appreciate it.

[Information submitted for the record follows:]

"Farm means a facility on a tract of land devoted to the production of crops of raising animals, including fish, which produced and sold, or normally would have produced and sold, $1,000 or more of agricultural products during a year."

Senator Isakson. Second, and this may show my ignorance, but on the proposed rule, it is open now for comment. Is that correct?

Mr. Dunne. That is correct, for 60 days.

Senator Isakson. For 60 days. Going back on the agribusiness for a second, if there was a sufficient, specific request for the Agency to consider it, if I filed it during that 60 days, is it possible for it to be considered for incorporation within the rule?

Mr. Dunne. Sure.

Senator Isakson. OK, thank you very much.

Thank you, Mr. Chairman.

Senator Inhofe. Thank you, Senator Isakson.

Senator Jeffords.

Senator Jeffords. Mr. Dunne, I understand that in 2004, the EPA Oil Program Director stated that, FE small quantities of oil can have profound and longstanding impacts on the waters of the United States and wetland environments, and small facilities often cannot afford the cost of responding to a spill.' In Dr. Corbett's testimony, he points out that the EPA's 1995 survey data finds that the SPCC compliance reduced spills and cleanup costs at small facilities. It seems that the EPA's proposal contradicts your own information.

Can you explain why the Agency proposes to weaken requirements and increase the risk of oil spills at the very facilities that your own data suggests they are least equipped to respond to them?

Mr. Dunne. Senator, could you tell me who made that statement? I am sorry.

Senator Jeffords. The EPA Oil Program Director.

Mr. Dunne. Who is that?

Senator Inhofe. You are asking who the EPA Oil Program Director is? You don't know?

Mr. Dunne. Who is the Oil Director? I am not too sure what individual we are talking about who made this statement.

Senator Inhofe. I think his name is Dave Hudson.

Senator Jeffords. Dave Evans.

Senator Inhofe. Dave Evans.

Mr. Dunne. Dave Evans, he used to be the Oil Program Director.

I think it is true that you can have small quantities of oil that can do damage to waterways and to aquatic life. There is no doubt. I don't think that we are regressing at all. Actually, we are trying to make it simpler for people who store small amounts of oil, so they don't have to have PE certification. I don't see where that is anything more than trying to help them reduce the burden of reporting and lower their costs, but it doesn't take anybody off the hook in terms of whether or not they have to comply with the regulation.

Senator Jeffords. Mr. Sullivan, we have received testimony that small business will incur increased liability and cleanup costs if they self-certify a spill prevention plan, and that there will be a severe economic impact on 86 percent of engineering firms in the Nation with less than 20 employees, if EPA's proposal does go forward.

Did you analyze these factors in developing your position presented today? And how does the Small Business Administration's Office of Advocacy justify its support of a regulatory change that is inconsistent with its mission to promote the goals of small businesses?

Mr. Sullivan. Thank you, Senator Jeffords.

First of all, the self-certification reform of which my office is very supportive does eliminate the requirement for professional engineers to certify. So to the extent that you have built a business model on being a PE to certify small facilities, then there may be less business.

With respect to the self-certification reform, small businesses have come into my office and said this is something that makes sense, really for two reasons. One, the small businesses believe they are in a good position to make that certification themselves, and two, from an environmental compliance perspective, there is widespread acknowledgment that there aren't enough small facilities in the environmental compliance program right now, and there is some evidence that a self-certification program will increase the amount of small facilities that start paying attention to these issues.

I will use, as an example, the Massachusetts Environmental Results Program, where they instituted a self-certification program

particular to dry cleaners. Before that self-certification program came into existence, less than 10 percent of the dry cleaners were in conversations with the Massachusetts Department of Environmental Protection. Two years after the self-certification, 95 percent of the dry cleaners in my home State were involved in environmental compliance efforts with the Environmental Protection Program in Massachusetts. So the self-certification reform, we believe, will result in greater compliance rates across the board.

Senator Jeffords. Mr. Dunne, in Dr. Ott's testimony, she points out some of the evolutions that have occurred in the oil spill science since the 1970's, most notably the toxic components of oil remain in the environment for an extended time and can cause significant harm.

How has the EPA incorporated modern day knowledge about oil spills into the Agency's analysis of the impact on this rule?

Mr. Dunne. Well, I am not too sure I can answer that with any certainty in terms of the science of it. There is no doubt there has been some improvement in technology. Remember, Senator, that the EPA and the Coast Guard every year respond to oil spills, and we do learn a lot about oil spills in that regard, in terms of the breadth of having to clean them up, and how you clean them up, and what the cost is to clean them up. I will check to see in terms of that particular area, in terms of scientific research, but I don't believe it had a huge impact in terms of what we are considering.

Senator Jeffords. Thank you.

Senator Inhofe. Thank you, Senator Jeffords.

We have been joined by Senator Thune from South Dakota and Senator Vitter from Louisiana, and I ask if you have any opening statement you would like to make at this time.

Senator Thune.

Senator Thune. Thank you, Mr. Chairman.

I don't have a long statement. I have got statement that I would like to have included in the record. I do appreciate your holding today's full committee hearing on an issue that could have a potential impact on farmers in my State of South Dakota.

Senator Inhofe. Let me interrupt you. I was reminded that Senator Voinovich, who was here first, had not given an opening statement.

Senator Voinovich, did you want to?

Senator Voinovich. Mr. Chairman, I——

Senator Inhofe. We have a friendship that goes all the way back to when we were both mayors of cities about 30 years, and I don't want that to change now.

Senator Thune. I am glad to hear this doesn't have something to do with seniority.

[Laughter.]

OPENING STATEMENT OF HON. GEORGE V. VOINOVICH, U.S. SENATOR FROM THE STATE OF OHIO

Senator Voinovich. Mr. Chairman, I am just glad that you have called this hearing today to discuss the proposed rules that streamline the Spill Prevention, Control, and Countermeasures Program. I think that, from my perspective, these rules need to be clarified.

I thank you for holding the hearing, and I will wait for my questioning time.

[The prepared statement of Senator Voinovich follows:]

STATEMENT OF HON. GEORGE V. VOINOVICH, U.S. SENATOR FROM THE STATE OF OHIO

Thank you, Mr. Chairman. I am pleased to be here today to discuss the two proposed rules that are aimed at streamlining the Spill Prevention Control and Countermeasure Program to help clarify some of the confusion that is felt by those affected by this. I understand this is clearly an important issue that affects our farmers, as well as our airports and others. Thus, we are here today to better understand how this rule will really help our constituents. For instance, I know the Ohio corn growers were concerned about the effects of the 2002 rule and how the rule would affect their members and Ohio farmers. By the same token, they are heartened by some changes that are now being proposed to the 2002 rule.

Today, we are examining whether those changes are adequate and equitable. Thank you, Mr. Chairman, for holding this hearing, and I thank the witnesses for being here. I look forward to your comments.

Senator Inhofe. Senator Thune.

OPENING STATEMENT OF HON. JOHN THUNE, U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

Senator Thune. I would just echo what I said before. This is an issue that has potential impact on a lot of farmers across this Country and my State of South Dakota. As someone who has some experience with the Small Business Administration, I do appreciate EPA's willingness to work with SBA and other stakeholders in an attempt to provide clarity to a rule that has caused a great deal of confusion for those who use and store petroleum products. While I would agree that it is wise public policy to require spill prevention and countermeasure requirements for facilities that pose a risk to the environment, I don't believe it is necessary to require family farmers to adhere to the same requirements that petroleum terminals and electric utilities are currently required to meet.

And thankfully, after a great deal of input from the regulated community, I am pleased to see that EPA's proposed rule will not be applied to farms with less than 10,000 gallons of storage capacity until more data can be collected and analyzed. I realize, as well, that while the EPA has attempted to build in a great deal of flexibility when it comes to compliance with the proposed rule, I also believe more can and should be done to ensure that this rule is as targeted and focused as possible.

And so, Mr. Chairman, like you, I have concerns regarding various aspects of this rule, and in the interest of moving along with this hearing, I will wait to ask questions when we have an opportunity as well.

Thank you, Mr. Chairman.

[The prepared statement of Senator Thune follows:]

STATEMENT OF HON. JOHN THUNE, U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

Mr. Chairman, I appreciate you holding today's full committee hearing on an issue that could have a potential impact on farmers in my home State.

As someone who formerly worked at the Small Business Administration, I appreciate EPA's willingness to work with the SBA and other stakeholders in an attempt to provide clarity to a Rule that has caused a great deal of confusion to those who use and store petroleum products.

While I agree that its wise public policy to require spill prevention and countermeasure requirements for facilities that pose a risk to the environment, I don't believe its necessary to require family farmers to adhere to the same requirements that petroleum terminals and electric utilities are currently required to meet.

Thankfully, after a great deal of input from the regulated community, I am pleased to see that EPA's proposed rule will not be applied to farms with less than 10,000 gallons of storage capacity until more data can be collected and analyzed.

While I realize that the EPA has attempted to build-in a great deal of flexibility when it comes to compliance with the proposed SPCC rule, I believe more can and should be done to ensure that this rule is as targeted as possible.

Mr. Chairman, like you I have concerns regarding various aspects of the SPCC rule and in the interest of moving along with today's hearing, I will wait to ask additional questions of today's panelists until they have had an opportunity to give their testimony.

Senator Inhofe. Thank you, Senator Thune.

Senator Vitter.

OPENING STATEMENT OF HON. DAVID VITTER, U.S. SENATOR FROM THE STATE OF LOUISIANA

Senator Vitter. Mr. Chairman, I will look forward to questions.

Senator Inhofe. All right, very good. Now we will continue with our questioning.

Senator Murkowski.

Senator Murkowski. Thank you, Mr. Chairman.

Mr. Dunne, this is in the area of the airports and the airplanes. In Alaska, as you probably know, we have a host of small airports, very small airports, where we certainly would not have storage capacity exceeding 10,000 gallons but probably over the 1,360 gallons.

What will the effect be on so many of Alaska's very small, little airports? What are we going to have to do out there in order to comply with these regulations?

Mr. Dunne. Well, there are a couple things that I think are worthwhile. The smaller airports are not going to be subject to the same secondary containment as a larger airport, and they are going to be able to make a decision in terms of what is the best way. For instance, you could have a containment pad where you have the tank and sort of absorb your oil there. Also, if it is under 10,000 gallons, if that is what they store, they don't have to have a PE come, and they can make their own determinations. And, of course, the third thing is whether or not they are close enough to navigable waters to make a difference.

So I think there is some consideration and some relief we have given the airports. We are still going to work with airports, particularly the small airports and see if there is more information that could be developed to make sure that we don't add any more burden to the regulation already.

Senator Murkowski. The concern that we have is you may have a little strip that serves a community of 35 people, where we certainly want to do what we can to prevent any spills, but if you go too far with this, you may not be able to comply and meet these regulations because you have got to have these containment areas in an area where you just don't have that ability.

Let me ask you about the animal and vegetable oils provision and the rule change there. In Alaska, we have a great number of

fish processors that store fish oil, and this is again usually in excess of 1,360 but not exceeding the 10,000 gallon capacity.

How will this rule change affect those businesses, these fish processing business?

Mr. Dunne. Well, basically, it will add the same advantage that any other small business has or people who have small amounts of oil that fall into that range between 1,320 and 10,000 gallons. The oil one is a difficult thing to deal with because there is an interesting argument that oil is not toxic, and indeed it doesn't have the same toxic characteristic as petroleum as we generally think of it. Vegetable oil that gets into water has some of the same effects. It has the same effect as crude oil in that it will suffocate aquatic life. It can create havoc in terms of drinking water systems. So I don't see where we have been able to accomplish a heck of a lot, except to give the small operators, as you mentioned, some relief in terms of how they go about writing their plan.

Senator Murkowski. Well, and to that, Mr. Sullivan, maybe you want to comment on this as well because you were speaking to Senator Jeffords about this, and this is the allowance for the self-certification. Now from Alaska's perspective where we will have so many small business operations, I think that they will welcome that as an opportunity, but the question really remains, how we can explain that allowing for the self-certification is not going to have significant environmental risk.

Mr. Sullivan. Senator, I think that looking at the whole set of requirements, in order to take advantage of the self-certification, deserves some comment in this hearing. In order to qualify for the self-certification, it is more than just being a small business. It is, in fact, being a good environmentally compliant small business because the reforms strike the balance of recognizing that small businesses do not have the where-withal to comply with too many rules, regulations, laws, mandates, and so forth, but also should be compliant with some level of environmental, work place safety, and other regulations.

So, in order to qualify for the self-certification, you have to have had no spills for 10 years. Or if you have been in business for less than 10 years, you have to have documented that you have had no spills in the entire time that you have been in existence. Those same types of reforms that get into the integrity testing, where small firms will be allowed to have a visual inspection instead of hiring a PE or have integrity tests, it is the same type of balance. You have to have secondary containment. Those tanks have to pass stringent fire code and FAA requirements in order for those tanks to even be sold and purchased by those small airports.

So I want to make sure that the record does reflect that these reforms strike the balance between removing unnecessary or duplicative requirements, but at the same time, making sure that there are environmental protections guaranteed.

Senator Murkowski. How much flexibility will actually be worked into that, though? Because, say you have a company, a small business that has been in operation in excess of 10 years and did have a spill, and they handled their spill exactly as anyone would want and had cleaned it up 100 percent. Do they get any allowance for that, or is it, sorry, your 10 years has to be completely untainted?

Mr. Sullivan. Senator, the self-certification reforms really are about encouraging small facilities to come into the regulatory system, establish a dialog with EPA and the regional and district offices, even in Alaska. So if you are in the scenario that you laid out, you have a small facility that obviously has a history and a relationship with the local office, there are enough flexibility in the enforcement regime that EPA manages to make sure that a small facility that is a good actor is treated as such.

Senator Murkowski. Thank you, Mr. Chairman.

Senator Inhofe. Thank you, Senator Murkowski.

Senator Voinovich, it will be your turn to ask questions. I would like to acknowledge that you have made a request, it is a good time for us to bring this up, of the Administration's Great Lakes Plan, to have a hearing on that. The answer is yes. You determine a time that you want to have that hearing, and we will plan to do it early next year if that is acceptable with you.

Senator Voinovich. Thank you very much. As you know I have spent a lot of time on it. The President declared the Great Lakes a National Treasure. The EPA has worked very hard on it. I think it is appropo for us to have them in here and see just exactly what they have done to make sure they are taking the resources they have and utilizing them and getting the biggest return on the investment. Also, I am really interested in finding out, do they now have an orchestra leader, because we had two hearings, and they didn't have one.

Senator Inhofe. I bet we will find out then.

[Laughter.]

Senator Inhofe. You have been championing that cause for a long time, and it is time to get to the bottom of a lot of unanswered questions, and you will have that opportunity.

Senator Voinovich. Thank you very, very much.

First of all, I would like to say, thank you for holding the hearing. Second, I think it is terrific that the two of you, that your agencies have worked together. One of the things that has always bothered me, as a mayor and then as a Governor, was that it seemed like Federal agencies didn't talk to each other. On one hand, we are trying to create small business and help them out, and you have got the EPA over here, doing their thing. Many times, they were working across purposes. So I congratulate you for the communication that has gone back and forth.

Another thing that I would be interested in, just to see how it works, is that when I was Governor I came to this committee and worked with the National Governor's Association to require cost benefit analysis under the Clean Water Act, peer review, and then look at alternative regulations that would not be so onerous on the private sector. I would be interested to see the paperwork that was done on the cost benefit analysis on these rules. I appreciate your sending them to my office or the committee.

Mr. Dunne. Sure.

[The referenced Information can be found on page 255.]

Senator Voinovich. I think the real problem that we have right now, and I am not as familiar with it as the Chairman in terms of airports and so forth, but in terms of the farm community, that is really where I have heard most of our complaints: What in the

heck is going on? What are these people doing. Are they crazy? I will say that our corn growers are happy with the fact that you seemed to listen, and there are some changes being made. I think it is really important that we have as much of a clarification of what all of this means, so they are not out there getting hot about something that they shouldn't be getting hot about.

I would just be interested in: What are you doing to try to communicate just exactly what these rules through the Farm Bureau and other farm organizations in this Country?

Mr. Dunne. Well, our people who have developed the rule have met a number of times with people from the agriculture community. And, Senator, we are committed to work with USDA in terms of coming up with even more and better data to make sure that we have struck the right balance in this.

All facilities, including farms, have been covered under this act since 1973. The fact is I suspect there has not been good communication since the inception of that legislation or that rule. A lot of farmers didn't understand what their responsibilities are. So I think we are going to continue to look at the farm issue and the farm problem to make sure that we have struck the right balance of having people stay in compliance if they are storing large amounts of oil. Certainly the intention of this rule right now, the 2002 rule and what we are doing in having an extension, is to reduce burden wherever possible and to have some kind of balance between environmental compliance and making sure any business, including farms, don't suffer disproportionately in terms of the burden that the Government regulations put on them.

Senator Voinovich. Specifically, one of the things in the guidance that was addressed is it attempts to clarify the facility owner or operator as some discretion to define the facility. However, it goes on to put limitations on the discretion. It was our understanding that farmers who own several parcels of land spread over hundreds of acres could self-define several facilities within that area. However, I am not sure that it is very clear in the guidance as to how that would work.

Can you state for the record that farmers and others who own very large facilities spread out over large amounts of land will be able to divide up their parcels in a reasonable fashion to make compliance with the rule more manageable?

Mr. Dunne. I will take a look at that, Senator. I am not exactly sure how many of these farms we are talking about. I do understand the point that you are making is that a farmer that may be doing 10,000 acres of farming would have different plots, not adjacent or contiguous to each other, and whether or not they can be considered separately. I think that is a reasonable observation to make.

Senator Voinovich. The other thing is: Who defines navigable waters? I know in the pieces of paper that you put out, I read that.

Mr. Dunne. Well, it is in court right now, Senator.

[Laughter.]

Mr. Dunne. We did have some lawsuits against us, and we were able to negotiate everything except navigable waters. It is in the U.S. District Court for hearing right now.

Senator Voinovich. So that once that court decision is made, that will clarify it?

Mr. Dunne. Sometimes it never does, does it?

[Laughter.]

Mr. Dunne. We will see.

Senator Voinovich. Any information you have got on that, I would be very interested.

Mr. Dunne. We will send that.

Senator Voinovich. Our people are real interested in that.

Thank you, Mr. Chairman.

Senator Inhofe. While we are defining, let us also define reasonable expectation of discharge. One of the problems we have here is a lack of definition that makes it very difficult for us. It should be evident to both of you and other witnesses that the seven Senators up here all come from agricultural States. I know that we have a lot of concern in my State of Oklahoma, and I am sure they hear just as much as we do.

Senator Thune.

Senator Thune. Thank you, Mr. Chairman.

I would echo some of that. I would love to know the definition of a navigable waterway because there are a lot of dry creek beds in South Dakota that I suspect might qualify which probably have no business being in this. Also, the expectation of discharge because that, to me too, is fundamentally what we are talking about.

When I mentioned earlier the whole issue of targeting and focusing this rule to where it really is effective in capturing in the net those particular operations that are really the issue, that, to me, seems what we are after here. This wide net that applies to so many different operations seems to me to be extremely inclusive and particularly harmful in terms of the economic impact it would have on a lot of farm operations. I am not talking big farm operations; I am talking small and medium size farm operations.

With regard to inspections, the program covers over 600,000 facilities, I am told. From what I understand, the inspection rate is extremely low. One of the recommendations made by both GAO and the Oil Spill Task Force in the late 1980's was that EPA should establish inspection priorities.

I guess into tying in how this becomes more focused or targeted, I am interested in knowing what the Agency's view is on those recommendations, and has anything happened since they were made?

Mr. Dunne. Well, we do less inspections today than we did maybe in 1986. I did look at the chart. I think that the 1986 high mark was because of a flurry of oil spills during that particular time.

I can tell you this, Senator, we are not specifically going to be targeting small farmers. In fact, I will guarantee you that we will not be. Particularly, the reason we extended this rule to October 31, 2007, which is almost 23 months, is to give everybody a chance to get in compliance. We are not looking at this as a hammer. We are looking at this as if we can make our guidance and regulations much clearer in terms of what is expected. So we are not expecting to go into any small business and target them, even though they may have been covered for the last 32 years.

Senator Thune. I am told there are roughly only about 1,100 facilities that are inspected each year, which would suggest you have a lot better chance of being audited by the IRS than you have actually of being inspected here.

Then if you could clarify, too, one other question regarding which farms under 10,000 gallons qualify for the indefinite extension of the compliance date. I ask that question, too, because I have heard conflicting interpretations that it would only apply to farms that are currently in compliance with the 1973 rule, which is somewhat confusing to me, seeing that an overwhelming majority of farmers were unaware that that ruling applied to them until it was amended in 2002.

Mr. Dunne. I think that is a correct interpretation. If you were covered by the rule, whether or not you knew it or not, you should have a plan or you should be developing a plan, or amending if that is necessary. So the extension of the date is you get plans up to date to October 31st, 2007, before implementation. A farm that has not been in compliance is going to have ample time to get into compliance by 2007.

Senator Thune. The delay would apply widely then. I guess what I am asking is: Is the EPA's reprieve a very narrow one?

Mr. Dunne. Yes. It is not as broad as all 152,000 farms, and I think that is an accurate figure that we think are covered, don't have to do anything between now and October 31st, 2007. If they were covered by the rule before, and they didn't know it or didn't for any reason, they have to develop a plan, and they have to do that as soon as possible. The implementation date when we will take a look at those plans on whether or not people are in compliance will be after October 31st, 2007.

Senator Thune. The exemption then is going to be very narrow to those 2002 people.

Mr. Dunne. That is correct. That is correct.

Senator Thune. Well, I am not sure that helps a lot or does what we need to do for a lot of the farmers who are going to be impacted.

Let me just make one, I guess, final comment if I might, Mr. Chairman. I appreciate that clarification. It is probably not the answer I was looking for. It seems to me, at least, that the USDA data that I have looked at suggests that this could be a $4.5 billion cost, projected compliance cost, for farmers and also very little evidence of oil spills by farmers. If you break that down on a per operator type basis, you are talking conceivably, according to USDA's numbers, about almost $13,000 for an average tank size of 6,700 gallons.

Again farm operations, to be profitable in this day and age, have to have some economies of scale working for them. In most cases, your really small farms, it is just hard to make ends meet. As a consequence, these farmers are getting into farming 1,000 acres or 2,000, or 5,000 acres anymore. You are likely to have, as was noted earlier, several different locations. When you aggregate all these things and add them up, the compliance costs become very, very significant.

It would seem to me, too, that at a time when we are asking our farmers to compete in the world marketplace against countries, many of whom have no such requirements imposed on their agri-

cultural economies, and we are fighting every 5 years in a new Farm bill for programs, that it is getting harder and harder to build political support from some of our colleagues in other parts of the Country because they say: We want to put more money. We don't want to subsidize. We want to have these farm programs in place. Yet, we impose these costly regulations.

This is the kind of stuff that we have got to be thinking about. Having an approach that really does identify, and I think hone in on the real problem, rather than casting a very wide, broad net that adds exorbitant amount of cost to production for agriculture in this Country and puts us at a competitive disadvantage with those that we are trying to compete with in the global marketplace.

So I think this is a very important issue to address and have resolved. I, again, appreciate the Chairman's leadership in calling this hearing and having us examine this issue and look at what we might do to further clarify and hopefully, in working with the agricultural community, make this workable in a way that captures the operations that are really creating the risk and the danger, and not just putting this enormous cost on the backs of your average farmer across this Country. It doesn't seem right.

With that, I yield back, Mr. Chairman.

Senator Inhofe. It is obvious you have heard from the same people I have.

Senator Vitter.

Senator Vitter. Thank you, Mr. Chairman, and I have, too. I mostly want to echo those same concerns, and a big part of the concern is just a concern about lack of clarity.

Senator Voinovich mentioned this very important issue of noncontiguous parcels. To what extent can those be put together to define one entity? To what extent can't they be? I think that is very important to have crystal clear clarity about.

Just as an example of the lack of clarity I am concerned about, the guidance document itself says at one point, FE Inspectors should evaluate the intended activity carefully because a determination of jurisdiction is not always straight forward.' For that sentence to be in the guidance document isn't particularly confidence inspiring in terms of creating clarity, which is what the guidance document is supposed to do. So I, first and foremost, want to echo all of those concerns that are very important.

I also want to ask you quickly about the impact on the aviation community. I know they have been seeking some changes to EPA's interpretations since 2002 because of some safety and operational concerns at airports. To what extent did EPA consult with the FAA then or now in terms of the proposed revision?

Mr. Dunne. Our staff did have a number of meetings with the FAA. I think it is clear that we did provide relief from the secondary containment issue that makes it much more flexible for small airports in particular to not necessarily put up big barriers or big booms around trucks that are parked at night or storage tanks that they have. I think that is one of the things which the aviation community had asked for, and we were able to satisfy it I believe in the regulation.

But we are also committed, as we are on farms, to ensure that we continue to work with the regulated industry to make sure that

we strike the right balance between the concern of environmental protection of our waterways and make sure that we are not placing undue burden on airport operators or farmers.

Senator Vitter. OK, thank you, Mr. Dunne.

And then very quickly for Mr. Sullivan, is this rule part of a larger reform effort for the manufacturing sector, and can you describe that larger effort?

Mr. Sullivan. Yes. What the Senator is referring to is the Office of Management and Budget's call for regulatory reform nominations. This has been underway for some time, several years. Two years ago, John Graham who heads the Office of Information and Regulatory Affairs called for regulatory reform nominations, particular to the manufacturing sector. There were three environmental reforms that my office actually has been working with the EPA and the Office of Management and Budget to see some progress on. This is one of them, and it is certainly a high priority for EPA's reforms particular to the manufacturing sector.

Senator Vitter. Thank you very much. That is all I have, Mr. Chairman.

Senator Inhofe. Thank you, Senator Vitter.

We thank both of our witnesses very much for the time you have given us, and we would dismiss you and ask the next panel to come forward.

The next panel has, from my State of Oklahoma, Brent Cummings who is in the oil business. One of the things I have noticed out of the three hearings we have had, Senator Jeffords, where we have had people from Oklahoma in the oil business. I think by now they realize these are not giants; these are just small business people that are scratching out a living.

We have James Coyne, a dear friend of mine, one with whom I served in the other house, representing the National Air and Transportation Association. We park together when we fly our airplanes up to Oshkosh each year.

Richard Owen, Director of CHS, Incorporated; Dr. Riki Ott, the Author and Marine Toxicologist; and James J. Corbett. Dr. Corbett is the Assistant Professor of the Marine Policy Program at the Graduate College of Marine Studies, University of Delaware.

We will start in the order that I mentioned with Mr. Cummings and then go across. I would like to ask you to try to confine your opening statements to 5 minutes, and your entire statement will be made a part of the record. If any of you have brought with you members of your family, feel free to introduce those, and that will not be taken away from your time.

Mr. Cummings.

STATEMENT OF BRENT CUMMINGS, VICE PRESIDENT, CUMMINGS OIL

Mr. Cummings. Good morning, Mr. Chairman, members of the Committee. I am Brent Cummings. We have a family crude oil and natural gas exploration and production company, Cummings Oil Company, located in Oklahoma City.

I appreciate the opportunity to appear before this committee today, and I offer my remarks from the perspective of a small, independent oil and natural gas exploration and production oper-

ator, and on behalf of the Oklahoma Independent Petroleum Association, an association of more than 1,600 oil and natural gas producers.

Senator Inhofe. Mr. Cummings, if you could just pause there for a minute. What I have tried to do is to make sure people understand that there is a big difference between the giants and the independents, and sometimes the needs aren't the same. So I appreciate the fact that you are characterizing what you have as a family business.

Mr. Cummings. Thank you.

I have a degree in Petroleum Engineering, and I am responsible for all aspects of our field operations, including drilling, completion, and production operations. A significant and continuously increasing part of this responsibility includes making sure our company is compliant with numerous Federal environmental requirements under the Clean Water Act, the Safe Drinking Water Act, the Clean Air Act, SARA Title III, Federal Emergency Management Agency, U.S. Fish and Wildlife Service, Historic Preservation, Bureau of Land Management, in addition to a variety of State requirements.

Oklahoma is a mature energy producing State. A significant aspect of our production involves the critical role of marginal wells. The Interstate Oil and Gas Compact Commission defines a marginal oil well as producing 10 barrels or less of oil per day, and a marginal gas well as producing 60 million cubic feet or less of gas per day. Over half of Oklahoma's oil production comes from marginal wells, which account for approximately 41.4 million barrels of crude oil per year from approximately 48,000 marginal wells.

As Senator Inhofe mentioned, our members explore for and produce crude oil and natural gas. In contrast to the large integrated companies, our members do not refine crude oil, and we do not market gasoline or heating fuels.

A new SPCC rule was finalized and became effective August 16th, 2002. Prior to and since that day, OIPA has raised significant concerns regarding the adverse impacts of these regulations on oil and natural gas production in Oklahoma. On December 2d, 2005, the EPA produced another rule to clarify some of the issues raised with the 2002 rule, as well as a guidance document for its inspectors. Unfortunately, none of our issues are addressed in the proposed rule, and the guidance document leaves too much to regional inspectors to interpret.

The intent of the SPCC regulation is to prevent release of oil into waters of the United States The EPA's broad interpretation of the definition of waters of the United States, that includes such things as dry arroyos, drainage ditches, and road bar ditches, is unreasonable. The various court decisions have complicated this issue as well. Additionally, the guidance document does not provide any clarity on what is waters of the United States.

The SPCC's current one size fits all requirements do not take into consideration the risk of marginal crude oil and natural gas wells as compared to larger bulk storage facilities and refineries that have high throughput and large single tank storage volumes.

As previously stated, the intent of the SPCC rule is to prevent and control oil discharges, not produced water discharges. Oil and

gas exploration and production equipment used to treat produced water should be subject to the same wastewater exemption to the same extent as similar facilities in other industrial sectors.

At non-exploration and production sites, process equipment is excluded from the definition of bulk storage containers, where as at E&P facilities, this type of equipment is considered bulk storage containers and subject to secondary containment requirements. The EPA has singled out the E&P oil and gas water separation facilities for an increased level of regulation while facilities in other sectors using similar or nearly identical technologies are allowed to be exempted from these rules.

The requirement for containment around flow lines and gathering lines is unrealistic and impractical. A more reasonable approach would be to allow operators to implement flexible and reasonable, risk-based flow line inspection and maintenance programs, not prescriptive corrosion, integrity, or pressure testing which can be extremely costly for small operators.

Design, construction, and maintenance of secondary containment around oil tanks are the most beneficial ways to prevent spills. Even though the EPA has recently proposed to streamline the process for smaller facilities in a recent proposal, the proposed threshold does not address marginal crude oil levels.

The 2002 SPCC rule includes numerous administrative changes, taken as a whole, greatly expands and increases the impact of the rules on the regulated community. All these changes take away the flexibility of the professional engineer or the owner-operator to address the various site specific conditions.

Additionally, we have never seen a cost or energy impact analysis of the 2002 regulations or data that supports the need for changes provided in this SPCC rule, affecting the E&P sector. We are aware that the Department of Energy has recently initiated a cost impact study and believe that the results will be very beneficial.

Senator Inhofe. Mr. Cummings, try to wrap it up, if you would, please.

Mr. Cummings. OK. Finally, the EPA should clarify how it plans to address the API litigation settlement agreement issues as it relates to the 2002 SPCC rules. The EPA should follow through with a rulemaking to clarify these issues.

We urge the EPA to develop a regulatory approach that is appropriate for our industry. This approach would include a clear, concise, and reasonable definition of waters of the United States for the E&P industry and focus on those facilities that reasonably can be expected to impact those water, include a benefit/cost analysis of the requirements being considered and implemented, address the real environmental risk of domestic exploration where past experience has demonstrated a true need for the regulation, and provide a practical, economic regulatory scheme that small operators can understand.

I appreciate the opportunity to submit these comments.

Senator Inhofe. Thank you, Mr. Cummings.

Mr. Coyne.

STATEMENT OF JAMES COYNE, PRESIDENT, NATIONAL AIR TRANSPORTATION ASSOCIATION

Mr. Coyne. Mr. Chairman, Senator Jeffords, and members of the committee. It is a pleasure to be here. My name is James Coyne. I am the President of the National Air Transportation Association which represents nearly 2,000 aviation business at literally thousands of airports across the Country in almost every corner.

I would also like to mention that I am also not unfamiliar with some of the important environmental issues that are important in this decision. Before I joined Congress, I worked for one of the most distinguished environmental consulting companies in the Country. I was the individual responsible for the arrest and conviction of the very first person who was ever sent to jail for polluting our Nation's navigable waters in 1978. I served on the Environmental Study Conference in Congress with Senator Jeffords.

Of course after Congress, I was the Washington head for the Roy Weston Company which is one of the most distinguished environmental consulting firms in the Country, and I also served as President of the American Consulting Engineers Council which represents the professional engineers which support and service the environmental industry.

But my reason for being with you today is to discuss the impact of these spill prevention, control, and compliance measures on the aviation industry and the importance of a partnership being developed between the EPA, and the FAA, and industry, and Congress to produce reasonable regulations which will benefit all Americans.

I have a rather involved testimony here, which I hope you will submit to the record, but I would like to just briefly summarize one or two of the points in that testimony for you.

The first question is whether or not fuel spills are a significant problem at airports from refuelers. We are mostly concerned with the impact of these regulations on fixed-base operators and aviation users at airports. While we recognize that fuel spills are an important issue anywhere in the Country, we have to ask the question: Are refueling trucks at airports a significant cause of fuel degradation into our waterways? The simple fact of the matter is that we see no evidence that that is the case.

Since I have been with NATA now for nearly 12 years, we have been intimately involved in the management and the training of FBOs and aviation professionals to deal with the management of fuel at airports across the Country. During that time, we introduced the Nation's leading program for the management of fuel at airports, something called the Safety First Program, which is responsible for not only the environmental protection but also the protection of individuals, employees, and facilities at airports.

During that program, we have maintained very careful records of potential fuel hazards at airports, and we do not have a single example, in the time period that we are talking about, of an airport refueling truck rupturing in any manner and causing a fuel spill into the environment. Now that is not to say there are not other fuel contaminations at airports that stem from the fuel farms, from airplanes themselves, or others. With regard to the refuel trucks themselves, we don't have any evidence that this is a problem.

We have asked the EPA to give us evidence or whether they have any examples from their reporting data of this being a problem, not only in the last 5 years but since the invention of the airplane. And, unfortunately, we have not received back from them any evidence at all that this is a problem. Of course, that is not to say it is not theoretically a problem, but theoretically already our industry is doing a great deal to respond to the potential risk of a fuel spill.

I have here for you an example of the training document that we give to every FBO in the Country, so that they go through a very intensive safety and environmental protection management program to ensure that fuel is not spilled at an airport. Frankly, they have a very compelling reason for doing this, not only the protection of the environment but the simple economic reality that they are in the business of selling fuel.

And a fuel spill is a tremendously costly event for an airport, and they want to do everything that they possibly can to prevent a spill. I submit that the refuel trucks that we have operating on airports today are the most capable trucks in the environment anywhere for ensuring that spills do not happen, and the record has shown that this is the case.

Now the second question to ask is whether there would be unintended consequences if we impose draconian rules on these airport locations. I think that is very clear to envision where you would force airports to put all of their fuel trucks in one location, obviously making the risk of a significant spill greater or a significant fire or a terrorist act.

But more than that, you would be increasing dramatically the amount of truck traffic back and forth across the airport as every truck goes to and from one distant appropriate spot. So you would have more pollution; you would have more risk of accidents on the airport; and you would have a lot more confusion at the airport as well.

Finally, I would like to just give you an example of the type of care that our member employees do. This is a daily line report that is required for our members to do at airports, where each time they get into the truck each day, they do this kind of inspection. I would like to submit this for the record as well to show you that a great deal of care is being taken by airport managers to ensure that we do not have a spill.

Finally, of course, the most significant effect, if we had draconian regulations, would be that many airports in America would simply stop selling fuel because the cost of it would be too great, the cost of the secondary spill prevention tests, the construction, and so forth at facilities. These small airports which might currently only sell a few tens of thousands of fuel a year are very, very important airports to the American aviation system. So we have got to preserve access to them.

Fortunately, the EPA has responded, I think, in an intelligent way to some of the concerns that we have had. The new proposal that has just come out seems to address many of these issues.

Unfortunately, as Senator Thune mentioned in his questions about agriculture, there still is a great deal of confusion in this NPRM, especially about the time at which it goes into effect for the

member companies. We feel that we need great clarity from the EPA on this issue as to when the effective date of the rule is for the affected businesses across the Country. We hope that this Committee will have some impact in persuading the EPA to help clarify that.

Finally, I would just like to thank the members of the Committee for their interest in this important subject and their support for better cooperation between the EPA, the FAA, and the industry.

Senator Inhofe. Thank you, Mr. Coyne.

Mr. Owen and the other two witnesses, feel free to go a little bit longer since the first ones did.

Mr. Owen.

STATEMENT OF RICHARD G. OWEN, DIRECTOR, CHS, INC.

Mr. Owen. Thank you, Mr. Chairman, members of the committee. My name is Richard Owen, and I am a third generation farmer from Central Montana. I raise non-irrigated wheat and other crops, and I am an elected Director of CHS, Inc., the Nation's largest farmer cooperative.

I am here today on behalf of the Agriculture Coalition, representing farmers, cooperatives, and related agribusinesses. We appreciate EPA's recent efforts to develop a more realistic approach to its SPCC regulations. However, we are still concerned about the impact of its 2002 regulation and its December, 2005 proposal.

Under EPA's existing 2002 regulations, any facility, including farms and ranches as well as farmer cooperatives and other agribusinesses, with aggregate storage of 1,320 gallons of oil must have an amended oil spill prevention plan certified by a professional engineer by February, 2006, and implement that plan by August, 2006. This includes building secondary containment, such as berms or drain basins, constructing fences, providing lighting, security, and monitoring, and performing tank integrity testing and other requirements, according to a recent USDA study which I would like to submit for the record.

[The referenced report can be found on page 260.]

Senator Inhofe. Without objection, that will be a part of the record at the conclusion of your remarks and the same with Mr. Coyne's report. It will be included in the record at the conclusion of your remarks.

Mr. Owen. Thank you, Mr. Chairman.

The EPA's regulations would cover nearly 70 percent of all farms as well as many other agribusinesses. For farmers alone, USDA estimates the total cost at $4.5 billion. These requirements would apply, even though the same USDA study found less than 1 percent spill history in the case of production agriculture. Many of EPA's requirements are extremely impractical, given the unique characteristic of farming. Imagine fencing whole farms or running wire to remote sites for monitoring across many miles to reach other small refueling sites, especially when you have multiple parcels or fields.

Based on this, we believe a strong case can be made that farmers and ranchers should be exempt from such requirements. That said, we have been working with EPA in good faith for the past 3 years in support of a more workable approach to address agriculture's

concerns. We have also called for a further extension of existing compliance deadlines.

As part of its December, 2005 proposal, EPA would provide an indefinite extension for compliance with its 2002 regulations for all farms with aggregate storage capacity of 10,000 gallons or less until more information can be collected to determine if differentiated SPCC requirements may be appropriate. For farms and ranches with aggregate oil storage over 10,000, the EPA has proposed that the compliance dates be extended to October 31, 2007. We believe that EPA should exclude all farms, pending such review.

We also want to comment on the new proposed 10,000 trigger. Although it is a significant improvement over the current 1,320 gallon trigger, it would still hit many farmers. This is because EPA continues to look at a farm as a single facility based on a total number of gallons. We continue to urge that EPA adopt a site-specific approach. An aggregate standard may make sense for a large terminal but not a farming operation where you can have many different fields or parcels with multiple fueling sites and tanks that are sometimes filled only on a seasonal basis.

Finally, we continue to be concerned over the potential impact in costs of such regulations on many farmer cooperatives and other agribusinesses that serve farmers.

Again, on behalf of the Agriculture Coalition, we appreciate the opportunity to testify before this committee. We look forward to working with you as well as EPA to address the concerns of agriculture, while continuing to meet important environmental objectives.

Thank you very much.

Senator Inhofe. Thank you, Mr. Owen.

Dr. Ott.

STATEMENT OF RIKI OTT, Ph.D., AUTHOR AND MARINE TOXICOLOGIST

Ms. Ott. Thank you for inviting me to testify on the oil spill prevention standards.

My name is Riki Ott, and I have a Master's and a Doctorate in Marine Toxicology with a focus in oil pollution. I come from a small fishing community that is still trying to recover from the long term economic, social, and environmental harm from the *Exxon Valdez* oil spill, 16 years ago.

I would like to share three lessons from our tragedy with this committee and explain how each relates to the SPCC proposed ruling. These lessons are: One, oil is far more toxic than we thought; two, prevention is critical; and three, better safer cleanup products need to be used.

A paradigm shift in the scientific understanding of oil toxicity has occurred since the passage of the Clean Water Act and the Oil Pollution Act of 1990. The 1970's science holds that the oil components, toxic oil components, dissipate quickly, and sublethal effects are limited to invertebrates and occur at exposure levels of parts per millions. This science underpins the risk assessment assumptions used by EPA in its proposed rule change.

The collapse of pink salmon and Pacific herring stocks in Prince William Sound, well after the *Exxon Valdez* spill, was a tipping point for science. Now scientists link long term harm to fish and wildlife with a particularly toxic fraction of crude oil called polycyclic aromatic hydrocarbons or PAHs. PAHs were largely ignored by the 1970's science.

Scientists now realize that crude oil is 1,000 times more toxic than previously thought and that levels of 1 to 20 parts per billion PAHs impair reproduction, disrupt cellular function, and generally decrease overall fitness of individuals, resulting in declines of populations of birds, fish, and mammals. I've attached an article summarizing the new oil toxicity paradigm (Peterson et al., Science 2003).

[The referenced article was not submitted at the time of print.]

Further, these effects are still happening in areas once heavily oiled. This was completely unanticipated by the 1970's science, that we would have still relatively fresh toxic oil on our beaches and that it would still be bioavailable.

I have a sample collected from a beach in Prince William Sound this past summer that I would like to pass around for the committee. Make sure that you take the lid off to get the full effect.

Findings in the medical field show that low levels of PAHs also harm public health. The upshot of all this new level of understanding on oil toxicity is that in 1999 the U.S. EPA added 22 PAHs in crude oil to its list of persistent bioaccumulative and toxic pollutants. This list includes lead, dioxin, mercury, PCBs, and DDT.

After 34 years, I agree with my Senator that it is time to update some old laws, but we need to update the old laws so that they match with the new science. I was shocked to hear the EPA representative declare that the science has no effect on this proposed rulemaking. The 1990's oil toxicity science supplants the 1970's science and changes the risk assessment equation. Since oil exposure causes greater known risk to the public and the environment, we need to increase, not decrease, spill prevention standards to reduce the likelihood of spilling oil.

EPA's proposal to reduce spill prevention standards essentially guarantees that small facilities will have more spills. Why? Because industry observers, including the Coast Guard, the National Research Council, and the EPA attribute reduced spillage to strong prevention standards and increased financial liability.

Reducing oil spills and oil pollution is a matter of holding operators accountable before and after spills. Oil companies are experts at externalizing costs to society and the environment. Facility owners should be held responsible for spill prevention, not exempted from it, thus passing the risk to the public.

The third problem with reduced spill prevention standards is that it virtually ensures more chemical products will be used because this is industry's preferred method of cleanup. Chemical products often contain industrial solvents to dissolve oil and grease, and thus are environmental hazards. One dispersant that was used during the *Exxon Valdez* cleanup, and that is currently stockpiled in Alaska, California, Washington, Hawaii, Texas, Florida, and New York contains an OSHA human health hazard and a warning

to "Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid." Why is this allowed?

The EPA maintains a schedule of chemical products for use in spill cleanups. However, the EPA only screens products for effects on wildlife and the environment, not humans. Yet, it is not just the environment that is at risk when chemical products are used. It is spill responders, and the public in places of multiple use and where drinking water or land may become contaminated. There are no guarantees that the products are safe for the environment either, as pointed out in a paper by EPA staff which I have attached. (Nichols 1999).

[The referenced paper was not submitted at the time of print.]

Other problems with the product schedule that should concern this Committee are a loophole in Subpart J which allows crude oils to be blended for product testing, no formal delisting process in Schedule C, and no requirement to test stockpiled product periodically to ensure effectiveness.

In summary, much of what I have discussed is covered in my book, "Sound Truth and Corporate Myth$: The Legacy of the *Exxon Valdez* Oil Spill," which I would like to leave with this Committee. I urge this Committee to maintain high spill prevention standards for all operators, and to insist that EPA incorporate its new oil toxicity science, and weigh the increased risk to all Americans against the benefits to the few from cost savings on oil spill prevention measures.

Thank you for this opportunity to testify.

Senator Inhofe. Thank you, Dr. Ott.

Dr. Corbett.

STATEMENT OF JAMES J. CORBETT, Ph.D., ASSISTANT PROFESSOR, MARINE POLICY PROGRAM, GRADUATE COLLEGE OF MARINE STUDIES, UNIVERSITY OF DELAWARE

Mr. Corbett. Good morning, Mr. Chairman and members of the committee.

I am James Corbett. I am an Assistant Professor in the College of Marine Studies at the University of Delaware. The College of Marine Studies is an interdisciplinary unit that conducts research and education regarding fundamental and applied problems in environmental science and policy. My research develops and applies tools and analyses to help reveal and evaluate technology policy alternatives related to energy, environment, and transportation.

Additionally, I have experience as a practicing professional engineer who helped facilities comply cost effectively by certifying Spill Prevention, Control, and Countermeasures Plans, and I have experience as an operating engineer of facilities and ships that store, transport, and handle oil.

SPCC plans protect businesses, both small and large, from direct cleanup costs and liability for damages. Oil spills and discharges from routine operations impair our Nation's fertile land, the water network that gives it life, the living ecosystems impacted by oil toxicity, and the public health. The costs of preparing SPCC plans afford businesses the benefits of fewer spills, better control of routine discharges, and countermeasures that may contain spills within

the facility instead of polluting a facility's neighboring communities and environment.

In other words, SPCC plans are recognized successes at minimizing the burden of oil spills to business and society because they reduce the risk, both the likelihood and the consequences of oil spills.

From a policy perspective, good environmental regulation reduces impacts and costs of pollution that are external to the facility's normal operation. This remains an explicit purpose of the original SPCC plan requirements and objectives. In this regard, a good SPCC plan is more cost effective through prevention, control, and countermeasures within a facility than the direct and indirect costs of responding after a spill.

EPA's proposed revisions raise the question whether it is more beneficial to act to prevent an event or to respond afterwards. EPA uses a rationale that argues it is better for small facilities to bear the greater burden of liability without adequate spill prevention measures.

Specifically, I have three major policy concerns. No. 1, preventing spills appears in the revised rule to be less important for small facilities. Without any risk-based justification, this provision implies that only facilities large enough to afford spill prevention plans should be asked to do them, while leaving smaller facilities exposed to the risk of higher cleanup and liability costs. More frequent yet smaller volume spills and discharges can occur from smaller facilities contrary to EPA's summary statements.

This is No. 2. The rule indefinitely allows agricultural facilities to avoid SPCC plan compliance even though spill prevention may better protect rural farming areas of our Nation. PE expertise, in fact, can help farmers whose job is feeding America by providing the expertise for alternative prevention measures.

And No. 3, the proposed revisions weaken certification requirements by relying less on independent professional expertise. Justifying self-certification of SPCC plans on the basis that no spills occurred in the last decade is like allowing me to write prescriptions for my child, instead of requiring a physician's educated examination and judgment, because my child hasn't had a serious illness in the last 10 years. It provides no public guarantee or sufficient requirement that the person certifying the plan possesses education, professional qualification, and the commitment to public safety that the professional engineer license does require.

I think what I will do at this point is let the rest of my testimony be submitted in written form and welcome any questions that you may have.

Senator Inhofe. Well, thank you, Dr. Corbett.

We will have a series of questions. It is my understanding that both Senators Carper and Voinovich will be coming back, and they will join us in the questions if they do make it back.

Mr. Coyne, as you know, I am very familiar with how airports operate, and I think of a berm and what that would do in terms of safety. Well, let me ask you this way. I notice at almost every airport I go in and out of, the drains are there. I assume that might be local jurisdiction, or it might be State, or is that a Federal

law? And why would that not take care of the risk that would be there in the case of an oil spill the same as a berm would?

Mr. Coyne. I think that the only thing you can really say about airports across the Country is that every one is different. Some of them are owned, of course, by private entities; some of them are owned by the local Governments; some of them are owned in conjunction with something like the Port Authority. So they have a wide group of regulations. And, obviously, the location of the airport affects a lot of the drainage requirements as well, the State requirements.

But I think your point is quite accurate that there are very significant local and Federal and State regulations that affect drainage that exists at airports. Now these rules typically are managed by the FAA in conjunction with EPA and local and State Government. One of the things that has been troubling about this process over the last 4 years since 2002 is that the EPA and the FAA really didn't have very good communications between the two of them until very recently.

But I think you are absolutely right. The drainage alternative is clearly much preferable to the whole question of berms because berms at an airport are almost impossible to envision in a practical sense. You have got issues that would be involved with water collecting on the berms and turning into ice and becoming a hazard. You have got issues related to snow removal. You have got issues related to aircraft moving around. Especially also you have the issue of many airports, as you know, have two or three or four or five or six FBOs providing fuel. From all of those trucks, from all the different sides of an airport, to be told to go to one location because it is bermed, you would have trucks driving back and forth across runways, across ramps and so forth, all to go to one particular location, tremendously increasing the amount of truck activity at an airport, increasing air pollution, increasing the risk of an accident.

It is much more logical to have those trucks parked close to where the planes are going to be coming in and allowing them to be ready. As you know, a plane can arrive at any time 24 hours a day. So you have got to be ready to deal with that uncertainty.

So we feel that requiring all of the trucks to go to a berm location at an airport would be almost totally unworkable, which is why we are happy, frankly, that the EPA has in their draft proposal suggested that they, too, finally understand that that is not workable.

Senator Inhofe. That is a good answer. A lot of people are not aware of the activity that takes place in a GA airport, as you and I are.

Mr. Cummings, the OIPA has done a series of white papers on the issue related to this rule, and without objection, I will make those a part of the record in this hearing.

[The referenced material can be found on page 255.]

Senator Inhofe. In its guidance document, the EPA reiterates a settlement agreement reached between the API and others on whether produced water from dry natural gas wells was covered by wastewater treatment exemption. Can you explain to the Committee why the produced water from oil wells should be exempt as it had been under 1973 or prior to the 2002 rule changes.

Mr. Cummings. Yes. The produced water is stored in a separate tank. It is not a crude oil storage tank; it is a separate tank that is just for the produced water. Occasionally, they will have a thin film of oil or perhaps a sheen, but that volume is typically very, very small, less than one barrel, and does represent a significant risk to the environment.

Senator Inhofe. All right. The following is a statement by the American Society of Civil Engineers, and I am going to read this and then ask you a question. I will have this as a part of the record.

"The plan to allow owners, who have had more than 30 years to adjust to the PE certification program, to verify for themselves that their facility complies with the SPCC rules is particularly ill-advised. Typically, these facility owners are not technically competent enough to make,' they are talking about you now.

[Laughter.]

Senator Inhofe. "They are not technically competent enough to make the complex calculations necessary to certify compliance with the SPCC's program requirements.' Do you agree that you are not competent enough to do this?

Mr. Cummings. No, I believe I am competent enough to do this. The calculations are fairly simple volumetric calculations, taking into consideration the tank size, the freeboard for rain, the daily production of oil. These are all very simple, straight forward, volumetric calculations that most people learn in their high school years.

Senator Inhofe. All right.

[Laughter.]

Senator Inhofe. Let me go ahead, and we will have a second round. I have a couple other questions.

Senator Carper has joined us. Would you like to make an opening statement, and then we will go to Senator Jeffords for his questioning, if that is all right?

OPENING STATEMENT OF HON. THOMAS R. CARPER, U.S. SENATOR FROM THE STATE OF DELAWARE

Senator Carper. Thanks, Mr. Chairman and to my colleagues, and to our witnesses, especially those from Delaware. Any spouses who might be in the audience, we welcome you today. I appreciate the chance to say a few words this morning.

On the one hand, we have a need, I think, to be responsive and sensitive to the concerns raised by small businesses, by farms, by farmers with respect to developing the ability to respond to spills from their storage operations, and to use some common sense.

I apologize for not having a chance to hear from our other witnesses. I just got a quick summary of your testimony here from my staff.

What I understand is that back in the 1970's, a policy was adopted. Correct me if I am wrong here, my colleagues. My understanding is a policy was adopted in the 1970's that said pretty much if you have petroleum, oil, or something like that stored in fairly large quantities that you had to had an engineer certify that you had the capability to clean up a spill that might occur.

I understand that a couple years ago, someone came in and suggested, maybe it was the Small Business Administration, but someone has come in on behalf of small businesses to say that, rather than having an engineer come in and certify that the cleanup structure is in place, that it might be all right to just self-certify for those storage tanks that are less than 10,000 gallons.

I have some concerns about that. I am anxious to have a change to ask some questions of our colleagues. So I think it is timely that we are doing this, and hopefully we will get to the bottom of it and get some answers. Again, to our visitors, our guests, thanks for joining us and for sharing your insights with us.

Thank you.

Senator Inhofe. Thank you, Senator.

Senator Jeffords, you are recognized for questions.

Senator Jeffords. Dr. Ott, based on your knowledge about the behavior of oil in aquatic environments, if smaller water bodies such as small streams or wetlands were subjected to the uncontrolled release of petroleum products, how would those ecosystems be affected, and would those effects be felt in receding waters of such streams?

Ms. Ott. Thank you for your question.

Based on my experience and the new science, we need to be more careful. We found that a lot of these waterways do connect, and what happens upstream is reflected downstream. There is a growing concern that in the 1970's, we understood vaguely, scientifically speaking, that water quality was connected to environmental health. Now with the new science on oil pollutants and other chemicals, our understanding is much more sophisticated, and we are able to very much hone in on how water quality and extremely low levels of chemicals definitely affects wildlife.

So, yes, upstream affects downstream.

Senator Jeffords. Thank you.

Dr. Corbett, can you describe what the mechanism is in the existing SPCC program for the public to obtain some degree of assurance that actions are being taken to prevent oil spills, how the EPA's projected rule alters that process, and what role enforcement plays in that process?

I will repeat that if you want.

Mr. Corbett. I want to make sure. Just repeat the first part because I was writing on the second two, so I wouldn't forget.

Senator Jeffords. Can you describe what the mechanism is in the existing SPCC program for the public to obtain some degree of assurance that actions are being taken to prevent oil spills, how the EPA's proposed rule alters that process, and what role enforcement plays in that process?

Mr. Corbett. Thank you very much. That allows me to sort of add to some of the dialog regarding whether facilities managers' competencies are called into question in absolute sense or not. I don't dispute the competence of the managers that I worked under when I worked in facilities that stored and managed oil.

In many, many cases, what I think the rule does in the original form is it ensured the public that there was an expert reviewer on their behalf of the plans that were in place. For well-run facilities,

PE certification is a simple matter, reinforcing and confirming the good operational judgment of good managers.

What the proposed changes seems to have done is to disconnect that expertise from the individual certifying, and essentially say that a facility that has been spill-free for 10 years can have whatever the current manager is, regardless of their expertise and experience, certify the plan. That is sort of like saying that if my car hasn't been in an accident in the last 10 years, anybody can drive it expertly, and I don't believe that that is true.

The other thing, the last part of your question is one I think is a more thoughtful part of it. My first reaction is that the role of enforcement would likely be increased by a self-certification system because these plans currently are not submitted for public review and comment. They are not held in EPA regional offices. They are available only onsite for inspection when the plan is written the first time or when there is a substantial change to a facility's infrastructure and operations. That is the trigger that brings the PE into the system to ensure that the plan is cost effective for the business and protects the public health and environment according to the regulations.

Senator Jeffords. Dr. Ott, can you comment on Mr. Dunne's statement that the evolution of science regarding oil spills did not have a major impact upon their proposed rule?

Ms. Ott. I completely disagree with that comment. I think it shows a lack of understanding of the new science. The new oil toxicity science is like Columbus discovering suddenly that the world is round. It shifts everything. The new science completely changes the risk assessment equation. There is new risk to public health and the environment, now we know oil is more toxic. This is new risk. That new risk needs to be factored into the cost-benefit analysis to weigh against the supposed benefits or cost savings from inadequate oil spill preparation. So, it really does completely change the formula.

I wanted to do one follow-up comment. There has been a lot of discussion about navigable waters and what waters exactly does the Clean Water Act protect. It seems to me here we need to use a little bit of common sense about the Clean Water Act: it is supposed to be protecting waters for all Americans.

I just want to reflect on what happened with the wolves when they were introduced into Yellowstone. Scientists found that populations of songbirds increased. Scientists had no idea that the songbirds were connected to the wolves. The pathway was that the wolves increased the predation on deer. Deer were stripping the foliage off the bushes. So by decreasing the deer population, increased habitat for songbirds.

This is the kind of thing that is going on with waterways. They are all connected. Right now in Alaska, we are fighting to prevent industry from having mixing zones in spawning streams of salmon. Industry is arguing that they can put pollutants directly into salmon spawning streams and not have an effect. This is crazy. We know better than this now.

So there is increased risk, and we need to have better standards to prevent spills as a result of this increased risk.

Senator Jeffords. Thank you.

Senator Inhofe. Senator Carper.

Senator Carper. Thank you.

Let me just ask my colleagues: When were you elected to the House of Representatives?

Senator Inhofe. 1986

Senator Carper. 1986.

Senator Jeffords. 1974.

Senator Carper. Yes, it has been a while. I was elected in 1982. I recall, and I remember this because when I hired a woman to be my Legislative Director, her name was Janet St. Amand, she had previously worked, I think, maybe as the Legislative Director for then Congressman Jim Coyne, and it is just very nice to see you again. I think you and Peter Kostmeyer, I recall, kept swapping seats.

[Laughter.]

Senator Carper. I think every 2 years, we would have a merry-go-round there.

Mr. Coyne. It was a close district, yes.

Senator Carper. It sure was. It is great to see you again.

Mr. Coyne. Thank you.

Senator Carper. Thanks. I kid people, and I say I enjoyed working for Janet St. Amand as my Legislative Director. So you know what I mean. It is good to see you again.

Let me just kind of go down the line. I have some questions, especially for Dr. Corbett. Since I missed your testimony, I want to ask each of you to just give me like a 30-second takeaway. What would you have me take away, basically? If I don't remember anything else from you said here today, what would you have me take away?

Mr. Cummings. That secondary containment for oil tanks is the primary preventive measure and the requirements for integrity testing, certified plans, etcetera are not going to stop any spills; secondary containment for oil tanks is the thing that will stop spills and provide the most benefit.

Senator Carper. All right, thank you.

Congressman Coyne.

Mr. Coyne. Senator, I would like you to take away the thought that at airports where mobile refuelers were originally subject to this SPCC, the EPA has come up with an NPRM which is going to provide, I think, a more reasonable solution. However, the solution in their proposed rule is still somewhat awkward and unclear, and we need some clarification.

Also, we need the EPA to work more closely with the FAA because, as you know, at airports as opposed to everybody else you are listening to here, the businesses at airports are the most heavily regulated by the Federal Government entity there is. I mean all sorts of Federal regulators come to them everyday, and it is much more important for that regulation to be developed with close coordination with the FAA to deal with the other issues, so that we don't have unintended consequences from EPA acting by itself.

Senator Carper. OK, thank you.

Mr. Owen.

Mr. Owen. Senator, the Agriculture Coalition thinks that farmers should be exempt from the SPCC rules based on the data that has been submitted.

Senator Carper. Good, thank you, sir.

Dr. Ott.

Ms. Ott. Oil is more toxic than we thought 34 years ago, and this should be reflected now in all of our laws that have anything to do with regulating oil pollution. The new science on oil toxicity shows increased risk to public health and the environment.

Senator Carper. All right, good, thanks.

And Dr. Corbett, I have a couple more specific questions I want to ask of you. I understand your wife is here with you today, Beth.

Mr. Corbett. Yes, thank you.

Senator Carper. I want to welcome her to these hallowed halls. It is great of you to come. Thanks for bringing your husband and allowing him to speak. I can just barely see your lips move when you speak, so it is pretty clever the way you two do that.

Mr. Corbett. I had to practice a lot on that.

[Laughter.]

Senator Carper. Dr. Corbett, can you explain your experiences with the Spill Prevention, Control, and Countermeasures plans? If you could, could you explain the role of professional engineers in the certification process and the costs that are involved in that process?

Mr. Corbett. Yes, I can. My own experience was working for another very well respected, but no longer in existence, environmental consulting firm that competed with Mr. Coyne's. In my work, we would have staff and licensed engineers on a team, preparing plans for facilities. Most of these were larger commercial facilities or military installations.

However, included in the facilities, that we wrote Spill Prevention, Control, and Countermeasures plans for, were facilities that leased many, many, many acres to farmers. There was an agricultural operation within the bounds of some of these facilities. So, I had the opportunity to evaluate the measures, write the plan, and certify plans that successfully protected agricultural lands.

What is involved in that, in general, is that the preparation of the plan is something that managers can do largely themselves, or assist directly in. For the PE, the certification requirement essentially means that the engineer has to review the plan, assure that it is facility-specific, and assure that it complies with the regulatory requirements.

Often, however, the professional engineer provides additional value to the small business by suggesting more cost effective ways to store, manage, or handle the oil, so that they can minimize the costs of compliance, and in fact can make some of the tough choices where, in practicality, an equivalent measure may be most feasible for that facility.

The point I want to make with regard to that is that with the PE's involvement, we did not produce one size fits all. We produced plans that were thoughtful, specific to the facilities, and expertly tuned, so that they not only complied with regulations but they complied with regulations within the operating and infrastructure conditions of that facility.

Senator Carper. All right, thank you. I think my time has expired.

Senator Inhofe. We will have another round.

Senator Carper. That is great, OK. Thanks very much.

Senator Inhofe. Thank you, Senator Carper.

Senator Voinovich, Mr. Owen, had a question that I am going to try, and you may want to respond to it for the record. In terms of the compliance with the 10,000 rule, it is my understanding that when we came out with the rule just the other day, that that exempted only those farmers who were exempt under the 1973 rule? Is this your understanding?

Mr. Owen. Yes, that is the way I understand it.

Senator Inhofe. All right. Would you kind of explain the problems in conjunction with that.

Mr. Owen. Well, if you have a facility on your farm or ranch or whatever that is compliant, the way I understand it, under the new proposal for 2005, if you are compliant with the 1,320 gallon rule that was in force back in the 1970's, then you will be able to get the extension. If you did not comply with that, if you did not have the plan in effect that has been certified by a PE, then you are not able to get the extension on the new rule.

Senator Inhofe. OK, that is good. I appreciate that.

Now you mentioned just a few minutes ago that the cost of this, in terms of farmers, at $4.5 billion I think you said. Is that correct?

Mr. Owen. That is correct.

Senator Inhofe. How is it calculated? What components went into that calculation?

Mr. Owen. The USDA and the Agriculture Coalition that did the survey, based on a certain amount of survey, they felt they got a very good representation from farmers. During that survey, they used a lot of numbers. They specified it in the back, actually. It would take me a long time to dig through and go through all the numbers.

Senator Inhofe. OK.

Mr. Owen. Based on the number of farms that would be affected and a number that USDA came up with that it felt.

Senator Inhofe. The reason I asked that is I want to kind of get that into an Oklahoma perspective for my own benefit. So I will, and if you can help me on that respect, I would appreciate it.

Mr. Cummings, in a letter of the OIPA, that is the Oklahoma Independent Petroleum Association, submitted during the comment period on EPA's notice of data availability, it suggested a threshold or recommended a threshold of 42,000 gallons. Without objection, that study or that portion of the study would be made a part of the record.

Senator Inhofe. Can you explain to the committee why the 10,000 gallon threshold proposed by the EPA doesn't work for small producers?

Mr. Cummings. Yes. The majority of facilities, small marginal well facilities, will have two tanks, typically 210 barrel or 300 barrel tanks. Typically, you would produce into one tank until you had a volume of saleable quantity. Then, you would prepare that for sale and the produce into the other tank while you were waiting for the truck to actually come and actually pick up the 1st tank.

The 42,000 gallon volume was derived from 1,000 barrels which would cover the typical small marginal well tank volumes that are on location. Now that wouldn't typically be a single tank of that size, but because most locations have more than one tank, we came up with that level to try to take care of both tanks, although any single tank would not be near that size.

Senator Inhofe. To help us resolve a little disagreement we are having with my staff, you used the 10 barrels a day as the level for marginal production. It used to be 15 barrels a day. Do you remember when that changed?

Mr. Cummings. I am not sure. There are different entities that describe the levels at different volumes. I think in Federal legislation stripper wells are 15 barrels per day or less, but according to the Interstate Oil and Gas Compact Commission, marginal wells are 10 barrels a day or less. So it depends on whose definition and exactly which term you use.

Senator Inhofe. Yes, I was clearly right.

[Laughter.]

Senator Inhofe. Dr. Corbett, in your testimony, you seem to argue that the fear of liability is not sufficient to work to prevent oil spills. Then Dr. Ott, in her testimony, said, and I think I am quoting this, that the fear of liability is what works best. Which is it?

Mr. Corbett. I am first a trained engineer, and so I am afraid of everything.

[Laughter.]

Mr. Corbett. What I think is I think that the purpose of the rule is not to force that calculus. That allowing businesses to individually calculate whether they should be prepared, preventative, and control their spills within their facilities, so that their neighboring communities and environment are not spoiled, should be the requirement of the rule. That is the way I understand the rule.

What I see the revisions, the proposed revisions doing is setting up a situation that may perversely motivate people to do that calculus, disseminate and distribute their oil storage among facilities that do not meet the thresholds under the new proposed guidance and put more of our environment at greater risk.

With regard to some perspective, I have lived in only five States, not yours yet, but all of those have been agricultural States, and my father was a veterinarian serving ranches and farms in California. From what I can see in the EPA's own data, there are around two million farms in the United States, and only about, I think Mr. Dunne said about 150,000 are subject to his rule.

So I think that if we look at where those are distributed, and the USDA has fine map on its web site that show us where, in fact, those are, you will see that the farms around the United States are located along the watersheds and waterways up and down the Mississippi and the major rivers and in the West on the west side of the Sierras.

Senator Inhofe. All right, thank you very much.

Dr. Ott, you say in your testimony that by lowering the threshold for spill planning and prevention, that the EPA has lessened the liability. It has been my understanding that it has really no effect on the liability at all, but you contend that it does. Is that correct?

Ms. Ott. I think we are just arguing over semantics. I am at the receiving end of oil spills. From the perspective of my community, if additional measures are taken before a spill, that costs money. We have all heard today that these prevention measures cost money. I equate that with liability. So I think it is just semantics.

What I am saying is that the money spent up front is going to be way less and way better spent than the money spent afterward.

Senator Inhofe. All right, thank you.

Mr. Owen or Mr. Cummings, do you have any response to that, any thoughts? All right, thank you.

Senator Jeffords.

Senator Jeffords. Dr. Corbett, can you elaborate on your comments regarding the fact that the EPA's proposed rulemaking does not consider the consequences from agricultural spills to rural ecosystems may be greater than the consequences of a commercial sector spill in more urban regions?

Mr. Corbett. In my research and teaching of my students with regard to policy analysis, I often use spatial information, maps, etcetera to understand whether a rule, or a regulation, or a policy, proposed or existing, does what it says it will do. In making this proposed rulemaking, EPA provides very little information about where these facilities are with regard to the environments that they are protecting. Because of that, it is impossible really to judge whether the risks and consequences to the environment are greater, are made greater or lessened from the proposed rule.

However, independently looking at where we know farm facilities are, and I would love to find locations where some of these other facilities are, we could then do the risk assessment of what would those facilities pose in terms of potential consequences if they were not using prevention, control, and countermeasures best practices.

And so, I am not sure that I understand whether they have done that at all. It is not accessible in the rule, and I couldn't find it in some of their other public documents.

Senator Jeffords. Thank you.

Dr. Ott, given your experiences with the ability of well funded, technologically advanced companies to effectively cleanup oil spills, what is your reaction to the EPA's proposal to eliminate the requirement for smaller facilities to have a professional engineer certify oil spill prevention plans and depend more heavily on response?

Ms. Ott. I shudder at this proposal. We, in Alaska at least, our experience is that it is very, very difficult to clean up an oil spill. It just, it really cannot be done. It damages. It causes incredible damage. Actually, this was the experience of Washington State as well. They just had, as you might recall last year, a thousand gallon spill in Puget Sound that caused a lot of harm.

I think, like I said before, money spent up front for prevention is far preferred than having to rely on response. We just cannot. I know the technology is supposed to be sophisticated, but the fact of the matter is it just does not work very well yet.

Senator Jeffords. Thank you.

Senator Inhofe. All right, thank you.

Senator Jeffords. Am I finished?

Senator Inhofe. Yes.

Senator Carper.

Senator Carper. Thanks, Mr. Chairman.

Dr. Corbett, did you say your father had been a veterinarian?

Mr. Corbett. Yes, he is a veterinarian.

Senator Carper. Does he still practice?

Mr. Corbett. He is retired now.

Senator Carper. Where, in California?

Mr. Corbett. Yes.

Senator Carper. OK. The question I have is I guess you spent a fair amount of time on farms.

Mr. Corbett. I grew up, helping my dad on ranches and ranch farm combinations, yes.

Senator Carper. OK. In California, I guess, right?

Mr. Corbett. Yes.

Senator Carper. I understand that a small percentage of farms are required to have these Spill Prevention, Control, and Countermeasures plans.

Mr. Corbett. Yes.

Senator Carper. I have no idea what percentage. Is it a few? Is it 10 percent, 50 percent?

Mr. Corbett. The EPA has information from a 1991 survey and from a 1995 survey, and then they summarize what they consider to be the current profile. Consistently throughout each of those, it has been around 8 percent of farms that EPA suggests are subject to these regulations.

Senator Carper. My question is: Do you believe it is necessary to do as the proposed rule suggests, and that is to exempt 8 percent of the farms from this requirement?

Mr. Corbett. No. No I don't. The EPA's survey data also lists the numbers of spills that have occurred in each of the sectors, and agriculture ranks third among the number of spills that have occurred among all the sectors that are subject to this rule.

Senator Carper. OK. These 8 percent of the farms, how are the 8 percent selected?

Mr. Corbett. Well, again, the EPA's rulemaking is silent on that, but my presumption is that those are the ones that are subject to the storage requirements. That, I think is clear in the rule. What that suggest to me is that these may be not the small farms that I was used to going to as I grew up but the larger farms that are serving and feeding the Nation. So that is what I presume. I think I would like to know that data better myself.

Senator Carper. Mr. Owen, do you want to make just a brief comment on that line of questioning for me, please?

Mr. Owen. I don't know anything about the data that the EPA has about the 8 percent in California. All I know is that in Montana, and I know a lot of farmers, spills are very, very rare, almost non-occurring.

During the underground storage tank removal period back in the early 1080's, a lot of us pulled up tanks. We had no problems with that. We were compliant. A lot of us are being very careful about how we handle that fuel because it is getting quite expensive. No one likes a spill, not even a little puddle. Things can happen, but it is just not that big of a problem that we see.

Senator Carper. OK, good. Thanks.

Another question, if I could, for you, Dr. Corbett. I understand the proposed rule seems to indicate that it is cost prohibitive for these small oil storage facilities to comply with the Spill Prevention, Control, and Countermeasures plans. I guess my question to you is: Do you believe that that is an accurate statement of small facilities' capabilities?

Mr. Corbett. I don't believe that it is a generally accurate statement. I also believe that there may be conditions where prevention and countermeasures plans are impractical. As in the current rule, the rules have allowed licensed engineers to make those judgments and to look for alternatives.

I think also there is an opportunity for innovation perhaps to further reduce the burden of these facilities in terms of compliance by evaluating ways to better co-locate and better manage and better distribute oil discharges in the service of the functions of those industries for small facilities.

Senator Carper. Do you want to elaborate just a little bit more on that? I think you may have opened up a line of thought that certainly hadn't occurred to me.

Mr. Corbett. Well, when I did reviews of locations and plans, we sometimes knew that berming an area was prohibitive to access and would create problems. So, we would look at alternatives, spill and overflow protection, other sorts of maybe some monitoring options. We would be able, as a licensed engineer, to make those tough calls and not use a one-size-fits-all approach.

Senator Carper. Anybody on the panel want to kind of react to what he has just said?

Mr. Owen. Senator, in Montana where I am from, licensed engineers are very hard to come by, and they are very expensive. If we could pass the cost onto somebody else or if I had the money, I would be building million dollar facilities right now, but that is just not the case. So we are talking about what can we afford and what can we not afford, and where are we going to get the best value out of this SPCC rule.

Senator Carper. Thank you.

Congressman Coyne.

Senator, in aviation, there are many examples, many, many examples of self-certification where the FAA grants to the pilot, or to a maintenance professional, or to others the ability to certify that a plane is fixed properly, that training has been done, all in the interest of aviation safety regulations. So we have a long history of self-certification that has been widely acknowledged as having been successful in aviation.

And we think self-certification for environmental issues at airports where the business at the airports, the airport management which is typically a public entity, and the association which can also provide guidance to our members, would be a much more effective way of dealing with the unique issues of airports rather than to expect every single person, every time to go out and hire a professional engineer who, frankly, may not be as familiar with the issues of aviation fuel containment at an airport as someone who has been in that business for 20 or 30 or 40 years.

Senator Carper. Mr. Cummings, I think my time has expired, but just briefly, if you would. Thanks.

Mr. Cummings. I was just going to reiterate, as I said earlier, the calculations for spill containment are relatively simple. Many of the things in our oil and gas E&P industry are much more serious problems, i.e., blowout prevention. Personnel are trained in week long courses and do not require a professional engineer to certify they are blowout trained.

Senator Carper. Thanks to each of you. Dr. Corbett, great to see you and your wife. Congressman Coyne, great to see you again as well. Welcome to all of you. Thanks for your input.

Thank you, Mr. Chairman.

Senator Inhofe. Thank you very much.

Let me just make a comment that when Dr. Corbett, you were quoting EPA when you said that only 8 percent of the farms would be affected. The USDA, I think they have a position that 70 percent of the farms would be affected. For the record, since we are going to conclude the meeting right now, I would like to have anyone who wants to comment on that to do it for the record in writing and submit that.

Thank you very much, all of you, for being here today. We appreciate it, particularly my FE-no, not you, Congressman Coyne FE-but my friend from Oklahoma, Mr. Cummings.

Mr. Cummings. Thank you.

Senator Inhofe. All five of you, thank you very much.

[Whereupon, at 11:17 a.m., the committee was adjourned.]

[Additional statements submitted for the record follow:]

STATEMENT OF THOMAS SULLIVAN, CHIEF COUNSEL FOR ADVOCACY, OFFICE OF ADVOCACY, U.S. SMALL BUSINESS ADMINISTRATION

Chairman Inhofe, and members of the committee, good morning and thank you for giving me the opportunity to appear before you today. My name is Thomas M. Sullivan and I am the Chief Counsel for Advocacy at the U.S. Small Business Administration (SBA). Congress established the Office of Advocacy under Pub. L. No. 94-305 to advocate the views of small business before Federal agencies and Congress. Because the Office of Advocacy is an independent entity within the U.S. Small Business Administration (SBA), the views expressed here do not necessarily reflect the position of the Administration or the SBA.

In 2004, the Office of Management and Budget (OMB) and Federal agencies undertook a process designed to reduce the regulatory burden on United States manufacturers through 76 targeted regulatory reforms, including several reforms recommended by the Office of Advocacy. More than half of these reforms involved rules issued by the U.S. Environmental Protection Agency (EPA).[1]

At present, EPA is pursuing some 42 suggestions for reform of environmental rules affecting manufacturers. The Committee has requested the Office of Advocacy's views on progress made by EPA on one of these reforms, the Spill Prevention, Control, and Countermeasure (SPCC) Rule.

SPCC BACKGROUND

SPCC regulations were initially promulgated by EPA in 1973 pursuant to the Clean Water Act to prevent oil discharges into water. Generally, a facility that stores oil of any type in quantities above certain threshold levels is required to abide by a Spill Prevention, Control, and Countermeasure Plan.

Because of the complexity and cost of the SPCC program, many small businesses find it difficult to comply with the 1973 requirements and the new requirements adopted in 2002. For example, EPA requires covered facilities to prepare spill pre-

[1] The 2004 initiative to improve manufacturing rules is the most recent in a series of regulatory reform efforts initiated by this Administration since 2001. OMB called for public nominations of rule reforms in the May 2001 and March 2002 Draft Reports to Congress. OMB received 71 and 316 nominations from the public, respectively. OMB did not issue a public call for nominations in 2003. OMB's latest report can be found at http://www.whitehouse.gov/omb/inforeg/2005_cb/final_2005_cb_report.pdf.

vention plans that are certified by a professional engineer. The Office of Advocacy believes that this is a costly and unnecessary expense for firms with small-capacity storage tanks, and EPA's new proposal addresses this. EPA recognized that small volume tanks do not generally pose the same environmental risks that larger volume tanks do, nor do they often require complex plans.[2]

The stringency of some of the 2002 SPCC requirements prompted the agricultural community, electrical industry, airport community, construction industry, oil and gas producers, manufacturers, and others to raise issues regarding the adverse impacts of these regulations. The regulated entities were particularly surprised by the 2002 revisions, given that the stated primary purpose of the amendments was to reduce, and not increase regulatory burdens. In response to small business' outcry, the Office of Advocacy has worked extensively with EPA and the regulated communities to identify small business concerns related to this rule since shortly after the amendments were published in July 2002. The Office of Advocacy suggested reforms to the SPCC requirements in June 2004, including allowing facilities with an oil storage capacity below certain thresholds to use streamlined, less expensive requirements.[3] We believe that overall SPCC compliance would improve with a simpler, less expensive program that is tailored to small facilities.

On September 17, 2004, EPA issued a Notice of Data Availability (NODA) requesting public comments on the Office Advocacy's suggested approach for facilities that handled oil below certain threshold amounts.[4]

EPA staff has worked to meet the challenge of reinventing a SPCC rule that has suffered from widespread confusion and dissatisfaction about its regulatory requirements. The Office of Advocacy supports EPA's efforts and is pleased with the improvements EPA made to SPCC requirements through guidance and the proposed revised regulatory requirements. Several of our June 2004 suggestions were used to formulate this proposal.

EPA PROPOSES TO AMEND SPCC PLAN REQUIREMENTS

After studying the criticisms of the regulations, and the responses to the two recent notices of data availability, EPA is proposing new amendments to the SPCC Rule. We welcome EPA's proposal to amend the SPCC requirements, and the Office of Advocacy is supportive of the specific provisions for small facilities, airports, motive power, and oil-filled equipment. These amendments will provide relief for small businesses, while improving environmental protection by facilitating compliance by smaller firms.

SMALL FACILITY PROPOSAL

SPCC regulations require that all SPCC Plans be certified by a professional engineer (PE) who attests that the plan has been prepared in accordance with good engineering practice.

Based on EPA's proposed amendment, SPCC Plan requirements will now allow hundreds of thousands of small firms to self-certify their SPCC plan in lieu of expensive PE review and certification. Facilities with oil storage of under 10,000 gallons that can provide adequate protection against discharges can now prepare and implement a SPCC Plan without the involvement of a PE. Model plans can be written by trade associations that can be readily adapted for a small facility, as was successfully done for the accidental release program under section 112 (r) of the Clean Air Act.

INTEGRITY TESTING

Another key issue addressed by EPA in the new proposal involves the integrity testing requirements for tanks and containers. Industry experts believe that integrity testing for small shop-built tanks and drums is unnecessarily expensive, and is not technically feasible for drums. At an Environmental Roundtable held by the Office of Advocacy in May 2004, the National Paint and Coatings Association noted that integrity testing just for their industry's tanks would cost $20 million over a

[2] According to a 1995 EPA survey, facilities with total storage capacities of 5,000 gallons or less account for an estimated 48 percent of all facilities, but only 0.2 percent of oil discharged. In its own analysis of the 1995 survey, EPA noted that "facilities with larger storage capacity are likely to have a greater number of oil spills, larger volumes of oil spilled, and greater clean-up costs." U.S. EPA, Analysis of the Relationship Between Facility Characteristics and Oil Spill Risk (1996).

[3] The June 2004 letter is located at http://www.sba.qov/advo/laws/comments/epa04_0609.pdf.

[4] See 69 Fed. Reg. 56,182 (September 17, 2004). EPA also issued a NODA relating to a suggestion to modify the oil-filled equipment requirements. *Id.* at 56184.

10 year period. The Office of Advocacy recommended that EPA allow visual inspection without the need for obtaining a costly PE certification for small tanks and containers under specified conditions.

The Office of Advocacy is pleased with EPA's proposal for additional flexibility in integrity testing by allowing facilities to consult and rely upon industry inspection standards for small facilities (under the 10,000 gallon threshold) without employing a PE. Using the Steel Tank Institute SP001 industry standard, visual inspection will be allowed for all small facilities with tanks of up to 5,000 gallons. As discussed in the preamble to the proposal, EPA seeks comment on an alternative to extend this SP001 provision to all small facilities (under the 10,000 gallon threshold). We expect small businesses will support this provision and it will not present additional hazards because all small facilities are required to have release barriers and secondary containment.

MOTIVE POWER

We also welcome EPA's proposed elimination of "motive power" equipment from the scope of the SPCC rule. The Agency decided that it did not intend to cover tanks that are used to provide motive power to tractors, forklifts, mobile cranes, and other mobile equipment. EPA realized that it did not make sense for the SPCC rule to cover retail dealerships selling tractors, or to include construction sites under SPCC. The Agency found that it was not practicable to require containment around vehicles that regularly move about the site. This step will provide relief at thousands of facilities.

AIRPORTS

Owners and operators of airports objected to the burdensome and potentially dangerous requirements of secondary containment of mobile refuelers which operate at airports. The airport community has objected that such requirements raise serious safety and security concerns. EPA responded to this objection by proposing that the "sized secondary containment" (the catchment basin must be large enough to contain the capacity of the largest container) requirements be replaced by "general secondary containment" (no sized requirement). The Agency has posed an alternative for comment that would limit SPCC requirements to active refueling operations, which EPA states is the most common source of airport spills. My office will continue to work with EPA on flexible alternatives.

FARMS

The Office of Advocacy supports the proposed indefinite extension of the compliance date for farms pending additional study by EPA. With an estimated hundreds of thousands of farms subject to this rule (the largest universe of firms subject to SPCC), both the U.S. Department of Agriculture and EPA have expressed interest in a specific examination of the number and type of oil tanks, the spill history, the proximity to U.S. waters, and other relevant issues to determine the appropriate course of action.

OIL AND GAS PRODUCTION FACILITIES

While the proposed small facility rule provides relief for hundreds of thousands of small facilities, the 10,000 gallon threshold does not provide relief for thousands of independent oil and natural gas producers. A large number of these producers and their associations supplied comments on the November 2004 notice of data availability, expressing support for a separate approach for these facilities that face unique SPCC problems. Issues unique to oil and natural gas production include the cost and impracticality of secondary containment around flowlines, and the lack of a wastewater exemption for produced water tanks.[5] Small businesses in that industry are asking for EPA to propose additional changes for the oil and gas producers through rulemaking.

ASPHALT

As a result of substantial concerns raised by the construction industry, we advocated for the exclusion of asphalt cement and hot-mix asphalt from all SPCC- related requirements in our June 2004 letter. The Office of Advocacy based this on the observation that both asphalt cement and hot-mix asphalt are solid-to semi-solid at normal outdoor temperatures, and would not flow very far before becoming solidi-

[5] Produced water tanks contain water that was extracted from the oil/water mixture is recovered from the ground using an oil/water separator.

fied. This behavior was confirmed by an industry analysis of spill data provided to EPA in August 2004.[6] Another approach would be for EPA to draft guidance that would advise facilities to rely on active measures to stop any spill from reaching navigable waters, based on the most likely spill scenarios as determined using sound engineering judgment, in lieu of the more expensive passive measures, such as secondary containment.[7] We are hopeful that these options remain under consideration.

OIL-FILLED EQUIPMENT

The Office of Advocacy is supportive of EPA's proposed reduced requirements for oil-filled equipment. The proposal moves away from the more expensive secondary containment requirement and allows facilities to substitute an oil contingency plan and a written commitment of manpower, equipment and materials to expeditiously control and remove any oil that may be discharged. This provision reflects the fact that such equipment, unlike storage tanks, has a low spill rate. Such equipment rarely requires oil transfers, is generally corrosion-protected, and is frequently monitored and inspected for leaks.

THE OFFICE OF ADVOCACY IS COMMITTED TO WORKING WITH EPA TO COMPLETE SPCC REGULATORY REFORMS

On behalf of small business, my office commends EPA for listening to small business concerns while drafting these amendments.

The Office of Advocacy has worked closely with EPA and other entities to implement needed regulatory reforms. Our involvement has included holding roundtables to receive suggestions on needed reforms, working with small business representatives to hear their views, and completing a report in June 2004[8] addressing small facility issues. Congress realized the importance of small business when the Regulatory Flexibility Act (RFA) and the Small Business Regulatory Enforcement Fairness Act (SBREFA)[9] were enacted into law. Under the RFA and SBREFA, we look for ways to reduce small business burdens without compromising the regulatory objectives intended by the regulating Agency. We believe that EPA's regulatory reform efforts can achieve those same objectives.

Thank you for allowing me to present these views. I would be happy to answer any questions.

RESPONSES BY THOMAS SULLIVAN TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. Concerns have been raised about allowing facilities to self-certify their SPCC plans. Several associations representing engineers oppose the provisions arguing that those operating these facilities do not have the technical expertise to determine how to prevent spills at their facilities. Can you describe for the Committee the types of facilities you encountered while developing your proposal on which EPA based its December 2005 proposed rule? Would you also please explain for the committee why SBA recommended this approach and if there are other similar Federal programs that also contain planning requirements without a PE certification. Finally, please also discuss for the Committee why your office believes self-certification will result in more compliance with the SPCC rule and therefore fewer oil spills?

Response. There are several hundred thousand farms, car dealers, construction sites and other small facilities with small amounts of oil storage. Such facilities are unlikely to need the services of a professional engineer, at a cost of up to $7,000 to prepare a SPCC plan for a small facility. During 2003 and early 2004, Advocacy met with a wide variety of small business groups, including car dealerships, construction, chemical, paint and other manufacturing, agricultural groups, and utilities. Advocacy believed that small facilities with simple layouts and tanks that are not interconnected (e.g., farms, car dealerships or construction sites) did not require site visits, nor the help of a professional engineer (PE). The types of facilities subject

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[6] The National Response Center-Analysis of Data 2000-2003, National Asphalt Pavement Association, August 31, 2004.

[7] An active measure requires an action by the facility to prevent a spill from reaching navigable waters, and a passive measure involves a permanent structure designed to prevent spills from reaching such waters.

[8] Proposed Reforms to the SPCC Professional Engineer Certification Requirement: Designing a More Cost Effective Approach for Small Facilities, (June 2004) by Jack Faucett Associates for the Office of Advocacy under contract SBAHQ-00-D-006.

[9] Codified at 5 U.S.C. §§601-612.

to SPCC requirements are described in detail in the November 2005 EPA Economic Analysis of the small facility proposal.

In September 2003, the Office of Advocacy (Advocacy) provided EPA with a report, developed for Advocacy by Jack Faucett Associates (JFA), outlining potential regulatory revisions to small facilities with storage of less than 10,000 gallons. Advocacy supported several revisions discussed in the JFA report that replaced blanket PE-certification requirements with set requirements based on volume thresholds. Advocacy recommended that EPA establish a 10,000 gallon threshold for small facilities in place of the PE certification requirement. In January 2004, a coalition of 10 small business groups wrote EPA endorsing this three-tier self-certification scheme. The industries represented in that letter are: Agricultural Retailers Association, American Bakers Association, American Forest and Paper Association, American Trucking Association, Automotive Oil Change Association, Independent Lubricant Manufacturers Association, National Automobile Dealers Association, National Association of Fleet Administrators, National Cotton Council of America, and the Synthetic Organic Chemical Manufacturers Association.

We followed this with a June 2004 letter, accompanied by the June 2004 JFA report, that described the small facility concept in more detail.

EPA has rules in place for underground storage tanks, hazardous waste generators, and storm water pollution prevention that affect hundreds of thousands of facilities, mostly small firms. These programs, that have been in effect since the 1980's and 1990's appear to be working well, and do not require the services of a professional engineer. EPA has issued guidance materials for the regulated entities, such as "Understanding the Small Quantity Generator Hazardous Waste Rules: A Handbook for Small Business", a 32-page booklet issued in September 1986. This booklet was effective in communicating the applicable requirements. This program was supplemented by outreach through trade associations.

Given the fact that SPCC affects hundreds of thousands of facilities, predominantly small business facilities, affecting a large diversity of industries, there is a large opportunity to increase compliance rates. The March 2005 USDA survey found that 61 percent of farmers were unaware of the applicability of the SPCC requirements to farms. If this survey figure were representative of all farms, the amount of farm noncompliance would exceed 61 percent. Thus, there is substantial room for improving such a low rate of compliance. We agree with EPA's Economic Analysis to the December 2005 proposal that streamlining the SPCC requirements would create the opportunity for increasing the compliance rate and improving environmental protection. EPA stated "to the extent that the rule increases the compliance rate by lowering compliance costs, the proposal will have a positive impact on environmental quality".9 The self-certification approach is simpler and less costly, and will enable small firms to more readily come into compliance.

Question 2. The Oklahoma Independent Petroleum Association (OIPA), in their letter to EPA regarding the NODA argued that the 10,000 threshold proposed was not sufficient because many of their wells once produced significantly greater amounts of oil than they currently do. Therefore, the wells have on site storage capacity far in excess of what is actually used. Further, they must accumulate greater amounts of oil to make these wells profitable and their smallest facilities are not helped by the 10,000 threshold. Do you have any thoughts on their concerns? Can you please comment on whether the size threshold in the NODA is sufficient for small oil producers?

Response. While the proposed small facility rule provides relief for hundreds of thousands of small facilities, the 10,000 gallon threshold does not provide relief for thousands of independent oil and natural gas producers. More than 90 percent of these producers are small businesses. A large number of these producers and their associations supplied comments on the September 2004 notice of data availability, expressing support for a separate approach for these facilities that face unique SPCC problems. We agree with these concerns and believe that EPA should examine regulatory revisions for this industrial sector.

These commenters noted that hundreds of thousands of facilities with marginal and non-marginal wells of up to 50,000 gallons could be appropriately exempted from the professional engineering certification requirement. Such production facilities, and particularly the marginal well operations, operate at very small profit margins like other small facilities subject to the 10,000 gallon threshold. The industry commenters also noted that historical evidence shows that the smaller oil and gas production facilities do not pose a significant oil spill risk to navigable water.

Question 3. Dr. Corbett argues that we should provide any flexibility to affected stakeholders and that EPA has not proven such flexibility is needed. Do you agree that compliance rates would likely increase significantly if the rule provided the reg-

ulated community with some compliance options as well as being a rule they could afford and understand while believing too that it was necessary?

Response. Given the fact that SPCC affects hundreds of thousands of facilities, predominantly small business facilities, affecting a large diversity of industries, there is a large opportunity to increase compliance rates. The March 2005 USDA survey found that 61 percent of farmers were unaware of the applicability of the SPCC requirements to farms. If this survey figure were representative of all farms, the amount of farm noncompliance would exceed 61 percent. Thus, there is substantial room for improving the rate of compliance. We agree with EPA that the self-certification approach is simpler and less costly, and will enable small firms to more readily come into compliance. The availability of an affordable compliance option and a rule that is easily understood should lead to increased compliance rates. Over the past 2 years, we listened to small business groups express doubt about the necessity of these overly burdensome requirements for small facilities. Thus, we believe that compliance with this program would improve if facilities believed that the requirements reasonably addressed their own situation.

RESPONSE BY THOMAS SULLIVAN TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. During the hearing, I asked you whether or not your office analyzed the impact of the EPA proposal on the Nation's engineering firms, 86 percent of which have less than 20 employees. You did not provide a response. Please describe the results of the analysis that your office performed with regard to the effect of the EPA proposal on small engineering firms. If you did not perform an analysis, please explain why, and whether you plan to perform such an analysis at this point in time. If you do not plan to perform an analysis, please provide a description of the criteria that the SBA Office of Advocacy uses to determine which small businesses will receive your support and which will not.

Response. The Office of Advocacy primarily makes sure that Federal agencies, including EPA, consider appropriate regulatory alternatives to alleviate burdens on small businesses, as required by the Regulatory Flexibility Act. Federal courts have found that agencies must meet their RFA responsibilities by considering the direct impacts of Federal rules on small entities, and not the indirect impacts. In this case, the professional engineers are not directly regulated by the SPCC rule. Since engineering firms do not fall under the category of entities directly impacted by EPA's proposal, the Office of Advocacy did not perform an analysis of how they would fare under EPA's proposal.

Question 2. During the hearing, you stated that, "—small businesses believe they are in a good position to make that certification themselves—" Did your office collect any actual information from any of the small businesses that visited your office to determine the basis for this "belief" and its validity? For example, did you survey small businesses that met with you to determine what qualifications they would require the people performing these certifications to have? What were the results of this or other similar surveys?

Response. The Office of Advocacy meets with the small business trade and membership organizations and representatives on a regular basis to exchange information. In addition, we use contractors to perform detailed analyses. The June 2005 JFA report is an outgrowth of hundreds of hours working with the Office of Advocacy and the industry sectors directly affected by this rule. During 2003 and 2004, we organized several Environmental Roundtables where we hosted discussions between the EPA staff and small business representatives. We also met frequently with EPA staff to discuss SPCC issues.

The self-certification option was first presented by small businesses to EPA in a January 2004 letter to EPA by a coalition of 10 small business associations. The industries represented in that letter are: Agricultural Retailers Association, American Bakers Association, American Forest and Paper Association, American Trucking Association, Automotive Oil Change Association, Independent Lubricant Manufacturers Association, National Automobile Dealers Association, National Association of Fleet Administrators, National Cotton Council of America, and the Synthetic Organic Chemical Manufacturers Association.

We listened to small business, which lead to our June 2004 letter to EPA accompanied by the June 2004 JFA report.

Question 3. During the hearing, you stated that, "there is a widespread acknowledgement that there aren't enough small facilities in the environmental compliance program right now, and there is some evidence that a self-certification program will

the increase the amount of small facilities that start paying attention to these issues."

-On what statement, letters, reports, or other data are you basing your statement that there is "widespread acknowledgement" that small facilities are not in the "environmental compliance program"? Please provide copies of any relevant materials to the Committee.

-Can you define what you mean by "environmental compliance?" Do you mean compliance with the SPCC rule, with environmental regulations in general, or with any other specific environmental rules please explain?

-You state that there is "some evidence" that a self-certification program will increase the number of small facilities that start paying attention to these issues. I have two questions. First, please summarize the evidence, other that the single example you referred to in Massachusetts, that you are referring to and provide copies of any relevant data to the Committee. Second, your answer seemed to suggest that small facilities in general are out of compliance and in fact, ignoring environmental regulations.

-Based on your experience in the SBA Office of Advocacy, can you give the Committee an idea of the percentage of small businesses that you have found ignore the environmental regulations?

Response. In my response, I was referring to the compliance rates achieved by small firms with respect to the SPCC program. EPA staff has informed us about their anecdotal compliance experience in the field that there is a high level of noncompliance with SPCC requirements among smaller facilities. A March 2005 USDA survey shows a high noncompliance rate among farms (report attached). In addition, the Pechan 2006 analysis estimates a noncompliance rate of 61 percent for farms (based on USDA) and a 30 percent estimate for nonfarms (based on half the observed farm rate of 61 percent).

With regard to other self-certification programs, we identified the Massachusetts example to benefit your Committee's evaluation. While I did not research other examples, I expect your staff's expertise on rules and programs that deal with underground storage tanks, hazardous waste generators, and storm water will provide you with evidence on how self-certification affects industry's attention to their compliance responsibilities.

Based on my experience as a government official, I have not found that small businesses purposefully ignore environmental regulations.

Question 4. Mr. Sullivan, the Small Business Administration want EPA to allow greater flexibility for integrity testing by expanding the scope of the consensus industry standard for small-built tanks. Under the National Technology Transfer Advancement Act, EPA would be required to justify any divergence from accepted industry standards. What data has the Small Business Administration provided EPA to support deviation from the consensus industry standards for integrity testing? Please provide a copy to the committee.

Response. The Office of Advocacy recommendation is simply the replacement of a 5,000 gallon threshold for a 10,000 gallon threshold permitting visual inspection in lieu of an integrity test which is found in the Steel Tank Institute standard for aboveground tank inspections, SP001. The explicit purpose of the SPCC regulation, unlike the standard, is to prevent discharges into navigable waters, not discharges that are contained onsite. It was our technical judgment that it is highly unlikely that a tank, with a continuous release detection system and secondary containment can discharge oil, leading to oil escaping the containment area and reaching navigable waters. The oil spill data acquired by a 1995 EPA survey was used by our contractor to demonstrate only 2 percent of total spill volume is accounted for by small facilities with less than 10,000 gallons aggregate storage (see Pechan, 2006 analysis), which further supports our view that periodic visual inspection of tanks, that are inside secondary containment and have a continuous release detection system, is very likely to prevent a discharge from reaching navigable waters. The Office of Advocacy comments on the SPCC proposal that were sent today are enclosed along with the February 2006 Pechan report that contains supporting data.

STATEMENT OF BRENT CUMMINGS, VICE PRESIDENT, CUMMINGS OIL COMPANY

Good morning Mister Chairman, members of the committee, my name is Brent Cummings. We have a family crude oil and natural gas exploration and production (E&P) company, Cummings Oil Company located in Oklahoma City. We operate and have ownership in numerous wells in Oklahoma, and have ownership in wells located in Oklahoma, Kansas and New Mexico that are operated by other companies.

I appreciate the opportunity to appear before this committee today. I offer my remarks from the perspective of a small independent oil and natural gas exploration and production operator and on behalf of the Oklahoma Independent Petroleum Association (OIPA) which is an association of more than 1,600 independent oil and natural gas producers.

Our company has 8 full time employees and a number of contract associates. I have a degree in Petroleum Engineering and I am responsible for all aspects of our field operations including drilling, completion and production operations. A significant and continuously increasing part of this responsibility includes making sure our company is compliant with numerous Federal environmental requirements under the Clean Water Act, the Safe Drinking Water Act, the Clean Air Act, SARA Title III, Federal Emergency Management Agency, U.S. Fish and Wildlife Service, Historic Preservation, Bureau of Land Management, and a variety of state requirements.

Prior to addressing our concerns with the Spill Prevention Control and Countermeasure (SPCC) rule, I would like to describe the crude oil and natural gas exploration and production in Oklahoma and the nature of OIPA's membership. Oklahoma is a mature energy producing state. A significant aspect of that production particularly in the context of the effects of regulations involves the critical role of "marginal" wells. The Interstate Oil and Gas Compact Commission, defines a marginal oil well as producing 10 barrels or less per day of crude oil and 60 million cubic feet (mcf) or less of gas per day. Oklahoma ranks 2nd in the production of crude oil and natural gas from marginal wells. Over half of Oklahoma's oil production comes from marginal wells which accounts for approximately 41.4 million barrels of crude oil per year from approximately 48,000 marginal wells.

Although our membership includes some publicly traded companies, the majority of our members are small, family owned businesses similar to small family farms. Our members explore for and produce crude oil and natural gas. In contrast to the large integrated companies, our members do not refine crude oil and we do not market gasoline or heating fuels.

Now to address the SPCC rule, the Environmental Protection Agency (EPA) proposed revisions to the SPCC rule in 1991, 1993, and 1997. A new SPCC rule was finalized and became effective August 16, 2002. Prior to and since 2002, OIPA has raised significant concerns regarding the adverse impacts of these regulations on oil and natural gas production in Oklahoma. On December 2, 2005, EPA proposed another rule to clarify some issues raised with the 2002 rule as well as a guidance document for its inspectors. Unfortunately, none of our issues are addressed in the proposed rule and the guidance document leaves too much to regional inspectors to interpret.

The intent of the SPCC regulation is to prevent the release of oil into the waters of the United States. The EPA's broad interpretation of the definition of "waters of the United States" that include things such as dry arroyos, drainage ditches, road bar ditches is unreasonable. Smaller independent operators often do not have the time or the resources to prove they are not subject to the SPCC rules. This ambiguity has lead operators to develop costly plans and procedures when they may not be necessary. The various court decisions have complicated this issue as well. The guidance document does not provide any clarity on what is "waters of the United States."

The SPCC's current "one size fits all" requirements do not take into consideration the risk of marginal crude oil and natural gas wells as compared to larger bulk storage facilities and refineries that have high throughput and large single tank storage volumes.

As previously stated, the intent of the SPCC rule is to prevent and control oil discharges, not produced water discharges. The EPA has not presented data demonstrating there is a significant history of documented spills of oil into "waters of the United States." from produced water storage tanks. Oil and gas exploration and production equipment used to treat produced water should be subject to the wastewater exemption to the same extent as similar facilities in other industrial sectors.

At non-exploration and production sites, process equipment is excluded from the definition of bulk storage containers, whereas at E&P facilities, this type of equipment is considered bulk storage containers and subject to secondary containment requirements. The EPA has singled out E&P oil and gas water separation facilities for an increased level of regulation while facilities in other industry sectors using similar or nearly identical technologies and treatment goals are allowed to be exempted from these rules.

The requirements for containment around flow lines and gathering lines are unrealistic and impractical. Installing secondary containment or retrofitting all existing flow lines and gathering lines (such as double-walled piping) is cost prohibitive. A

more reasonable approach would be to allow operators to implement flexible and responsible, risk-based flow line inspection and maintenance programs, not prescriptive corrosion, integrity or pressure testing which can be extremely costly for small operators.

Design, construction and maintenance of secondary containment around oil tanks are the most beneficial ways to prevent spills. Even though EPA has recently proposed to streamline the process for smaller facilities in its recent proposal, the proposed threshold does not address marginal crude oil wells.

The 2002 SPCC rule includes numerous administrative changes that, taken as a whole, greatly expands and increases the impact of the rules on the regulated community. These changes include a new definition for a facility, requiring a plan prior to beginning any operations at an E&P site and changing the terminology from "shoulds and shalls" to "musts or implied musts". All these changes take away the flexibility that a Professional Engineer and/or an operator should have to address the various site specific conditions. We are disappointed to see that our issues with the 2002 regulation were not directly addressed in the recently announced proposed rule.

We have never seen a cost and energy impact analysis of the 2002 regulations or data that supports the needs for changes provided in the 2002 SPCC rule affecting the E&P sector. We are aware that the Department of Energy has recently initiated a cost impact study and believe that the results will be very beneficial. At a time when domestic oil and natural gas production is being challenged to meet critical domestic demand, understanding these consequences will be essential to rulemaking decisions.

Finally, the EPA should clarify how it plans to address the API litigation settlement agreement issues as it relates to the 2002 SPCC rule. EPA should follow through and make rule changes to clarify these issues. And while the API settlement agreement appears to address containment at crude oil loading areas, recent site inspection violations in Oklahoma show EPA inspectors taking a different approach.

On December 2, 2005, EPA Administrator Stephen L. Johnson signed a proposed amendment to extend the SPCC compliance deadline for all facilities. OIPA supports the EPA's proposed extension as we believe it will give us time to work with EPA to resolve our ongoing issues. We believe it is logical and appropriate to extend the compliance deadline to account for future rulemakings that could result in changes that would make expenditures under the 2002 regulations costly and unnecessary.

We urge the EPA to develop a regulatory approach that is appropriate for our industry. This approach would include a clear, concise and reasonable definition of "waters of the United States." for the E&P industry and focus on those facilities that reasonably can be expected to impact those waters, include a benefit/cost analysis of the requirements being considered and implemented, address the "real" environmental risks of domestic exploration and production of oil and natural gas sites and focus on those areas where past experience has demonstrated a true need for regulation, and provide a practical and economic regulatory scheme that small operators can understand. Such an approach would encourage marginal well crude oil and natural gas operators to comply, assure that industry's funds are spent where it can provide the most benefit, and maintain viability domestic production supplies.

I appreciate the opportunity to submit this testimony on OIPA's and our behalf.

RESPONSES BY BRENT CUMMINGS TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. How much oil is produced in the state of Oklahoma and of that oil, what percentage of it has actually been spilled?

Response. The Oklahoma Corporation Commission tracks the amount of oil and condensate produced on a yearly basis. The total oil and condensate production in Oklahoma for the following calendar years is:

Calendar Year 2000 - 69,018,135 barrels
Calendar Year 2001 - 68,725,026 barrels
Calendar Year 2002 - 66,030,455 barrels

Operators are required to report oil spills that reach waters of the United States to the National Response Center (NRC). The NRC's data was evaluated to determine the amount of spills that have occurred at production sites (excluding spills that were associated with downstream activities such as gathering, transmission and refining). Using the National Response Center data for Oklahoma, the percentage of crude oil and condensate spilled that reached waters of the United States during 2000 to 2002 in comparison to the amount of crude oil produced is as follows:

Calendar Year 2000—843 barrels - .00122 percent
Calendar Year 2001—891 barrels - .00130 percent
Calendar Year 2002—830 barrels - .00126 percent

This clearly shows that spills from production sites to waters of the United States present a low risk to the environment, there is no need for more onerous SPCC requirements at crude oil production sites, and that reduced requirements for these sites are warranted.

Question 2. In EPA's 1996 report entitled "Analysis of the Relationship between Facility Characteristics and Oil Spill Risk", it states that "the overwhelming majority of facilities in both the farm and institutional industry sectors are small, storing less than 10,000 gallons of oil. Most facilities in the facilities in the production industry sector store between 10,000 and 50,000 gallons of oil" EPA seems to imply that these production facilities are not "small" businesses when in fact these are the small businesses of the oil production industry and should be afforded the same flexibility given to other small businesses in the December 2005 rule. Do you agree?

Response. Yes, Cummings Oil Company employs 8 full time employees. Our company certainly is a small business and typically we have storage capacity approaching 42,000 gallons of crude oil at our production sites.

Question 3. Further, EPA's 1995 data and Dr. Corbett's testimony state that there are small oil production facilities that fall below the 1,320 gallon threshold that triggers the SPCC requirements. Are you aware of any such facilities?

Response. No. It would be extremely rare to find an oil production facility in Oklahoma that would have less than 1,320 gallons (i.e. approximately 31 barrels) of total oil storage. Production facilities in Oklahoma where crude oil is produced typically have at least two oil storage tanks (one to produce in and one where oil is stored in preparation for sale to the purchaser). The purchaser's transport load size is approximately 180 barrels. This combined with the producing capability of the well explains why the typical oil storage tank has a nominal capacity of 300 barrels or 210 barrels. There is a volume below the load level in a tank for heavy impurities to settle, and it is not practical to attempt to fill tanks to the top. However, the shell capacities of all oil containers are required by EPA to be included in the total facility storage volume. Additionally, there is often a produced water tank of similar size to the oil storage tanks, separation equipment, flow lines and piping at the facility that have to be included in the total facility storage volume (minus those containers that hold less than 55 gallons).

RESPONSES BY BRET CUMMINGS TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Mr. Cummings, in your testimony, you mention that you are concerned that EPA inspectors may not be taking actions consistent with the recent settlement agreement. Have you reviewed the EPA guidance for regional inspectors, issues on December 2, and do you believe such guidance is or is not adequate to resolve your concerns?

Response. We have reviewed the guidance document and found that it merely follows the 2002 SPCC rule. It provides no clarification on issues such as waters of the United States, produced water tanks, containment around flow lines, delayed implementation of SPCC plans at new oil production facilities, etc. We do not believe that our issues associated with production operations were addressed in the guidance document or the recently proposed rule.

The guidance document is not an "enforcement" document and an EPA inspector has the discretion to use the document or not. We do not believe a guidance document should be used to explain SPCC requirements in lieu of a rulemaking. For example, the API settlement agreement issues should be clarified in a rule.

Question 2. What is the total amount of petroleum products located within the boundaries of an average "marginal well" site?

Response. Produced crude oil is the petroleum product located at a marginal well site that typically meets the threshold requirement for SPCC plans. It is important to note that by nature oil well production rates decline over time. Many wells ultimately become marginally productive. However, the production and storage equipment is sized to meet the initial production capability of the well. Typically, it is not practical or economical to resize equipment. Additionally, although a well's production rate may currently be only a few barrels per day, there is need for larger storage capacity to accumulate enough oil to make it economical for an oil purchaser to transport.

Marginal production sites in Oklahoma where crude oil is produced commonly have at least two oil storage tanks (one to produce in and one where oil is stored

in preparation for sale to the purchaser). The purchaser's transport load size is approximately 180 barrels. This combined with the initial producing capability of the well explains why the typical oil storage tank has a nominal capacity of 300 barrels or 210 barrels. There is a volume below the load level in a tank for heavy impurities to settle, and it is not practical to attempt to fill them all the way to the top. However, the EPA requires the shell capacities of all oil containers are to be included in the total facility storage volume. Additionally, there is often a produced water tank of similar size to an oil storage tank, separation equipment, flow lines and piping at the facility (minus those containers that are less than 55 gallons). Depending on site characteristics, the total facility volume of petroleum hydrocarbons on a facility can be from 800 to 1000 barrels. It is important to note that this is not a single tank or piece of equipment that stores this volume of oil as compared to crude oil storage tank farms or refineries. The risk of is extremely low for all tanks and equipment at a typical oil production facility to fail at the same time. Although, we feel the requirements for most production sites are overly stringent. These types of facilities certainly warrant less stringent requirements and a more streamlined SPCC process.

STATEMENT OF JAMES COYNE, PRESIDENT, NATIONAL AIR TRANSPORTATION ASSOCIATION

Chairman Inhofe, Senator Jeffords, and Members of the Committee:

Thank you for this opportunity to appear before you today to discuss the Environmental Protection Agency's recently released revisions to the Spill Prevention, Control and Countermeasure (SPCC) rule. My name is James K. Coyne, and I am president of the National Air Transportation Association (NATA). I ask that my full statement be submitted for the record.

NATA, the voice of aviation businesses, is the public policy group representing the interests of aviation businesses before the Congress, Federal agencies, and state governments. NATA's 2,000 member companies, own, operate and service aircraft and provide for the needs of the traveling public by offering services and products to aircraft operators and others such as fuel sales, aircraft maintenance, parts sales, storage, rental, airline servicing, flight training, Part 135 on-demand air charter, fractional aircraft program management, and scheduled commuter operations in smaller aircraft. NATA members are a vital link in the aviation industry providing services to the general public, airlines, general aviation, and the military.

As you are well aware, over the past few years, a number of aviation-fuel providers have been notified by the U.S. Environmental Protection Agency that their fuel trucks are subject to regulation requiring so-called "secondary containment" while the trucks are parked. The EPA contends that these trucks are mobile or portable storage facilities subject to existing regulations that have been covered since the rules' inception in the early 1970s. Earlier this month, the EPA finally issued two Notices of Proposed Rulemaking (NPRMs) on revisions to the SPCC rule, which governs secondary containment. The new deadline for implementation of these regulations has been extended to October 31, 2007.

The NPRMs put forth by the EPA present a much better solution than those proposed earlier by the Agency, although the rules contain some contradictions and still leave many questions unanswered. Most notably, the proposed amendments do away with the requirements of "sized secondary containment" for mobile refuelers, which posed the largest challenges to the industry. Refueling vehicles will no longer be required to build costly containment areas to hold the trucks when they are not in service. Vehicles are still subject to "general containment" provisions, which are far more reasonable.

The EPA's new proposals still, however, leave some lingering questions regarding the SPCC requirements. The NPRMs do not specifically state whether the extension for compliance to October 2007 applies to aviation industry regulations as the industry asserts. Second, general containment is loosely defined in the documents, which gives more discretion to individual EPA inspectors responsible for auditing airport environmental operations. Additionally, other non-aviation vehicles and equipment subject to SPCC requirements are given exemptions due to their excellent history of handling fuel spills, while the aviation industry, which has a comparable if not better record, isn't provided these exemptions. Overall, NATA is supportive of the efforts made by the EPA to mitigate the impact the SPCC rules could have on the aviation industry, and looks forward to working with the Agency to further clarify some key issues that currently remain unresolved.

HISTORY

Regulations providing for secondary containment to prevent fuel spills have been in effect since 1974, with the passage of the Clean Water Act. In July 2002, the EPA issued proposed revisions to its oil spill prevention programs in a proposed rule known as the Spill Prevention, Control and Countermeasure (SPCC) rule. Included in the SPCC rule was a clarification in the definition of a mobile fuel truck used for refueling aircraft at an airport. The new rules classified mobile refueling vehicles as "mobile or portable storage containers" which would make them subject to SPCC regulations.

There has been considerable debate as to whether this classification of a mobile fuel truck as a storage container is a new or existing regulation. The EPA contends that mobile refuelers in use at airports have always been classified as portable facilities and have thus been covered under the SPCC regulations since the original 1974 rule. The EPA makes this claim despite the fact that the Agency has never taken any enforcement action against a mobile refueling truck until recently. The aviation industry asserts that the revisions to the SPCC rule in 2002 constituted a reinterpretation of existing regulations. Such a reinterpretation should be subject to a separate rulemaking process, with the appropriate opportunities for industry groups to comment on the proposed changes. To the EPA's credit, the NPRMs released earlier this month provide the opportunity for all affected to comment on the proposed rule.

Prior to the release of the SPCC NPRMs on December 2, the aviation industry was extremely concerned with the EPA's lack of communication with officials at the Department of Transportation and Federal Aviation Administration regarding the matter. While the EPA and DOT operate under a series of agreements regarding jurisdiction over certain parts of the airport, the industry found it alarming that the two agencies were not relying on the expertise each other had in drafting rules that would not impede airport operations. While we have received word that the FAA was consulted very late in the rulemaking process, the industry feels that the FAA and EPA should have been working together from the beginning.

To discuss the economic and logistical effects of the proposed SPCC rules, NATA teamed with other aviation industry stakeholders to bring a collective message to the EPA regarding the rule. A coalition comprising representatives from NATA, the Air Transport Association of America (ATA), the American Association of Airport Executives (AAAE), and the Airports Council International—North America (ACI-NA) was formed to advocate before the EPA and Congress the consequences of the SPCC rules.

After several aviation-fuel providers were visited by their local EPA regional offices and threatened with fines for non-compliance of the SPCC rule (while negotiations with the EPA were ongoing), the aviation coalition began taking their message to Capitol Hill. To date, approximately a dozen U.S. Representatives and Senators have written the EPA questioning the necessity of requiring mobile refuelers to be parked in special secondary containment areas. Just last month, in legislation to fund the Department of Transportation for the 2006 fiscal year, Congress included language encouraging the EPA to work with the DOT "to establish reasonable methods of compliance for the [SPCC] requirements as they relate to on-airport mobile refuelers."

ARE FUEL SPILLS A SIGNIFICANT PROBLEM?

Mobile refuelers in use at airports currently adhere to a strict inspection regimen designed to ensure the integrity of the fuel tanks to prevent them from leaking or spilling fuel onto the ground. The design and construction of all mobile refuelers follow DOT guidelines and are tested to certify compliance with environmental emissions standards. Moreover, virtually all mobile refueling vehicles are equipped with a number of safety devices to prevent fuel spills and leaks, and also to minimize the risk of fire. Airport refuelers are equipped with systems including emergency cut-off switches, interlock systems to prevent movement of the vehicle without the proper stowage of equipment and over-fill prevention valves. Refueling vehicles also contain protections such as "dead-man" switches, over-pressure cut-off valves and the capability to isolate individual system components.

In addition to the numerous safety precautions and redundancies in use on a mobile refueler, there is also a strong economic incentive for operators to conserve as much fuel as possible. Fuel is the most profitable and sometimes only commodity for an airport business, and it makes no sense for a fuel provider to not care about protecting fuel from leaks and spills. With the price of jet fuel having increased dramatically in recent years, it makes even more sense that the provider make sure

that every gallon of fuel he or she has purchased makes it into the aircraft rather than spilled onto the airport tarmac.

Over the last few years, NATA has implemented a program encouraging ramp safety for its member companies. The program, known as NATA Safety 1st, encourages standardized training and procedures for line service personnel employed on airport operating areas. The objective of the program is to teach personnel proper and safe procedures for ground servicing and refueling, towing and handling of general aviation aircraft and helicopters. Employees are trained to have a professional "safety first" attitude. The program has been an overwhelming success, with more than 8,000 line service technicians of NATA companies attending seminars and participating in safety training.

The aviation industry as a whole has also worked together to guard against fuel spills. The Air Transport Association has specifications regarding quality control for fuel handling, titled "Spec. 103: Standards for Jet Fuel Quality Control at Airports," that are required of any airport in the United States seeking to sell aviation fuel. Fuel distributors are required to include the specification as part of their handling manual. The specifications call for daily inspection of the mobile refueler for problems including cracks, leaks, or any other damage. Every aspect of the refueling vehicle is covered, including tires, hoses, fire prevention equipment, and brakes. It is mandated that a mobile refueler undergo this rigorous inspection each day before coming into contact with any aircraft.

The FAA released an Advisory Circular in 2004 accepting a number of industry publications as a means of complying with FAA regulations pertaining to fire safety in the safe storage, handling, and dispensing of fuels used in aircraft. A copy of the AC is attached to my testimony. The FAA included publications from the National Fire Prevention Association (NFPA), the American Petroleum Institute (API), and NATA. NATA's "Refueling and Quality Control Procedures for Airport Service and Support Operations" is listed as an acceptable means of compliance with FAA regulations. A copy of the publication is attached to my testimony as well.

While it is clear that airport refuelers take extraordinary steps to minimize the potential for damage caused by fuel spills, the EPA continues to believe that these trucks are highly susceptible to fuel spills and leakage, even when not in use. We contend that the EPA is proposing a solution to a problem that does not exist. Across the entire aviation industry, we do not have one documented case of a fuel truck spontaneously rupturing or spilling fuel while the truck is not in service, which is what many of the SPCC provisions guard against. In the rule and accompanying guidance released this month, the EPA contends again that they have documented cases of aviation fuel trucks spilling. However, the Agency has failed to share these cases with the industry at any time during our discussions on the rule. I think it would make for much better public policy if the EPA were to share their documented cases with the industry so we can review the cases and amend industry standards, if necessary. We have always welcomed the opportunity to work with the EPA to review the causes of such spills and to come together to reach solutions to help prevent similar incidents in the future.

TRADITIONAL COMPLIANCE WITH SPCC REGULATIONS

An SPCC plan is a written site-specific spill prevention plan that details a facility's operating procedures to prevent spills, control measures to prevent spills from reaching navigable waters, and countermeasures to contain, cleanup, and mitigate the effects of an oil spill that reaches navigable waters. The key elements of an SPCC plan include an identification of the source of possible spills, an identification of strategies to preclude fuel spillage, the installation of methods of spill containment and product recovery, and the audition and review of programs to determine that spill prevention programs are effective.

SPCC plans are necessary for owners or operators of a non-transportation-related fixed facility that could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. SPCC regulations also apply to facilities that have an aboveground storage capacity of more than 660 gallons in a single container, have an aboveground storage capacity of more than 1,320 gallons, or have a total underground buried storage capacity of more than 42,000 gallons. Some facilities may not fall under regulations if, due to their location, they are not reasonably expected to discharge oil into navigable waters.

An aviation business' SPCC plan must meet a number of criteria. The plan must have full management approval, be kept onsite, and be reviewed and certified by a Professional Engineer (PE) who has examined the facility. The plan must address both spill history and spill prediction, i.e. the direction of flow. SPCC plans must

be reviewed by management every three years and be revised within six months (and recertified by a PE) if the facility is modified.

Specifically, an SPCC plan must contain measures to prevent fuel spills, including drainage control, bulk storage tanks, facility transfer operations, and spill control equipment. A facility layout and surface drainage diagram must also be included in the plan.

THE EPA'S NEW REVISIONS TO THE SPCC RULE

The new NPRMs released by the EPA in early December represent a major change from earlier EPA policy regarding mobile refuelers and other vehicles operating on airport runways. The removal of the requirement of "sized secondary containment" is a great step in the right direction and demonstrates the EPA's willingness to listen to the industry regarding the impracticability of certain EPA regulations. With the current comment period still open, NATA hopes to further work with the EPA to discuss some of the outstanding issues and questions we have concerning the new rules and how to best resolve them in both a sensible and environmentally sound manner.

The NPRMs address several aspects of airport operations, and a summary of some of the provisions and how they relate to aviation businesses is listed below:

Mobile Refuelers

The EPA defines airport mobile refuelers as vehicles found at airports that have onboard bulk storage containers designed for or used to store and transport fuel for transfer into or from an aircraft or ground service equipment. The troublesome provisions for refuelers prior to this month's NPRMs read as follows:

> §112.8(c)(2): Construct all bulk storage container installations so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contained discharged oil. Dikes, containment curbs and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond.
>
> §112.8(11): Position or locate mobile or portable oil storage containers to prevent a discharge as described in §112.1(b). You must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.

The new EPA proposal effectively exempts airport mobile refuelers from both of the above provisions. These provisions were the most contentious in our discussions with the EPA, as they would have cost tens of thousands of dollars for airport businesses and required fuel providers to construct specialized areas of the airports to park the fuel trucks when they were not in service. Such areas would have reduced the already constrained space on the airport operating area (AOA) and many airports have no space at all in which to construct these facilities. Furthermore, the increased traffic of having fuel trucks driving back and forth to these areas increased the likelihood of safety incidents during daily airport operations. Also, having trucks loaded with fuel parked in relative proximity to each other would provide an inviting target for terrorists seeking to cripple the aviation system in the United States.

The NPRM took these concerns into account and did away with the sized secondary containment requirements that caused so much alarm in the industry. We are very appreciative of the EPA's efforts to listen to and address the industry's concerns on this important matter.

Although the requirements of sized secondary containment have been eliminated, the NPRMs do not exclude mobile refuelers from general containment requirements listed in §112.7(c) and §112.8(c) of the SPCC rule as they relate to bulk storage and transfers to the vehicles. General secondary containment requirements include, as noted in §112.7(c), "Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge" The rule states that "at a minimum, you must use one of the following prevention systems or its equivalent dikes, berms, or retaining walls sufficiently impervious to contain oil; curbing, culverting, gutters, or other drainage systems; weirs, booms or other barriers (such as drain plugs); spill diversion ponds; retention ponds; or sorbent materials." Other general provisions in the regulation require integrity testing of aboveground storage tanks, and training and response plans in the event of an oil discharge.

As you can see, the SPCC regulations offer a number of options for mobile refuelers to comply without resorting to the sized containment area. Many refuelers already use some of the prevention systems described in the regulation. The revisions proposed in the NPRMs are far more reasonable than those originally proposed by the EPA in 2002.

While the requirements of "general secondary containment" do provide a variety of ways to comply, the broadness of the provision also leaves many unanswered questions. We support the flexibility in having so many different compliance mechanisms, but are eager to hear more from the EPA on how the Agency will enforce these regulations. The guidance for EPA regional inspectors issued by the Agency to accompany the NPRMs is vague and leaves many of the terms undefined. We have concerns that without more structured guidance for EPA inspectors, the inspectors will have more autonomy to enforce the regulations at their will. We have already dealt with problems where EPA regulations are enforced differently depending upon in which region an airport is located and, without more defined guidance to EPA inspectors, we expect this practice to continue.

Small Facilities

One of the chief concerns regarding the SPCC regulations was their disproportionate detrimental effect on smaller businesses and smaller airports. These businesses were ill equipped to comply with some of the costlier provisions of the SPCC rule. The Small Businesses Administration (SBA) Office of Advocacy has remained a loyal advocate for the small businesses affected by this rule, especially those in the aviation industry. We commend the SBA Office of Advocacy for its tireless support of NATA businesses during this process.

After listening to the SBA and other representatives of small businesses, the EPA has now issued proposals that seek to offer relief for smaller facilities that are under the jurisdiction of the SPCC rule. The new proposal allows a "qualified facility" to self-certify its SPCC plan in lieu of certification by a Professional Engineer (PE). A "qualified facility" is a facility subject to the SPCC requirements that (1) has a maximum total facility oil storage capacity of 10,000 gallons or less; and (2) has had no reportable oil discharge as described in §112.1(b) of the SPCC rule during the 10 years prior to self-certification. If the facility has been in operation for less than ten years, then it must have had no reportable oil discharge during its entire tenure.

The EPA states that in addition to the smaller fuel storage capacity, a discharge history is a "reasonable indicator of a facility owner's or operator's ability to develop an SPCC plan for the facility without the involvement of a PE."

This provision will save small facilities thousands of dollars in consultant fees and certification costs by allowing them to avoid the use of a PE. Such a proposal is reasonable and alleviates many of the concerns held by smaller airports and aviation businesses prior to the release of the NPRM. However, the facilities are offered no exceptions to any SPCC regulations if they decide to use this option. Facilities self-certifying themselves cannot claim exemption from SPCC rules for impracticability reasons or any other factor.

Oil-Filled Equipment

The EPA defines oil-filled equipment as "equipment which includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device. Oil-filled operational equipment is not considered a bulk storage container, and does not include oil-filled manufacturing equipment." Examples of oil-filled operational equipment include, but are not limited to, hydraulic systems, lubricating systems, gear boxes, machining cooling systems, heat transfer systems, transformers, circuit breakers, electrical switches, and other systems containing oil to enable the operation of the device. Mobile refuelers are not considered oil-filled equipment under the SPCC rule.

The EPA's proposal offers many exemptions to the SPCC rule for oil-filled equipment. The Agency states that the operators of such equipment, mainly used in utilities, have strong economic incentives to prevent power outages, to discover and respond to an outage, and to correct the conditions that produced the outages (an oil leak) as quickly as possible. In addition, the Agency stated that oil-filled operational equipment is often subject to routine maintenance and inspections to ensure proper operations, and is designed, constructed, and maintained according to specifications for its particular operation, and that construction materials are corrosion-resistant.

The NPRMs provide several alternatives for owners of oil-filled equipment to comply with the SPCC regulations. Owners and operators of facilities where qualified oil-filled equipment is located have the alternative of preparing an oil spill contingency plan and a written commitment of manpower, equipment and materials, with-

out having to determine that secondary containment is impracticable on an individual equipment basis. Additionally, owners and operators of facilities where qualified oil-filled equipment is located may establish and document an inspection or monitoring program for this equipment to detect equipment failure and/or discharge in lieu of providing secondary containment for qualified oil-filled operational equipment. The proposal also eliminates the current requirement for individual impracticability determinations for oil-filled equipment at a facility that has had no reportable discharges during the 10 years prior to the plan certification date or since becoming subject to the SPCC requirements if the facility has been in operation for less than 10 years.

These changes to the original SPCC proposals again represent a reasonable approach by the EPA to provide methods of compliance that do not place an undue burden on the industry, yet provide sensible, environmentally sound procedures. All airports use some oil-filled equipment in some capacity, and these revisions alleviate many concerns among those in the industry.

Motive Power

Certain motive power containers are exempted from the SPCC rule as well. Motive power containers are defined as onboard bulk storage containers used solely to power the movement of a motor vehicle (i.e. fuel tanks), or ancillary onboard oil-filled operational equipment (i.e. hydraulics and lubrication systems) used solely to facilitate its operation. This exemption from the SPCC regulations does not apply to a bulk storage container mounted on a vehicle for any purpose other than powering the vehicle itself (i.e. a tanker truck or mobile refueler). The EPA defines a "motive power container" as an integral part of the motor vehicle, providing fuel for propulsion or providing some other operational function, such as lubrication of moving parts or for operation of onboard hydraulic equipment. Examples of motive power vehicles include, but are not limited to, buses, recreational vehicles, some sport utility vehicles, construction vehicles, aircraft, farm equipment, and earthmoving equipment. Other airport equipment, including snowplows, deicing vehicles, and aircraft tugs are not addressed in the proposed amendments.

While motive power is not addressed specifically in the SPCC regulation, some vehicle fuel containers may fall under the definition of a "bulk-storage container" in §112.2, while the onboard lubrication system may be considered oil-filled operational equipment. The EPA states that it recognizes that the requirements of the rule, especially specifically sized containment, are not practicable in most cases, and in fact the Agency never intended to regulate motive power containers. The EPA noted that although the equipment is exempt, oil transfer activities occurring within an SPCC-covered facility would continue to be regulated. The example provided by the EPA is when an airport mobile refueler transfers oil to a motive power tank, it is subject to the general secondary containment requirements because it does not occur across a loading/unloading rack.

The aviation industry greets the exemption of motive power from the SPCC regulations with a sigh of relief. Earlier EPA statements offered up the possibility that all motive power, including large aircraft, would be subject to SPCC rules. This clarification and exemption of motive power is most helpful to the industry.

Extension of Compliance Deadlines

Originally, the amendments to the SPCC rule first published in 2002 had set 2006 as the final deadline for SPCC compliance. Facilities subject to the rule would have to incorporate a plan developed by February 2006 and have the plan fully implemented by August 2006. The new NPRMs extend the deadlines for compliance until October 31, 2007. All affected facilities must have a plan certified and implemented by then.

It is unclear, however, whether the extension applies to the aviation industry and to mobile refuelers specifically. In claiming that mobile refuelers have been subject to SPCC rules since the 1970s, the EPA is hinting that there will be no additional time for refuelers to comply and that EPA inspectors are free to immediately begin auditing airport operations. The aviation industry has long disputed the claim that mobile refuelers have always been covered, noting that the 2002 revisions constituted a reinterpretation of the definition of a mobile refueler.

It is imperative that the EPA grant aviation businesses the opportunity to take the time to develop a comprehensive SPCC plan that takes into account the new guidance issued by the Agency. It takes a significant amount to time for airports to complete the certification process and then implement their plans. The EPA should absolutely cease any enforcement until airports have the opportunity to develop and implement an SPCC plan.

CONTRADICTIONS IN EPA POLICY

While the new SPCC rules on the surface seem reasonable, the NPRMs do contain a number of contradictions in EPA policy regarding mobile refuelers. For instance, the EPA offers exemptions to certain facilities from SPCC rules based on the facilities' history of oil discharges, exempting those that have not had any spills in the last decade. While those facilities are offered exemptions, the aviation industry, which has an exemplary record of handling fuel spills, is not offered the same exemptions. Shouldn't the EPA at least consider expanding the "history test" when examining the necessity for secondary containment regulations?

Additionally, the EPA asserts that the utility industry's oil-filled equipment is "subject to routine maintenance and inspections to ensure proper operation, and is designed, constructed, and maintained according to specifications for its particular operation and construction materials are corrosion-resistant." The Agency also states that the utilities have an "economic incentive" to prevent an oil spill. Here, the EPA fails to recognize that aviation businesses at airports have the same economic incentives and similar design, construction and maintenance stringencies regarding mobile refuelers. While NATA is encouraged by the EPA's overall approach to the SPCC rule, these are questions we feel need to be asked of the EPA in regard to its policies on oil spills and prevention.

CONCLUSION

After years of discussion with the EPA and appeals to Members of Congress and other Administration officials, we are pleased that the Agency has listened to our concerns and released a proposed rule that appears practical and thoughtful. Although several questions remain and the rule appears to offer contradictory reasoning for its policies, these NPRMs are much closer to the aviation industry's goals than proposals of years past. We commend the EPA for taking our positions into account in drafting this rule. As the comment period moves forward and the Agency seeks comments on the proposed amendment, we will be happy to continue to address our thoughts and concerns with the EPA. We are hopeful that this rule will help reopen a dialogue between the industry and the EPA on how to reach the best possible policy. In the meantime, we hope that the Agency opts to include aviation facilities in the extension to 2007 offered by the rule. Such an extension will provide the appropriate opportunity for all affected airports to design, certify and implement an environmentally rigorous spill prevention plan.

The aviation industry is committed to maintaining the environmental integrity of airports throughout the country. We recognize the sensitive environmental concerns that both the government and the public share regarding the role of the airport in the community. We feel that the best way to achieve a policy that benefits all stakeholders is to strengthen the government-business relationship. Such a relationship offers many opportunities for both parties to make our aviation system even better than it is today.

I thank you for the opportunity to testify, and would be happy to answer any questions you may have.

RESPONSES BY JAMES COYNE TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. In your statements during the hearing, you discussed the need for flexibility in airport management in moving mobile refuelers around a facility, the concern about having all such trucks go to a berm location. You also mention that the EPA suggested in their proposal that this is not workable. It seems that your issues regarding mobile refuelers should be resolved with the EPA proposal. Can you clarify?

Response. The EPA proposal issued on December 2 of last year is a great step forward in the right direction. Removing the requirements of "sized secondary containment" for airport mobile refuelers was the largest point of contention between the aviation industry and the EPA. However, there are still some questions that remain with the EPA's proposal. The NPRM does not specifically state whether the extension provided to qualified facilities until October 31, 2007, applies to the aviation industry. The industry asserts that such an extension should apply, noting that the original 2002 revisions to the SPCC program issued by the EPA constituted a reinterpretation of the definition of a mobile refueler. Allowing aviation fuel providers an extension until October 2007 will also result in more environmentally sound solutions to preventing oil spills, as facilities will have more time to budget properly and develop SPCC plans that focus on the long-term environmental health of the airport, rather than a short-term solution to meet an immediate deadline.

Additionally, while refuelers are exempted from "sized containment" requirements, they are still subject to "general containment," which is far more reasonable, although the term is loosely defined. While NATA appreciates the flexibility offered by the loose definition of general containment, the association does have concerns that the vagueness of the term may give individual inspectors more power in deciding whether a facility has properly complied with the SPCC program.

NATA would also like the EPA to consider applying exemptions provided to other equipment that share many of the same characteristics as mobile refuelers to the aviation industry's mobile refuelers. For example, certain facilities are exempted from SPCC rules based on the facilities' history of oil discharges. Those that have not had any spills in the

last decade are exempted. The aviation industry, which has an exemplary record of handling spills, is not offered those same exemptions. Other equipment is exempted from SPCC rules due to the "economic incentive" of conserving fuel. Aviation fuel providers should be considered for a similar exemption, given the fact that fuel is a precious commodity and aviation businesses cannot afford to lose large amounts of fuel due to spillage.

Question 2. Mr. Coyne, in your testimony, you seem to suggest that it would be appropriate for small facilities, which may or may not have any technical expertise on hand regarding oil spill containment, to make technical judgments regarding "impracticability" or "environmental equivalence." You heard the testimony stating that the self-certification option adds a significant liability to small business. Has NATA evaluated the liability impacts for small airports of the self-certification option as proposed and the self-certification option as you believe it should be drafted, and if so, what were the results?

Response. To date, NATA has not conducted a study examining the liability impacts for small airports and operators that choose to self-certify. Prior to the publication of the NPRM in December 2005 governing the SPCC program, there was no indication from the Agency that self-certification for small facilities would be an option.

NATA appreciates the flexibility offered by the EPA in allowing small airports and operators to self-certify their SPCC plans if they so choose, but encourages all the association's members who qualify under the regulations to employ the services of a Professional Engineer (PE). Given the already high insurance rates faced by most airports and operators following the 9/11 attacks, the association is confident that most operators will use a PE to certify their facilities rather than incur the increased liability from self-certification.

Question 3. In your testimony you reference letters of support sent by several members of Congress. Can you please provide the committee with copies of these letters?

Response. Copies of the letters have been sent to the committee by both fax and e-mail.

STATEMENT OF RICHARD OWEN, DIRECTOR, CHS, INC

Mr. Chairman, members of the committee, I am pleased to be here today representing the Agriculture Coalition on Spill Prevention Control and Countermeasure (SPCC). My name is Richard Owen, and I am a third-generation wheat farmer from central Montana. I farm 2200 acres of non-irrigated wheat, feed barley, malt barley, waxy barley and safflower in rotation. I also serve as a director for CHS, the country's largest farmer-owned cooperative, which is headquartered in St. Paul, Minnesota, and includes over 325,000 farmer owners.

The Agriculture Coalition, which includes organizations representing farmers, cooperatives, and related businesses, welcomes the Environmental Protection Agency's (EPA) continued efforts to address the concerns of agriculture as part of its December 2005, proposed rulemaking. However, we continue to have concerns with both EPA's existing regulations as well as this latest proposal.

In reviewing the history, we do not believe that the original EPA regulations, which became effective in 1974, were ever intended to apply to farms and ranches. Many farmers and ranchers in fact only became aware of such requirements when EPA issued its amended regulations in 2002.

Under EPA's existing 2002 regulations, any facility, including farms and ranches, as well as farmer cooperatives other agribusinesses, with aggregate storage of 1,320 gallons of oil (which is defined as oil of any kind) is required to:

(A) Have an amended oil spill prevention plan, certified by a professional engineer, by February 17, 2006; and

(B) Implement that plan by August 18, 2006. This includes: (1) develop an oil spill plan, and have it certified by professional engineer, (2) build secondary containment - such as berms or drain basins, (3) construct fences, (4) provide lighting, (5) employ monitoring devices, and (6) perform tank integrity testing and meet several other requirements. Imagine fencing whole farms or running wire to remote sites for monitoring across many miles to reach other small refueling sites.

According to a recent USDA study, which I would like to submit for the record, such requirements would impact nearly 70 percent of all farms and many farmer cooperatives and other agribusinesses. For farmers alone, the cost would be approximately $4.5 billion. For many farmers, the burden of such additional costs would be devastating. Moreover, such requirements are extremely impractical in many cases given the unique characteristics of farming in general. This is especially true for farms which are made up of multiple parcels and include lands that are noncontiguous and nonadjacent, and where you may have several tank sites. As part of its study, USDA found that 47 percent of the farms that responded in the survey have multiple sites, on average 6, which are located an average of 4.1 miles, not feet or yards, away from the main fueling sites. In addition, many agricultural fuel tanks do not stay full year-round as do industrial tanks for which this rule was originally designed. For example, fuel tanks for irrigation pumps stand empty many months of the year and during pumping operations are constantly being drawn down.

Finally, the same USDA study also found there is little justification for such requirements in view of the fact that agriculture has a spill history of less than 1 percent.

In my case, these regulations would also apply to me since the storage on my farm consists of 3,000 gallons of diesel fuel and 1,200 gallons of gasoline, which triggers EPA's current aggregate threshold of 1,320 gallons.

Given this history, the potentially huge cost, the difficulty with compliance due to the nature of agriculture and farming, and the lack of data to indicate there is a problem, we continue to believe a strong case can be made that farmers and ranchers should be exempt from such requirements. That said we have been working with the EPA in good faith for the past 3 years in support of a more workable and realistic approach to address the concerns of agriculture under the 2002 rule.

Specifically, we have recommended a separate definition for farms and ranches relating to the term "facility" be established - one that reflects their unique characteristics. A farm or ranch, including those comprised of multiple parcels and/or noncontiguous or nonadjacent lands, should not be considered a single facility under the regulations. Each field or parcel where tanks are located should be considered separately and not simply combined and aggregated.

We have also suggested to EPA a tiered approach to compliance, based on whether the amount of oil storage on a site specific basis exceeds a threshold trigger. Applying a single, inflexible concept of an "aggregated facility total" to trigger compliance may make sense for a large terminal, but it makes no sense in the case of a farm or ranch that may have multiple fueling sites spread out across several miles.

We have also urged EPA to further delay implementation of its SPCC regulation given the fact that it would be impossible in most cases for farmers to meet the existing February and August 2006 deadlines for compliance.

As part of its December 2005, proposal, EPA has announced an indefinite extension for compliance with its 2002 regulations for all farms with an aggregate storage capacity of 10,000 gallons or less until more information can be collected and analyzed to determine if differentiated SPCC requirements may be appropriate. For farms and ranches with aggregate oil storage over 10,000 gallons, EPA has proposed that the compliance dates be extended to October 31, 2007.

While the 10,000 gallon trigger is a significant improvement over the current 1,320 gallon trigger, we are concerned that farms would still be subject to compliance based on the establishment of an "aggregate" trigger for the entire farm rather than on a site by site basis. In addition, given the huge cost as well as impracticality of its SPCC regulations in many cases, we believe EPA should exclude all farms from its requirements pending further review and that it adopt a more flexible and workable approach that fully addresses the concerns of agriculture as we have outlined.

In addition, we continue to be concerned over the potential impact and cost of such regulations on many farmer cooperatives and other agribusinesses that serve farmers.

Again, on behalf of the Agriculture Coalition, we appreciate the opportunity to testify before the committee on this important and costly issue. We look forward to

working with you as well as EPA to address the concerns of agriculture, while continuing to meet important environmental objectives.

Thank you.

RESPONSES BY RICHARD G. OWEN TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. USDA conducted a survey of farmers on the SPCC rule. Can you explain to the Committee, based on the USDA's information, how many farmers are impacted by the SPCC rule and how many farms have spilled a reportable quantity of oil?

Response. USDA's 2005 study, entitled "Fuel/Oil Storage and Delivery for Farmers and Cooperatives," indicated that over 70 percent of all farms surveyed and many farmer cooperatives and other agribusinesses will be impacted by the current SPCC rule. Based on the survey results, USDA estimated that 487,343 farms nationwide would be impacted at a total cost of $4.5 billion based on an average cost of $9,215. While this by itself represents a huge cost, the Agriculture Coalition believes this may be conservative.

The USDA study found little justification for these SPCC requirements in view of the fact that agriculture has a spill history of less than 1 percent.

Question 2. According to EPA's 1995 survey data, farms have on average less than 10,000 gallons of throughput volume. EPA further estimates that for facilities with approximately 10,000 gallons throughput, 0.03 gallons of oil spill. EPA's data also found that the average quantity of oil discharged from a farm (a total of 50 incidents) was just over 1,000 gallons with all but 7 gallons being contained within secondary containment. The discharges mostly reached land and soil, not navigable waters.

Further, in his analysis of EPA's data, Dr. Corbett argues that "—the total petroleum usage by the agriculture sector indicates that farms store, transfer, and use about the same quantity oil products as the Nation's commercial sector, or about half as much oil as the electric power industry." However, his own charts show that in fact while oil production and farms make up the greatest percent of SPCC regulated facilities, they actually have fewer spills when one compares their percent of SPCC related oil spills to the number of SPCC related facilities. Farms, according to his chart, make up about 37 percent of the regulated community and have about 10 percent of its spills. Whereas most other industries have a greater percent of SPCC spills than they do SPCC facilities. For instance, manufacturing has nearly 45 percent of the spills but only 5 percent of the facilities.

Based on this data, do you think EPA should extend any flexibility it offers in the December 2005 rule to all farms?

Response. Yes. While the 10,000 gallon threshold proposed by EPA in their December 12, 2005 proposal is a significant improvement over the current 1,320 gallons, this tankage threshold number is not necessarily applicable to farms. While the Agriculture Coalition on SPCC supports EPA increasing the threshold in the proposed rule, we have concerns with the 10,000 gallon trigger because it was established only to remain consistent with those in other EPA regulations related to oil discharges, like the National Oil and Hazardous Substances Pollution Contingency Plan (National Contingency Plan or NCP) and does address the typical dispersion of storage tanks in agriculture. The NCP was developed in 1968 as a response to a massive oil spill from the oil tanker Torrey Canyon off the coast of England. Revisions to the NCP, of which the most recent was finalized in 1994, were again in response to a massive spill, this time the *Exxon Valdez*. Given its unique fuel dispersion characteristics and lack of any significant spill history, the agriculture industry cannot be compared to the spills of huge oil tankers. Before any rule is applied to our industry, EPA must evaluate the threat (if any) we present and establish rules applicable to the industry, which includes appropriate triggers.

EPA's 2005 Proposed Rule grants farms with 10,000 gallons or less of storage AND a spill plan, an indefinite extension of compliance deadlines. Farms with 10,000 gallons or less with no plan and farms with more than 10,000 gallons of storage will not be afforded the indefinite compliance extension deadline. The relief provided by this indefinite extension is minimal as most farming facilities were unaware that the SPCC rule even applied to them. Also, the Coalition maintains that if EPA, in its own words, "believes that the unique characteristics of farms pose particular challenges to SPCC compliance and that further consideration of the requirements as they relate to farms is warranted," that consideration and further investigation should be applied to all farms of any size. I am also disturbed that EPA's 1995 survey data upon which so much of the analyses are based is by its own admission in the proposed rule, very poor.

The more recent 2005 USDA study sharply contradicts EPA's earlier analysis. Again, it also indicates there is less than a one percent spill history with regard to agriculture. In addition, a survey conducted by the Agricultural Retailers Association (ARA) in 2005 of agricultural retail dealers and distributors showed data similar to that collected by USDA.

In addition, EPA's 10,000 gallon trigger as applied to agriculture is based on an aggregate measure of all storage tanks and their capacity on a farm (which often include multiple parcels of land that are nonadjacent and noncontiguous, sometimes separated by roads, etc. and multiple tank locations at a significant distance from each other). Accordingly, any threshold trigger should be established on a site-by-site basis.

RESPONSES BY RICHARD G. OWEN TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. The 1973 SPCC regulations were applied purely on a threshold basis any type of facility meeting the threshold for quantity of petroleum products on site was regulated. On what basis do you assert that the 1973 regulations were never intended to apply to farms?

Response. Neither the 1973 EPA Regulation or the 1971 Memorandum of Understanding between the U.S. Department of Transportation (DOT) and EPA upon which the 1973 regulation followed, contains any specific reference to farm or farming operation. Nor do they include any reference to the term farmer or agricultural producer. There is no record as far we can determine of any action at that time to apply such regulations to farms. In fact, as USDA's report indicated, the majority of farmers surveyed were unaware of such regulations.

Question 2. Can you describe in more detail the type of storage on your property for example, do you hold fuels in one location? Are they located in separate tanks separated by large distances? For what purpose are you storing such significant quantities of fuel?

Response. With regard to my farming operation, storage of fuel is in two different sites, the largest amount of fuel being 3000 gallons. It is uncommon that more than one or two thousand gallons are stored for a long period of time because of use soon after the tank is filled. The second set of two tanks is 100 feet away from the larger one and is currently used to store aviation gasoline. No more than 600 gallons are typically stored for a long period of time. The fuel tanks are all aboveground and in excellent condition with the area kept clean at all times. There has never been a spill.

Significant quantities are stored when producers try to purchase fuel when prices are low. Some producers save as much as two or three thousand dollars at a time because they are capable of buying larger amounts at relatively lower prices.

Question 3. What is your opinion of the mobile equipment exemptions included in the EPA's proposed rule?

Response. The Agriculture Coalition on SPCC fully supports the EPA's proposal to exempt motive power and the proposal that these motive power containers do NOT count towards the aggregate facility capacity. We would fully support EPA extending a similar exemption to home heating oil storage located at a farm facilities main site, but which is used for the residential property at the site.

Question 4. You did not speak at all in your testimony to environmental risk. Can you describe why fuel stored at agriculture sites would pose any less risk than fuel stored at another site? Are there protections inherent to farms that you believe reduce the risk to waters, which are often located adjacent to farms?

Response. According to USDA's analysis, there is very little environmental risk associated with agriculture. In fact, USDA's survey of farmers indicates there is less than a 1 percent spill history in excess of 1,320 gallons.

There are a number of factors that help contribute to agriculture's low risk with regard to potential oil spills. Farmers have a strong vested interest in protection and prevention efforts, as well as environmental stewardship, because they (1) reside on the land and (2) they are dependent on the land for their current and future livelihood. They also can ill afford the cost and disruption of their farming operation as a result of any tank rupture or spill. Storage tanks are also subject to regular and constant inspection, are often separated and dispersed (an average of 4.1 miles apart as noted on page 12 of the USDA study) rather than concentrated in one location, and are not generally as heavily utilized because of the seasonal nature of production agriculture. Geographic location and concentration in rural areas, along with the dispersed nature of tank locations, also reduces risk. It's also highly un-

likely that multiple tanks that are widely dispersed are going to rupture simultaneously; this also means there is less likelihood of a concentrated spill in the remote case of a potential rupture and even less chance of any health risks.

Question 5. Are you aware of any analysis that evaluates the degree of change in the amount of risk to the food supply should oil-contaminated water be used for irrigation purposes?

Response. No.

STATEMENT OF RIKI OTT, PH.D., AUTHOR AND MARINE TOXICOLOGIST

Thank you for inviting me to testify on oil spill prevention standards.

My name is Riki Ott. I have a masters and doctorate in marine toxicology with a focus in oil pollution. I was on the scene before, during, and after the infamous *Exxon Valdez* oil spill. I am a 20-year resident of Cordova, Alaska. At the time of the oil spill, I was a commercial salmon fisherman in Prince William Sound. After the pink salmon and herring populations collapsed, unexpectedly, in 1992 and 1993—along with Cordova's economy, I retired from fishing to focus on helping rebuild my community.

I have since co-founded three nonprofit organizations to deal with lingering social, economic, and environmental harm from this spill (www.alaskaforum.org, www.copperriver.org, www.orafoundation). I've also written a book on the legacy of the *Exxon Valdez* oil spill (Ott 2005).

The lessons from our tragedy apply to spills of any size as well as public health and the environment. I would like to share three lessons with this committee and explain how each relates to the SPCC proposed rule. These lessons are:

-Oil is far more toxic than we thought.
-Prevention is critical.
-Better, safer cleanup products need to be used.

1. OIL IS FAR MORE TOXIC THAN WE THOUGHT.

A paradigm shift in the scientific understanding of oil toxicity has occurred since passage of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA 90). It is important to realize the limitations of the 1970s science. This science is based on standard laboratory bioassays, using single species, exposed for 96 hours to only the Water Soluble Fraction of crude oil. Based on these studies, scientists thought toxic components of oil evaporated quickly and sub-lethal effects were limited to invertebrates, and occurred at exposure levels of parts per million. This 1970s science underpins the risk assessment assumptions used by the EPA in its proposed rule change.

The collapse of pink salmon and Pacific herring stocks in Prince William Sound was a tipping point for science, because the reality of what was occurring in the Sound—that is, long-term harm from the 1989 spill—did not match the 1970s understanding that oil only caused short-term harm.

To determine what was going on in Prince William Sound, interdisciplinary teams of scientists conducted four ecosystem studies from 1993 to 2001. These complex studies were conducted in the field, using lab tests to interpret and/or validate field findings. The ecosystem studies used multiple species over multiple generations and focused on a particularly toxic fraction of crude oil called polycyclic aromatic hydrocarbons or PAHs. PAHs were largely ignored by the 1970s science.

As a result of the ecosystems studies, scientists now realize that crude oil is 1,000 times more toxic than previously thought. In many of the birds, fish, and mammals studied, 1-20 parts per billion PAHs were found to impair reproduction, disrupt immune system function, and generally decrease overall fitness (health) of individuals, resulting in declines of localized populations (Bodkin et al. 2002; Carls et al. 1999, 2002; Esler et al. 2000, 2002; Golet et al. 2002; Matkin et al. 1999; Thomas and Thorne 2003; Trust et al. 2000).

Further, these effects are still happening in areas once heavily oiled. Only 7 of 28 species are listed as fully recovered by the *Exxon Valdez* Oil Spill Trustee Council (EVOSTC 2002). After 16 years, there is relatively fresh, toxic oil still on the beaches, and it is still bioavailable (Carls et al. 2001; Short et al. 2004), much to the amazement of scientists and disappointment of residents. I have a sample collected this past summer that I'll pass around when I'm done. The emerging paradigm is summarized in an article in Science in December 2003 (Attachment 1: Peterson et al. 2003)

Findings in medical science support the new paradigm and show that low levels of PAHs also harm public health. For example, medical doctors link low levels of

PAH exposure with asthma, depression, and chemical sensitivities (Ashford and Miller 1998). In 1999 the EPA added 22 PAHs in crude oil to its list of persistent, bioaccumulative, toxic pollutants. This list includes lead, dioxin, mercury, PCBs, and DDT and now PAHs (U.S. EPA 2000).

This relates to today's hearing because the 1990s science on oil toxicity supplants the 1970s science and changes the risk assessment equation. Oil is more toxic than we thought. Since oil exposure causes greater known risk to the public and the environment, we need to increase, not decrease, spill prevention standards to reduce the likelihood of spilling it.

2. PREVENTION IS CRITICAL.

Another reason to maintain strong standards for spill prevention is industry's general inability to contain and clean up spilled oil. The public has witnessed, time and again, industry's inept fumbling ever since England's Torrey Canyon spill (in 1968). Even one of the most technologically sophisticated companies in the world only managed to recover a small fraction of what was spilled in Prince William Sound (Ott 2005; Spies et al. 1996).

The size of the spill doesn't matter. The 1,000-gallon spill in Puget Sound, Washington, (2004) oiled hundreds of miles of coastline, while the massive *Exxon Valdez* oiled thousands.

This relates to today's hearing because the EPA's proposal to lower the threshold for spill planning and prevention essentially guarantees the small facilities will have more spills. Why? Because less liability equates to more spilled oil.

The National Research Council found that for tankers, oil spillage dropped off significantly after 1991, following passage of OPA 90 (2002). Industry watchers attribute the reduced spillage to preventative measures and increased industry concerns over escalating financial liability (de Bettencourt et al. 2001). As one senior U.S. Coast Guard officer put it, the "requirement for some ships to assume a higher level of financial liability for spilling oil has likely had a greater impact on reducing the amount spilled than the plethora of 'command and control 'regulations that (preceded or) followed OPA 90" (Elliott 2001, 31).

Reducing oil spills and oil pollution is a matter of making the polluter pay. Oil companies are experts at externalizing costs to society and the environment. Spill cleanup involves high costs to society because taxpayers foot the bill and because cleanup workers risk their health to deal with hazardous waste cleanups, including oil spills. Facility owners should be held responsible for spill prevention not exempted from it.

3. BETTER, SAFER CLEANUP PRODUCTS NEED TO BE USED.

The third reason for maintaining strong oil spill prevention standards is that, when oil does spill, industry's preferred method of cleanup is chemical products. This often creates more problems than is solves, because cleanup products often contain industrial solvents to dissolve oil and grease and, thus, are environmental hazards.

One dispersant that was used during the *Exxon Valdez* cleanup is Exxon's Corexit 9527, which contains an OSHA human health hazard called 2-butoxyethanol. Exxon's Material Safety Data Sheet for Corexit 9527 states: "Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid—" (Exxon 1992). This product was sprayed on water and beaches during Exxon's cleanup. It is currently stockpiled in Alaska, California, Washington, Hawaii, Texas, Florida, New York, and Puerto Rico and likely other places.

How is this allowed? The EPA maintains a schedule of chemical products for use in the National Oil and Hazardous Substances Pollution Contingency Plan. The EPA only screens products for effects on animals and the environment-not humans. Yet, it's not just the environment that's at risk when chemical products are used, it's spill responders and the public in places where drinking water or land may become contaminated. Evidence of sick workers from the *Exxon Valdez* cleanup suggests it's time to include effects on humans in product assessment (Ott 2005).

There are no guarantees that the products are safe for the environment either (Attachment 2: Nichols 2001). Products are designed for specific purposes; however, the EPA admits its system is rife with abuse: "misuse . . . may cause further harm to the environment than the oil alone" (ibid., 1481).

For example, during the *Exxon Valdez* cleanup, dispersants designed for open water use were applied directly on beaches, despite voluntary guidelines adopted by the Alaska Regional Response Team (1989) through a consensus process with stakeholders that dispersant use was not recommended on beaches and in nearshore areas.

Other problems with the Product Schedule that should concern this committee are:

-A loophole in subpart J, which allows South Louisiana crude to be mixed 50:50 with Prudhoe Bay crude so dispersants will meet the EPA's minimum 45 percent effectiveness threshold for product listing (Nichols 2001). This creates an illusion that dispersants work and eliminates industry incentive to develop ones that actually do.

-No formal de-listing process in Schedule C, requiring the manufacturer to notify the EPA when products are no longer manufactured, and to provide a written explanation for the de-listing. This is like discovering a product is dangerous, but never publicly announcing its recall, or the reasons for the recall, so the public is unaware of any health risk from use or exposure.

-No requirement to test stockpiled product periodically to ensure effectiveness.

This relates to today's hearing because it is cheaper for industry to throw chemical products at spilled oil than to prevent the spill from happening in the first place. Reducing spill prevention standards is another example of externalizing costs to the public because it virtually ensures more cleanup products will be used.

To summarize, I've addressed three reasons for maintaining strong oil spill prevention standards, based on direct experience in dealing with an oil spill. First, oil is more toxic than we thought; second, oil is nearly impossible to contain and cleanup once it does spill; and third, the chemical cleanup products introduce more risk for spill responders, the public, and the environment. All of what I've discussed is covered in my book (Ott 2005), which I would like to leave with this committee.

I urge this committee to reject the EPA's proposed rulemaking to lower standards for spill prevention for small facilities.

Thank you for the opportunity to testify.

RESPONSES BY RIKI OTT TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Can you describe your reaction to the proposal by some in industry that the Clean Water Act's definition of navigable waters should be narrowed, thereby limiting the facilities that would be required to have an SPCC plan, as well as removing general Clean Water Act protections from many wetlands, tributaries, and streams? Is it appropriate for a change of this magnitude to be negotiated as part of a settlement with a single party?

Response. Industry would like to dismantle the Clean Water Act and has grown quite bold under this Administration. Wetlands, tributaries, and streams provide critical habitat for many sensitive species. Wetlands also filter water, providing a critical cleaning function that could easily be overwhelmed. Think of trying to dredge a wetland to clean it of deposited pollutants like occasionally must be done in harbors! The CWA was designed to protect critical habitat and habit function for all Americans. It would be tragic and a blow to the public trust if something as basic as clean water protection was 'sold down the river' for one party in a settlement.

Question 2. Can you respond to Mr. Cummings suggestion that despite the fact that secondary containment is the best protection for spills from oil tanks, marginal crude oil wells should receive differential treatment under the SPCC rule?

Response. Marginal oil wells should NOT receive differential treatment under the SPCC rule. This is a problem we encounter all the time in Alaska when oil wells end their peak production years and start to wind down or, conversely, when new "marginal" fields are first developed. It seems one of the first cost cuts in "marginal" fields is environmental costs such as spill prevention measures. An oil spill from a "marginal" field costs the same to the public and the environment as a spill from a productive field! If the field is too "marginal" to do business in an "environmentally sound manner" as the industry likes to claim it does, then the company should do business elsewhere. Some costs, such as environmental and public protection, cannot be cut and must be a part of doing business.

Question 3. Can you describe again your thoughts regarding the EPA's testimony that they did not consider the evolution of the science regarding oil spill impacts and clean-up when making this SPCC proposal?

Response. I was literally shocked when the EPA stated that they had not considered the new science when making their ruling. As a member of the public, I certainly assume that the EPA is following, knows about, and uses the most current science in its proposals and rule-makings. EPA's rules and proposals are only as good as the science and models that these decisions are based upon.

The risk assessment model is deeply flawed enough—with its outdated reliance upon only one chemical at a time and exposure to a 70 kg person (presumed male).

In fact, the question of whether the regulatory system is too lax was covered in a four-part series in the Wall Street Journal last year! (P. Waldman 2005, "Common industrial chemicals in tiny doses raise health issues. Advanced tests often detect subtle biological effects; Are standards too lax?" 7/25/05, A1.) Lax standards allow activities that are dangerous to the public health and the environment—but this problem is certainly compounded by not using the most current science to boot! As you know, the cost-benefit analysis, then, factors in the "cost" of public health and the environment against the benefit the industry will provide. The cost-benefit analysis relies on the risk assessment to provide accurate costs.

In this case, the new oil toxicity science adds significantly to the risk side of this equation as the science shows that oil is much more toxic than we thought from the 1970s science. Therefore, this added risk needs to be factored into the cost-benefit analysis for the SPCC proposal. The added risk to the public and the environment means that the industry (or party) must show much more benefit in order to counter balance this added risk. I certainly didn't see enough benefit to justify gutting the Clean Water Act.

STATEMENT OF JAMES J. CORBETT, PH.D., ASSISTANT PROFESSOR, MARINE POLICY PROGRAM, GRADUATE COLLEGE OF MARINE STUDIES, UNIVERSITY OF DELEWARE

Good morning, Mr. Chairman and members of the committee. I am James J. Corbett, Jr., Assistant Professor in the College of Marine Studies at the University of Delaware. The College of Marine Studies is an interdisciplinary unit that conducts research and education regarding fundamental and applied problems in environmental science and policy. The college mission is to provide better understanding of oceanic, geologic and atmospheric systems and to inform society about human impacts on the environment. My research develops and applies tools and analyses to help reveal and evaluate technology-policy alternatives related to energy, environment, and transportation. Additionally, I have experience as a practicing professional engineer (PE) who certified Spill Prevention, Control, and Countermeasures (SPCC) plans, and experience as an operating engineer of facilities and ships that store, transport, and handle oil. The opinions I offer to you today are based on my review of the proposed regulations, on research studies showing that policies aimed primarily at one aspect of a situation often produce unintended consequences, and on how multiple stakeholders focus technology-policy debate on issues of central importance.

SUMMARY OF CONCERNS WITH PROPOSED CHANGES

Spill Prevention Control and Countermeasures (SPCC) Plans serve to protect the public and our environment from oil discharges and spills. Landside runoff and discharges currently release significant amounts of oil into our waterways and their tributary streams, watersheds and groundwater connections.[1]

SPCC Plans also protect businesses, both small and large, from the direct cleanup costs and liability for damages. Oil spills and discharges from routine operations impair our Nation's fertile land, the water network that gives it life, the living ecosystems impacted by oil toxicity, and the public health. The costs of preparing SPCC plans, including the costs of maintaining their certification through training and periodic review, afford businesses the benefits of fewer spills, better control of routine discharges, and countermeasures that may contain spills within the facility, instead of polluting a facility's neighboring communities and environment. In other words, SPCC plans are recognized successes at minimizing the burden of oil spills to business and society, because they reduce the risk—both the likelihood and the consequences—of oil spills.

From a policy perspective, good environmental regulation reduces impacts and costs of pollution that are external to a facility's normal operation—this remains an explicit purpose of the original SPCC plan requirements. The EPA's SPCC regulations (and OPA 90) successfully required that facilities internally cover the costs of protecting the environment and public from oil spills, because businesses must bear the costs of a certified SPCC plan and bear the costs of spill cleanup if the plan fails. In this regard, a good SPCC plan is more cost effective through prevention, control, and countermeasures within a facility than the direct and indirect costs of responding after a spill.

EPA's proposed revisions raise the question whether it is more beneficial to act to prevent an event or to respond afterwards [U.S. Environmental Protection Agen-

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[1] See http://oils.gpa.unep.org/facts/source.htm, and http://www.offshore-environment.com/oilpollution.html for links to many sources.

cy, 2005]. In fact, some of the proposed changes appear to reduce or defer indefinitely the burden of spill prevention for some facilities. EPA's proposed SPCC revisions use a rationale that argues it is better for small facilities to bear the greater burden of liability without adequate spill prevention measures. Specifically, I have three major policy concerns:

1. Preventing spills appears in the revised rule to be less important for smaller facilities. Without a risk-based justification, this provision implies that only facilities large enough to afford spill prevention plans should be asked to do them, while leaving smaller facilities exposed to the risk of higher cleanup and liability costs. The proposed rule does not consider properly that higher overall risk to public health and the environment may be associated with facilities exempted in the revision. More frequent (if smaller volume) spills and discharges can occur from smaller facilities, contrary to EPA's summary statements.

2. The rule indefinitely allows agricultural facilities to avoid SPCC plan compliance, even though spill prevention may better protect rural, farming areas of our Nation that are more connected to our environment and our food supply than many commercial facilities that must complete SPCC plans. If agricultural oil storage and handling facilities are among the smallest, most distributed facilities addressed by the SPCC rule, they are also among those that may impact most our groundwater, irrigation networks, wetlands, and navigable waterways.

3. The proposed revisions weaken certification requirements by relying less on independent, professional expertise. The justification appears to be that SPCC plans can be obtained by industry at lower cost, without a convincing argument that the public receives equivalent protection from the risk of spills, or any other public benefit in tradeoff. Justifying self-certification of SPCC plans on the basis that no spills occurred in the past decade is like allowing me to write prescriptions for my child, instead of requiring a physician's examination and judgment, because she hasn't had a serious illness in the past ten years. It provides no public guarantee, or sufficient requirement, that the person certifying the plan posesses education, professional qualifications, and the commitment to public safety that professional engineering licensure requires.

The remainder of my testimony discusses these points in greater detail.

EXEMPTING SMALL FACILITIES REDUCES PROTECTION WITHOUT REDUCING COSTS

It is not clear that EPA is correct in its claim that it significantly reduces "the burden imposed on the regulated community in complying with the SPCC requirements, while maintaining protection of human health and the environment." EPA claims that a key limitation in their recent analysis is lack of data on regulated facilities. However, EPA uses its own 1995 survey data [U.S. Environmental Protection Agency, 1996a; U.S. Environmental Protection Agency, 1996b], collected for the specific purpose of reviewing the efficacy of the SPCC regulation. These data provide significant evidence that SPCC plans effectively reduce the burden of spill liability for facilities and that SPCC plans may protect small facilities more than larger ones.

EPA's survey analysis "revealed that compliance with the SPCC provisions reduces the number of spills, spill volume and the amount of oil that migrates outside of the facility's boundaries. It also indicated that compliance with one SPCC provision serves as a general indicator of a facility's awareness of the importance of other spill prevention and control measures" [U.S. Environmental Protection Agency, 1996a; U.S. Environmental Protection Agency, 1996b]. This reduces the liability small businesses face if a spill occurs.

EPA's proposed rule quotes their SPCC survey report claiming that facilities with larger storage capacity are likely to have a greater number of oil spills, larger volumes of oil spilled, and greater cleanup costs.[2] Indeed, actual data from the SPCC survey shows significantly different costs on a per gallon spilled basis. EPA data show that with an SPCC plan, small facility spills cost less per gallon to clean up than large facility spills.

EPA survey data shows that an SPCC plan reduces cleanup costs and that smaller facilities face lower cleanup costs than larger facilities, even on a per gallon spilled basis. This is because with an effective SPCC plan, spills are smaller, less frequent, and better contained within the facility. In exempting small facilities from plan requirements, the proposed rule states that "small facilities no longer required to have SPCC plans are still liable for cleanup costs and damages." Strangely, this

[2] This conclusion appears not to be based on predicted total costs from a statistical regression, which presented very similar cleanup costs per gallon, usually ranging between $0.16 and $0.21 per gallon.

justification suggests that exposing small facilities to the direct and liability costs of larger spills is better than requiring SPCC plans to protect the public and the environment through prevention of spills, or through controls and countermeasures to minimize them and confine them to the facility. EPA's rationale argues that society and businesses are better off paying for the consequences of spills from small facilities rather than preventing them.

DELAYING AGRICULTURAL FACILITY COMPLIANCE IS INADEQUATELY JUSTIFIED

Quoting from a current report by USDA[3] [U.S. Department of Agriculture, 2004]:

"Energy is used directly in agriculture for a range of purposes, including operating vehicles and irrigation pumps, and controlling indoor temperatures of greenhouses, barns, and other farm buildings. Crop production requires a large amount of liquid fuel for field operations. Most large farms use diesel-fueled vehicles for tilling, planting, cultivating, disking, harvesting, and applying chemicals. Gasoline is used for small trucks and older harvesting equipment primarily. Smaller farms are more likely to use gasoline-powered equipment, but as farms get larger they tend to use more diesel fuel. In addition, energy is used in some operations to dry crops such as grain, tobacco, and peanuts; and livestock operations use energy to operate various types of equipment."

EPA's own "survey data indicate that two industries (Farms and Oil Production) constitute about 80 percent of the SPCC-regulated universe. Manufacturing, Transportation, and Gasoline Stations/Vehicle Fueling constitute the next 12 percent of facilities. All other industries combined make up the remaining 8 percent." EPA also notes that "while farms may comprise a sizable portion of the SPCC-regulated universe, [farms that would require SPCC plans] represent only a small percentage (8 percent) of the farms in the United States. Farms in general have smaller storage capacity, fewer tanks, and lower throughput levels than other types of facilities" [U.S. Environmental Protection Agency, 1996a; U.S. Environmental Protection Agency, 1996b].[4] One may presume that these represent the 8 percent of farms at highest spill risk, or at least that these store, transfer, or use the most oil. This information is summarized in Figure 1.

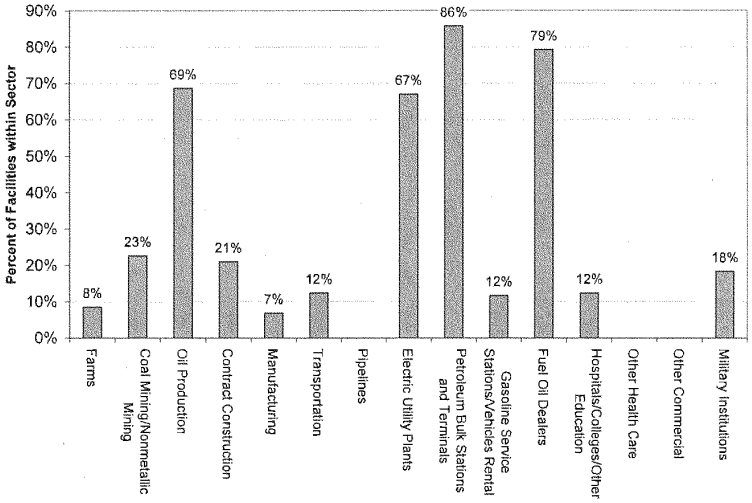


Figure 1. Percent of Industry Meeting SPCC Storage Criteria by Industry Sector

Figure 1 suggests that farms may not be disproportionately burdened compared to other industries. However, such a conclusion should consider the oil spill risk from agricultural SPCC facilities compared to SPCC facilities in other sectors. My estimate in Table 1 of the total petroleum usage by the agriculture sector indicates

[3]: Chapter 5: Energy Use in Agriculture, http://www.usda.gov/oce/gcpo/ghginventory.html,.

[4] See http://www.epa.gov/oilspill/spccref.htm, specifically http://www.epa.gov/oilspill/pdfs/pap—risk.pdf.

that farms store, transfer, and use about the same quantity oil products as the Nation's commercial sector, or about half as much oil as the electric power industry.

Table 1. Summary of Petroleum Usage[a] by Sector (10^6 metric tons)

US Petroleum Consumption	1995	1996	1997	1998	1999	2000	2001	2001	Average % of Total Annual Petroleum Consumption (1995-2001)
Residential	33.3	36.4	35.4	32.2	35.2	36.2	35.9	35.9	4.2%
Commercial	18.2	19.0	17.9	16.7	16.5	18.2	18.2	18.2	2.1%
Industrial[b]	132.7	141.4	144.6	133.8	132.7	133.8	129.5	129.5	16.2%
Agriculture[b]	**20.1**	**18.4**	**20.6**	**20.4**	**21.2**	**17.8**	**17.8**	**17.8**	**2.3%**
Transportation	544.9	558.6	561.2	572.9	593.7	611.3	618.3	618.3	69.6%
Electricity Generation	21.1	22.8	26.0	36.5	33.8	31.8	35.6	35.6	3.6%
U.S. Territories	15.3	13.8	14.8	16.6	17.4	18.0	18.5	18.5	2.0%

a. Derived from CO_2 totals for petroleum from Table 1-11 and Table 2-3 [*Environmental Protection Agency*, 2003], using an average petroleum carbon content of 86%.

b. Industrial petroleum use includes agricultural use; agricultural petroleum consumption was deducted from the total.

More directly, the 1996 Survey data can be used to compare SPCC facilities by sector as part of the set of all facilities covered by SPCC requirements. This is shown in Figure 2, which plots the percent of regulated facilities and the percent of reported spills by sector. In this figure, farms appear to be ranked third among SPCC-facility spills by sector, behind only manufacturing and oil production. Based on the survey data, EPA may be deferring indefinitely the compliance requirements for those farms where an SPCC plan made the most positive difference. Survey data indicate that less than 2 percent of all agricultural spills in facilities with SPCC plans escape secondary containment; this demonstrates that control and countermeasures in SPCC plans for farms are nearly as effective as SPCC plans are for the electric power sector.

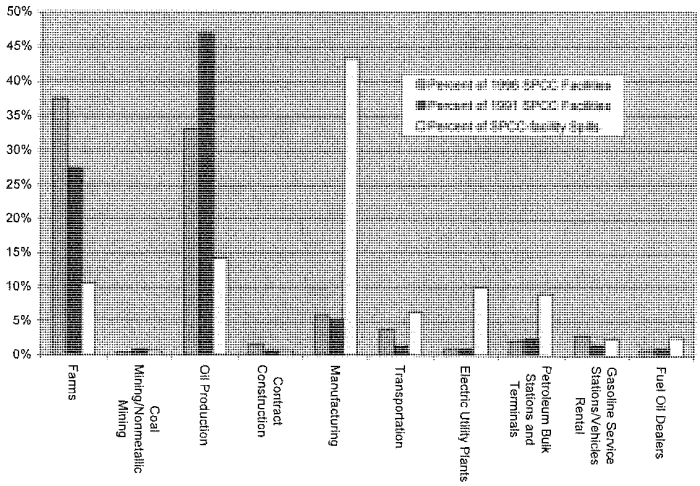


Figure 2. Comparison of SPCC facilities (1991, 1996) and the percent of all spills from in EPA's 1996 survey [*US Environmental Protection Agency*, 1996a; *US Environmental Protection Agency*, 1996b].

Is the indefinite deferment of compliance requirements justified for facilities in one sector, but not for other sectors with similar oil consumption and/or spill rates? Potential spill consequences from agriculture may directly damage our crop lands, water irrigation networks, groundwater aquifers, and associated wetlands and waterways. EPA's proposed rulemaking doesn't consider that consequences from agricultural spills to rural ecosystems may be greater than consequences of commercial sector spill in more urban regions.

PROFESSIONAL ENGINEER CERTIFICATION VERSUS SELF-CERTIFICATION

Exempting some facilities from PE certification of an SPCC appears counter to the justifications for other exemptions from PE certifications, such as industry exemptions for mechanical and electrical engineers. Moreover, exempting PE certification from SPCC plans on the basis of cost (or regulatory burden) may increase the risk of spills from self-certifying facilities where managers without engineering training

and/or technicians do not possess a standard professional knowledge base, ascribe to a professional code that places public protection highest, or share individual legal liability for their judgments.

Self-certification of SPCC plans for smaller facilities appears similar to an industry exemption for other engineering documents and plans, but it is not. Industry exemptions have been generally provided to unlicensed, practicing engineers who are directly employed by the company for which they provide engineering services.[5] Such exemptions have been justified for the following reasons:

1. Engineering services provided within a company for the company's benefit (e.g., revenue and profit) do not present a conflict of interest between an engineer's independent judgment and his/her loyalty to the company.
2. The business assumes direct responsibility as employer for the quality of the unlicensed engineer's work; this provides the company with motivation to hire and train well-qualified engineering employees.
3. Therefore, when the best engineering judgment of the employee engineer is exercised, there is reasonable assurance that both the company's and individual's interests are served.

Unlike engineering services provided by an unlicensed employee under the industry exemption, required SPCC plans serve the public goal of protecting the environment. EPA appears to misapply the logic behind industry exemptions or they ignore the real and potential conflicts of interest inherent in their self-certification proposal. Unlicensed employees are not protected if they attempt to "protect the public" in opposition to their employer's economic motivations. (Licensed professional engineers within the same company may face similar potential conflicts, but may be less influenced by virtue of their license and code of conduct requirements "to protect and safeguard the health, safety, welfare, and property of the public.")

The possibility that an owner/operator without proper engineering skills will self-certify a facility presents even greater concern. In this case, the possibility of a conflict of interest that puts the public at risk is compounded because the public has no assurance that judgments made to self-certify the SPCC plan are founded in the qualifications and training of the individual owner/operator. Many owner/operators may make adequate judgments based upon experience or because their facility has avoided spills in the recent past. However, the proposed rule provides no way of assessing an manager's contribution to a spill free past at a facility; in short, the proposed revision cannot assure the public that the environment is protected from oil spills.

FURTHER ANALYSIS IS MERITED FOR PROPOSED SPCC REQUIREMENTS

There is a need for better risk-based analysis before EPA relieves the burden of regulation (i.e., costs) to oil storage and transfer facilities without considering properly how this burden shifts to the public. Environmental consequences may not be primarily influenced by spill size, but by spill impacts. The SPCC Facility Survey Analysis presents graphs of simplified statistical relationships that may be misleading, given that the statistical regressions for small facilities appear systematically biased. More importantly, these data appear to only represent costs of spills from facilities with certified SPCC plans; spill costs from SPCC-exempt facilities could be much greater than facilities where certified SPCC plans helped minimize the frequency and size of spills—and therefore the liability and clean-up costs to those facilities.

This is partly acknowledged within the EPA analysis of their survey data; the report states "if small facilities, for example, are assumed to be less aware of the NRC and the Clean Water Act reporting requirements (due to limited resources for example), then these facilities would be less likely to have spill records in ERNS and the results of the comparison described above would be biased downward." However, underreporting is not the only threat to validity of EPA's conclusions. The survey data summarized in the analysis reveals bias in the derived statistics for smaller facilities. In fact, it appears from the data that some smaller facilities have more and larger spills than the simplified statistics predict. Using actual versus predicted data reinforces that exempting smaller facilities may be inconsistent with the goal to reduce the risk of spills.

An analysis of the data summarized in EPA's survey confirms a more important fact about oil spills. Plotting EPA's survey data for costs of clean up per gallon and per spill reveals that the cost of cleaning up most oil spills is not proportional to the gallons of oil spilled or number of spills; rather, costs are more related to clean-

[5] Mechanical Engineer magazine http://www.memagazine.org/backissues/may99/features/tolicense/tolicense.html.

up efforts and restoring the impacted environment. In other words, where a small amount of spilled oil fouls a local environment and impacts water, soil, and living ecosystems, a larger spill may cause proportionally less damage and can cost less per gallon to clean up. This general fact is not new, and is not limited to land-based oil facilities covered under OPA 90 and the Clean Water Act; a similar conclusion was reached by a study for the National Academy of Sciences in Special Report 259 [Tikka et al., 2001], which simulated physical impacts from various volumes of spilled oil under a variety of oil tanker spill scenarios.

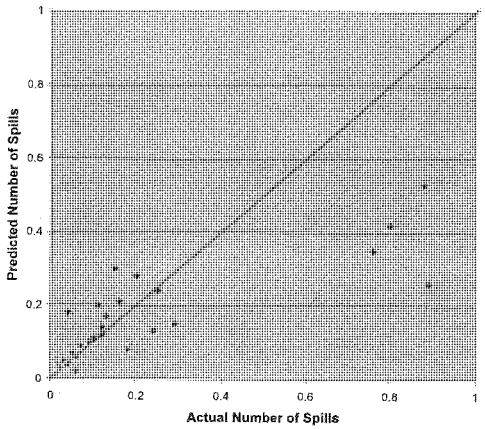
Backup Charts from written testimony by James J. Corbett, Jr., P.E.

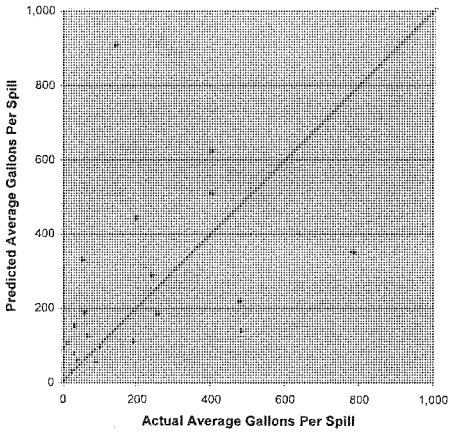
Senate Environment and Public Works Committee

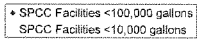
14 December 2005

UNIVERSITY OF DELAWARE

Comparison of actual versus predicted data from EPA's SPCC Facility Survey, Appendix B, Exhibit B-1: Regression Results







Source: [US Environmental Protection Agency, 1996a; US Environmental Protection Agency, 1996b]

Estimated population of facilities by sector
1.9 Million Farms
1996 Non-SPCC Facilities
1996 SPCC Regulated
Number of Facilities
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
Farms
Coal Mining/Nonmetallic Mining
Oil Production
Contract Construction
Manufacturing
Transportation
Pipelines
Electric Utility Plants
Petroleum Bulk Stations and Terminals
Gasoline Service Stations/Vehicles Rental
Fuel Oil Dealers
Hospitals/Colleges/Other Education
Other Health Care
Other Commercial
Military Institutions
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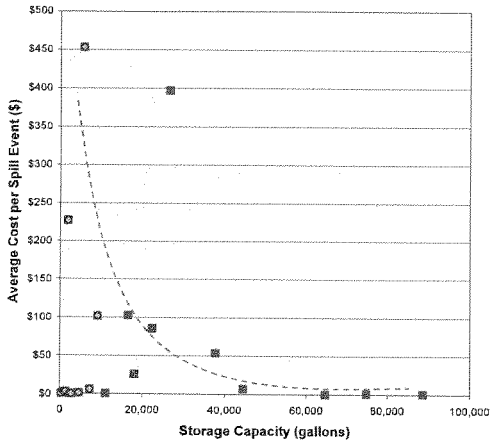
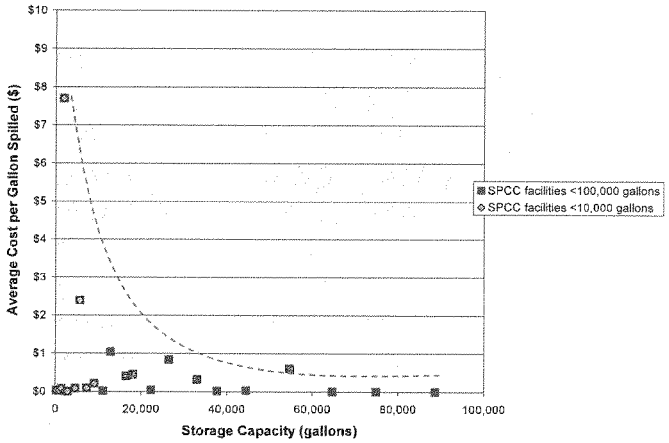
Graphs of actual costs of spills versus storage capacity from EPA's SPCC Facility Survey, Appendix B, Exhibit B-1: Regression Results





The curves *qualitatively* indicate an apparent frontier showing that small spills may cost more per spill event. Additional data analysis of SPCC survey would be required to better define this relationship.

Source: [US Environmental Protection Agency, 1996a; US Environmental Protection Agency, 1996b]

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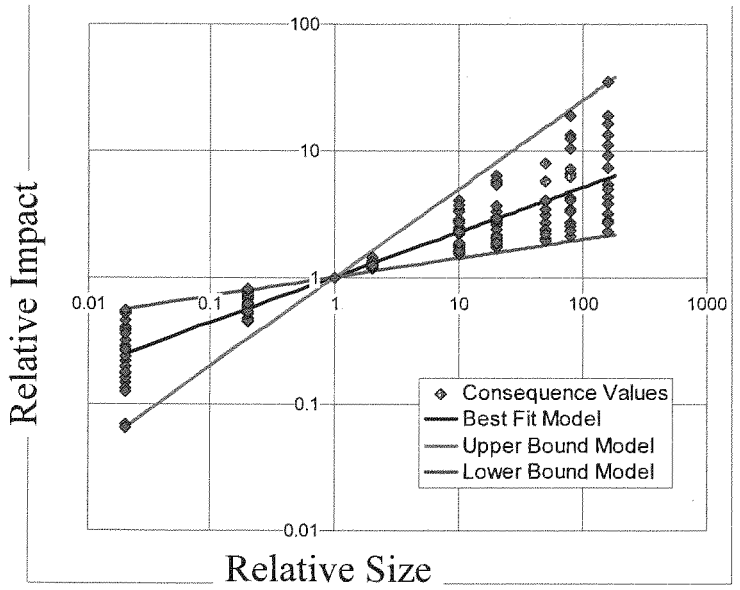
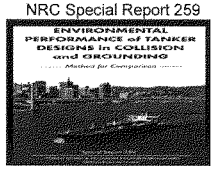
Relative Consequence Metric

Equal differences in gallons are less important as spill sizes increase.
Once the environment has been heavily damaged,
extra oil does relatively less harm.



Relative to 500,000 gallon tanker spill

NRC Special Report 259



ADDITTIONAL STATEMENT OF JAMES J. CORBETT, JR., P.E., PH.D., ASSISTANT PROFESSOR, UNIVERSITY OF DELAWARE

In December 2005 testimony to the U.S. Senate Committee on Environment and Public Works http://epw.senate.gov/hearing statements.cfm?id=249640.1 provided initial comments on the potential problems with the proposed SPCC rule amendments. I attach my testimony here, and submit additional comments that suggest a more effective strategy to meet the small business administration goal to relieve regulatory burden without weakening the public protections that SPCC requirements provide. These additional comments are based on a thorough review of limited data obtained since that testimony, but may not include all the information available to EPA or other stakeholders.

THE PROPOSED RULE PROVIDES SIGNIFICANTLY FEWER BENEFITS TO SMALL AGRICULTURAL OPERATIONS THAN EPA PROPOSED RULE AND OTHERS ESTIMATE.

Since my testimony before the U.S. Senate Committee on Public Works and Environment, I reviewed a copy of the survey analysis prepared for the National Council of Farm Cooperatives (NCFC) submitted as part of senate testimony by Mr. Richard G. Owen, Director, CHS, Inc.; he refers to this as the USDA study and I will refer to this as the NCFC survey analysis [Crooks et al., 2005]. My motivation was to help address Senator Inhofe's question at the end of the hearing about whether EPA's data or the USDA survey data were correct regarding the percent of farms that may be subject to SPCC requirements due to their oil storage volumes. The survey sample obtained by the NCFC survey is useful, but needed to be adjusted to remove sample bias and better represent the overall farm population; this was Not done in the survey report or analysis. Essentially both conclusions seem wrong: 1) More than 8 percent farms will be subject to SPCC rules than the 1996 EPA data suggest, and 2) Far fewer farms will be benefited than the USDA Survey conclusions that nearly 70 percent of farms will have to comply.

The percent of farms subject to current SPCC rules is less than 70 percent. As shown in Table 1, the total number of farms according to USDA greatly exceeds the total number of farms considered by the NCFC survey as the population potentially subject to SPCC regulations. Footnote 3 of their survey analysis implies that the more than 766,000 farms they excluded from their survey may not be subject to SPCC rules because they may be "hobby farms." I am not convinced that this is true; but if true and if "hobby farms" generally store less than 1,320 gallons, then the maximum percent of farms subject to the rule would be 64 percent. And since only those agricultural facilities storing more than 1,320 gallons but less than 10,000 gallons would "benefit" from the delayed compliance, the proposed rulemaking clearly affects fewer than 70 percent of farms.

Somewhere between 23 percent and 35 percent of farms appear to be subject to the SPCC requirements (storing more than 1,320 gallons). Using standard techniques to weight survey results for population demographics, the survey data obtained by NCFC can be corrected to estimate the number of farms that actually store oil in quantities that make them subject to current SPCC regulations. The actual percentage will depend on how closely farmers harvesting rice, corn, soybeans, wheat, and cotton are representative of all other farmers. (Note that the NCFC analysis clearly states that its survey sample did NOT include all farms with harvested crop land, and no livestock ranches. The NCFC analysis used a list from USDA's Farm Service Agency that included ONLY rice, corn, soybeans, wheat, and cotton farmers.) The lower bound conforms to the implicit assumption in the USDA analysis (footnote 3) that only the 1.36 million farms with harvested crop land would require SPCC plans; I would not recommend this assumption for a best estimate without additional data on those farms and ranches that the USDA survey ignored. Clearly, more farms appear to be subject to SPCC rules than the 8 percent estimated by earlier EPA studies. The population-weighted summary in Table 2 makes the assumption that farms outside the survey population are similar to those surveyed, suggesting that 33 percent of all farms may require SPCC plans; this represents my best estimate without better survey data.

In other words, most farms (between 65 percent -77 percent) are not subject to current rules, at all. Moreover, since those farms storing more than 10,000 gallons of oil would not be exempt or deferred from any requirements under the proposed changes, EPA's proposed rulemaking will relax SPCC requirements for less than 33 percent of farms (using Table 2 and Figure 1). If the NCFC survey assumption implicit in footnote 3 is valid (that "hobby farms" are not subject to SPCC rules because they are not commercial or because they generally store less than 1320 gallons), then the proposed rulemaking relaxes SPCC requirements for less than 19 percent of farms.

Table 1. Summary of USDA Farm Population and NCFC Survey Data

	All Farms (USDA)	Farms Considered to be Represented by Survey		Survey Respondents		Farms Outside Survey (Classified Erroneously as Hobby Farms)	
Size (acres)	Number	Number	Percent	Number	Percent	Number	Percent
less than 200	1,447,708	816,713	38%	107	7%	630,995	30%
201 to 500	340,637	264,131	12%	230	15%	76,506	4%
501 to 1000	149,029	134,118	6%	302	20%	14,911	1%
more than 1000	191,608	147,646	7%	892	58%	43,962	2%
total	2,128,982	1,362,608	64%	1,531	100%	766,374	36%

Fewer than 28 percent of farms would be able to defer spill prevention requirements under the proposed rule changes. Ignoring whether deferment applies only to a subset of farms storing less than 10,000 gallons but more than 1320 gallons, the NCFC survey data can be used to estimate the number of farms potentially subject to the deferment provisions in the proposed rulemaking. As shown in Figure 1, there is clearly a relationship between the size of farm and quantity of oil stored. While all farm sizes surveyed identified some farms that stored less than 1320 gallons, farms less than 200 acres are more than three times more likely than larger farms to be exempt from current rules already. More to the point, fewer than 410,000 of farms (<28 percent) store between 1320 gallons and 10,000 gallons. (Ignoring what NCFC refers to as "hobby farms" reduces the estimated percent of farms that could defer SPCC requirements to only 19 percent of all farms.) Even assuming that decreased spill prevention afforded these farms some potential "benefit" from indefinite deferment under proposed rule changes, more than half of these farms are larger than 200 acres and may not be small businesses.

The proposed rule may delay compliance for less than 19-28 percent of all farms. According to the question exchange between Senator Thune, of south Dakota, and Mr. Thomas Dunne, Acting Assistant Administrator, Office of Solid Waste and Emergency Response, US EPA, farms that are not yet in compliance would not qualify for the deferment from SPCC planning requirements. My impression is that very few farmers have achieved compliance with current SPCC regulations; therefore even fewer farms may be "benefited" if the question exchange between Mr. Dunne and Senator Thune was accurate. I would request that EPA provide information clarifying this,

Table 2. Estimated Farms by Size and Oil Storage, Based on NCFC Survey and Assuming That the Survey May Represent All Farms

Size (acres)	All Farms	<1320 gal storage			1320 to 5000 gal storage			5001 to 12,000 gal storage			12,001 to 29,999 gal storage			30,000 gal or more storage		
			Population Weighted			Population Weighted			Population Weighted			Population Weighted			Population Weighted	
		Data	Number	Percent	Data	Number	Percent	Data	Number	Percent	Data	Number	Percent	Data	Number	Percent
< 200 acres	1,447,708	82	1,109,457	52%	15	202,949	9.5%	6	81,180	3.8%	4	54,120	2.5%	0	1	0.0%
201 to 500 acres	340,637	162	239,927	11%	56	82,938	3.9%	8	11,848	0.6%	3	4,443	0.2%	1	1,481	0.1%
501 to 1000 acres	149,029	118	58,230	3%	157	77,475	3.6%	22	10,856	0.5%	5	2,467	0.1%	0	0	0.0%
> 1000 acres	191,608	106	22,770	1%	418	89,790	4.2%	172	36,947	1.7%	165	35,443	1.7%	31	6,659	0.3%
total	**2,128,982**	**468**	**1,430,384**	**67%**	**646**	**453,152**	**21%**	**208**	**140,831**	**7%**	**177**	**96,474**	**5%**	**32**	**8,141**	**0.4%**

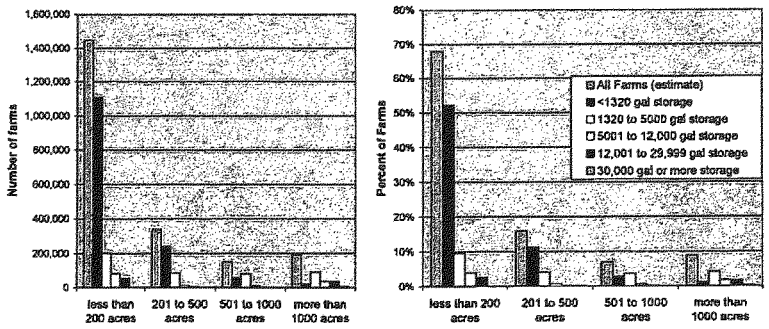


Figure 1. Illustration of All Farms by Size and Oil Storage, Based on NCFC Survey and Assuming That the Survey May Represent All Farms

Some states may realize much greater impact from the proposed rule changes than others, and farms in some important agricultural states may be much less affected than claimed. Using the same standard survey techniques to re-weight biased survey samples for their populations, a state-by-state picture of the potential impact of the proposed rulemaking is possible. This would require that the national (and regional) survey data was representative at each state level-a condition not in evidence in the NCFC survey analysis. However, for illustration purposes, I used the national summary of the NCFC survey data to consider expected differences among a few agricultural states (the four most discussed during the Senate Hearing). Figure 2 shows that the NCFC survey data (national average) poorly represents three of the four states considered. Specifically, the NCFC data underestimates smaller farms in California and Delaware, and overestimates the number of smaller farms in Montana. (Coincidentally, the national-level NCFC survey data respectively underestimates and overestimates these states by about 20 percent those farms smaller than 200 acres.) The NCFC national-level most closely represents farms in Oklahoma, and underestimates USDA farm populations for smaller farms by about 10 percent.

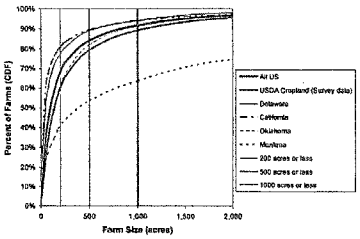


Figure 2. Cumulative Distribution of Farms by Size, Comparing National USDA Data, State USDA Data, and National NCFC Data

The avoided costs calculated as "benefits" in the NCFC survey analysis are not easily reproduced, contain apparent error, and are based on survey responses that cannot be verified through independent estimates. It appears that only costs of Professional Engineering (PE) certification should be considered for smaller (non-farm) facilities, since the SPCC plan and all ofits other requirements would still apply (albeit without independent verification or enforcement value). Potential reduction in PE certification costs may only apply to the 19 percent-28 percent of all farms that store between 1320 and 10,000 gallons if they fully prepare SPCC plans but self-certify. This percentage is an upper bound, since some of these farms likely comply already with SPCC requirements and would not need recertification unless they change their facility design or operation. The number of farms with reduced compliance costs may be fewer still, since those farms are not yet in compliance, and (according to Mr. Dunne's answers to Senator Thune's questions) these farms would not qualify for the deferment from SPCC planning. I would like to get more information clarifying this. In any case, the NCFC survey estimates appear to be calculated inappropriately from data on total SPCC plan costs for all farms, and the survey sample biases are not corrected for the population of farms.

Because of the non-uniformity of farms storing quantities that may qualify for indefinite deferment, the risk of spills from deferred farms may pose greater threats to waterways, and other environmentally sensitive areas. The farms most likely to "benefit" from the proposed rulemaking need to be considered geo-spatially on a risk basis. Simply using the illustration in Figure 2, one can immediately recognize the potential for coastal watersheds in California and Delaware to be at greater risk than Montana and Oklahoma, since these states are likely to have more farms that qualify for the indefinite deferment of SPCC requirements. In other words, there are likely to be inequities among the protections required by farms in some states and these will likely increase risk to some watersheds; without a risk-based analysis at least state by state, the proposed rule changes may asymmetrically shift the environmental risk of oil spills to those most costly to remediate and most important to prevent. (NOTE: One cannot directly assign oil storage capacities to these data from the NCFC survey without the assumption that the survey respondents were representative of each state; given only regional survey results reported in the NCFC study, no attempt is made here to extend those results to the state level.)

Further analyses of other industrial sectors are needed to support any revisions to current SPCC regulations, and these need to be risk-based and better designed than the proposed rulemaking. Similar to the efforts focused on agriculture that are

discussed above, other sectors should be explicitly studied before the assumption is made by EPA that simply reducing compliance requirements meets the intent of SPCC regulations and their originating legislation. These analyses should be geospatial to demonstrate that any inequities arising from less stringent requirements do not pose greater risk to human health or the environment. Regulatory impact assessments need to consider not only avoided costs of compliance, but potential increased costs of response to oil spills (both direct and indirect). Small business advocates should consider these carefully for other non-farm sectors before advocating a set of changes that may not relieve the small business burden.

I am concerned that support of self-certification for SPCC plans may be based on misplaced confidence in specific industry sectors that receive significant oversight and attention in many dimensions (e.g., like the oversight air transport receives regarding security, environment, passenger comfort, etc.) or it appears based on a mistaken belief that industry self regulation is universally effective across all externalities. With regard to the air transport sector, I think issues of passenger safety and reliability off light operations may be fundamentally consistent with limited self regulation in these domains. As I said in my testimony, there is an important difference between industry exemptions (or self regulation) where the internal interests of the industrial organization are clearly aligned with the goals of individual managers and the public. In the case of oil spill prevention, these environmental concerns are often (but not always) external to the normal operational mission of the organization and its people. In other words, there is no reasonable expectation that the market will internalize the external costs of oil spill prevention to protect the public and our environment; that is why environmental performance improvement is often labeled an economic externality.

EPA should provide updated guidance that allows Professional Engineers better enable the industry to work with licensed professionals to identify innovative and flexible solutions to impracticable defaults on an individual equipment basis. For example, clear guidance can assist the air transport sector and other sectors in ways that may support a PE's finding that secondary containment is impracticable on an individual equipment basis, since the current rule already allows for this. The current regulations are not one-size-fits-all. Importantly, there is no requirement under current SPCC regulations that prohibits facility personnel from preparing their own SPCC plans; if well-run facilities routinely outsource their SPCC plan preparation to engineering firms (e.g., in air transport and other highly visible sectors), then that may be evidence that external expertise for basic plan preparation is less costly. Indeed, the only cost that would be avoided under the proposed changes is the cost of PE review and certification, perhaps the least costly part of many facilities' SPCC plans.

It is the expertise of the individuals involved in preparing, reviewing, and certifying an SPCC plan that ensures the public that a facility without a spill for the past decade will remain spill free during the next. The purpose of the legislation behind the SPCC regulations is one of public protection, fundamentally. The fundamental and obvious flaw in EPA's proposed rule with regard to self-certification is that it does nothing to ensure this expertise in the individuals, falsely assuming that a spill-free facility will always remain so. As I said in my oral response to Senate questions, this is like suggesting any individual without a license can safely drive or repair a car that has been accident free for ten years. I am aware of dozens of examples where such flawed logic has been exposed through tragedy.

Better strategies are available to assist farms (in particular) and other small businesses.

Risk of oil spills exists where significant quantities of oil are stored, transported, and used, and liability remains with the polluter. However, the risk of a spill event is not uniform; according to EPA data [U.S. Environmental Protection Agency, 1996a; U.S. Environmental Protection Agency, 1996b], the risk is higher when facilities do not have a valid SPCC plan and/or are not following its recommendations for secondary containment and operator training, etc.

Clean Marina programs offer a better model than the proposed rule changes for reducing the burden of compliance. To consider PE costs for small facilities, I looked into the innovative Clean Marina programs for Delaware, Maryland, Connecticut, and New jersey (at least), where an SPCC template was developed specific to these similar facilities (for links to these programs, see http://cleanmarinas.noaa.gov/marinalinks.htmfl. I found that a PE certification for a small facility that develops its own plan may range between $1,000 and $5,000 per plan (about 1-2 days work for a small firm or independent PE). Maryland negotiated lower rates with an engineering firm and directly covers the cost for PE certification on behalf of Clean Marina members (http://www.dnr.state.md.us/boating/cleanmarina/): Delaware has followed the template, but doesn't subsidize the PE certification (http://

www.dnrec.state.de.us/DNREC2000/P2/Marina/): New Jersey has some information showing significant improvement in compliance for marinas through outreach (http://www.state.nj.us/dep/njcleanmarina/).

Agricultural facilities (and small facilities in other industry sectors) may demonstrate substantial similarities in their oil storage facilities and handling practices. As has been observed for marinas, facilities differ substantially in their primary purposes (e.g., sailboats, fishing vessels, etc., at marinas; or crop farming versus livestock ranching). However, there appear to be significant similarities in the quantities of oil stored and handled at different facilities. This suggests that a template developed with various industry sectors and with PE involvement could reduce significantly the cost of compliance, and may attract subsidies or assistance from Government agencies or industry groups. A counter argument that each facility within an industry sector is unique in its oil storage would provide additional justification for PE certification (e.g., if wheat farmers stored fuel differently than soybean farmers or cotton farmers). I discussed similar ways to assist farms through USDA assistance with Senate staff in December; flexibility clearly exists under the current SPCC requirements for a PE to help farms comply without undermining the benefits of SPCC plan protections.

These proposed rule changes could encourage reconsideration of storage volumes near 10,000 gallons, and could result in more facilities storing oil to avoid meeting the 10,000 gallon threshold. For example, a farm with crop land on two sides of a public road may try to designate each orchard, field, or vineyard as a separate facility; this could expose more of our fertile land, irrigation systems, wetlands, and waterways to the risk of spills. Under the proposed changes, there is no mechanism to prevent facilities from working to classify facilities in discrete terms that enable the wider dispersion of oil storage in units less than 10,000 gallons each. The definition of a facility must be made clearer (or remain consistent with earlier interpretations), and EPA should prevent a situation in which businesses may freely redefine facilities into smaller parcels to avoid proper planning for handling, transfer, and storage of oil. EPA guidance on facility definition should conform to definitions used in normal business practices for financial, emergency planning, and other purposes.

To increase flexibility and reduce costs to small businesses, PE certification burden for farms and other sectors may be further reduced by allowing adjacent or collated facilities (e.g., separate farms within a county or watershed) to share the certification costs if their facilities store and handle oil similarly. In my experience, larger military installations chose to consider all oil stored with their boundaries in aggregate to determine whether a plan was required. Separate site plans were provided for each location in the SPCC plan that independently met the threshold, and these were grouped by type of operation. This approach allowed military bases to contain in one plan facilities for on-base restaurant concessions, retail and military gasoline stations, air transport operations, and leased agricultural lands. This approach reduces significantly the cost of PE certification by distributing it among cooperating facilities. Additional guidance would be required from EPA that emphasized the SPCC requirements for site-specific annual training, and would likely require that copies of plans be distributed to each facility (and/or site) within the larger plan. This flexible approach prevents the disaggregating of facilities to avoid spill prevention planning on the one hand, but enables small businesses to share the common burden of plan preparation. In general, there appear to be no competitive reasons that would motivate oil handling at storage in one facility to differ from other facilities within a business sector; this would therefore help EPA achieve best SPCC practices within sectors.

The USDA Cooperative Services or other publicly funded industrial advocates should consider subsidizing resources need by farms to prepare better SPCC preparation guidance services, including partial or complete funding of expert review of plans by licensed Professional Engineers. This should also be considered for other industrial sectors through other Federal or state agencies, as appropriate. This would help small businesses in more tangible ways than the current purposed rules. It would also bring many non-complying facilities that are unaware of their status the help they need to prevent spills, which is the purpose of SPCC regulations and its legislative mandate.

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RESPONSE OF JAMES J. CORBETT TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. Can you comment on Mr. Coyne's proposal that individual, small companies, be permitted to self-certify to some of the more flexible requirements of the SPCC rule such as impracticality and environmental equivalence rather than depend upon the expertise of a professional engineer?

Response. In general, I think Mr. Coyne's summary of the air transport sector's concerns are thoughtful and clearly described. In this regard, I may agree with Mr. Coyne when he affirms "the EPA's willingness to listen to the industry regarding the impracticability of certain EPA regulations."

Mr. Coyne clearly understands the fuel and oil handling practices and storage facilities for air transport operations. While I have certified these types of facilities in military installations as a licensed Professional Engineer, he may have more immediate familiarity with spill prevention measures for commercial air transport.

However, I am concerned that his support of self-certification for SPCC plans may be based on his confidence in an industry sector that receives significant oversight and attention in so many dimensions from security to environment to passenger comfort, or based on a belief that industry self regulation is universally effective. With regard to the air transport sector, I think issues of passenger safety and reliability of flight operations may be fundamentally consistent with limited self regulation in these domains. As I said in my testimony, there is an important difference between industry exemptions (or self regulation) where the internal interests of the industrial organization are clearly aligned with the goals of individual managers and the public. In the case of oil spill prevention, these environmental concerns are often (but not always) external to the normal operational mission of the organization and its people. In other words, there is no reasonable expectation that the market will internalize the external costs of oil spill prevention to protect the public and our environment; that is why environmental performance improvement is often labeled an economic externality.

More to Mr. Coyne's point, I would join him in encouraging the EPA to provide updated guidance that allows Professional Engineers to work with the air transport sector in ways that may support a PE's finding "that secondary containment is impracticable on an individual equipment basis," and enable the industry to work with licensed professionals to identify innovative and flexible solutions to impracticable defaults on an individual equipment basis. Importantly, there is no requirement under current SPCC regulations that prohibits facility personnel from preparing their own SPCC plans; if well-run air transport facilities routinely outsource their SPCC plan preparation to engineering firms, then that may be evidence that external expertise for basic plan preparation is less costly. Indeed, the only cost that would be avoided under the proposed changes is the cost of PE review and certification, perhaps the least costly part of many facilities' SPCC plans.

However, the purpose of the legislation behind the SPCC regulations is one of public protection, fundamentally. It is the expertise of the individuals involved in preparing, reviewing, and certifying an SPCC plan that ensures the public that a facility without a spill for the past decade will remain spill free during the next. The fundamental and obvious flaw in EPA's proposed rule with regard to self-certification is that it does nothing to ensure this expertise in the individuals, falsely assuming that a spill-free facility will always remain so. As I said in my oral response to Senate questions, this is like suggesting any individual without a license can safely drive or repair a car that has been accident free for ten years. I am aware of dozens of examples where such flawed logic has been exposed through tragedy.

Question 2. Can you describe what the mechanism is in the existing SPCC program for the public to obtain some degree of assurance that actions are being taken to prevent oil spills, how the EPA's proposed rule alters that process, and what role enforcement plays in that process?

Response. The only mechanisms in place are Professional Engineering certification and the very limited SPCC enforcement functions funded by EPA. The PE certification is by definition a public assurance, due to the professional expertise, testing, and oath of a licensed Professional Engineer. While this assurance resides in a private sector relationship between the facility and the PE, it is founded on

the public licensure process. This is a parallel process to bar certified lawyers, to board certified surgeons, and to state certified teaching professionals.

The EPA's proposed rule undermines the process entirely for facilities storing 1320 to 10,000 gallons. This represents the majority of farm facilities subject to the SPCC rule and presumably may remove most facilities in other sectors from any oversight in the public interest by a licensed PE. Most importantly, it replaces a PE certification with no publicly trusted substitute that is clearly qualified and dedicated to the public good. The substitute is not even a corporation or supervising person who must demonstrate design and review expertise; the only substitute is the facility itself, without regard for the individual expertise of management or potential facility deterioration with age.

Enforcement was discussed in general during the hearing, and I recall that Mr. Dunne said in questioning that the EPA does fewer inspections today than they did in the 1980s. I believe that Senator Thune suggested that some 1,100 facilities are inspected each year, remarking that the chances of being audited by the IRS were greater than the chances of an enforcement inspection of a regulated SPCC facility. If the proposed rulemaking removes the PE certification requirement, then increased EPA enforcement would be required to compensate or the public and environment will be at even greater risk. This will increase the public costs of EPA enforcement, require additional federal budget, and shift what is currently a cooperative and privately internalized cost of PE certification to an adversarial and taxpayer burden for federal agencies.

Question 3. What effect does the EPA's proposed rule have on the basic principle of "polluter pays" as it applies to oil spill prevention and clean-up?

Response. I am not sure that the proposed rule changes the basic "polluter pays" principle, because current and proposed SPCC regulations do not relieve a facility of the cost of responding to and mitigating damage from an oil spill. However, the proposed rule clearly shifts the requirement that a facility fully prepare plans to prevent spills, to contain them within a facility, and to prepare the best countermeasures to minimize impacts of a spill. In fact, these proposed rule changes could less effectively avoid higher costs to a polluter of an unplanned or poorly planned spill response.

Question 4. Do you believe the EPA's proposal would create an incentive for larger facility managers to disperse their oil storage facilities and potentially create more risk for spills?

Response. I hope that the operating efficiencies of current oil storage facilities would make such a perverse calculus economically infeasible for most industries. However, there is no mechanism to prevent facilities from working to classify facilities in discrete terms that enable the wider dispersion of oil storage in units less than 10,000 gallons each. In fact, I am not sure that any study has ever evaluated whether the upward shift to a 1,320 lower threshold created more locations with small tanks in some or many sectors; it could be that we could already observe such behavior on a smaller scale. In my experience, larger military installations chose to consider all oil stored with their boundaries in aggregate to determine whether a plan was required. These proposed rule changes would certainly encourage a reconsideration of storage volumes near 10,000 gallons, and could result in more facilities storing oil to avoid meeting the 10,000 gallon threshold. For example, a farm with cropland on two sides of a public road may try to designate each orchard, field, or vineyard as a separate facility; this would expose more of our fertile land, irrigation systems, wetlands, and waterways to the risk of spills.

STATEMENT OF THOMAS P. DUNNE ACTING ASSISTANT ADMINISTRATOR OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE U.S. ENVIRONMENTAL PROTECTION AGENCY

Mr. Chairman and members of the committee, I am Thomas Dunne, Acting Assistant Administrator for the Office of Solid Waste and Emergency Response at the Environmental Protection Agency (EPA). Thank you for inviting me to appear here today to discuss EPA's Oil Spill Prevention, Control and Countermeasure (SPCC) program. My testimony will address issues regarding EPA's recent efforts to streamline the SPCC requirements for a number of industry sectors, to extend the compliance dates for modification and implementation of SPCC Plans, and to provide guidance to EPA inspectors on the SPCC requirements.

BACKGROUND

The Federal Water Pollution Control Act (FWPCA) of 1970 required the President to issue regulations that would establish procedures, methods, equipment, and other requirements to prevent discharges of oil from vessels and facilities and to contain such discharges. The President delegated the authority to regulate non-transportation-related onshore facilities to EPA. A Memorandum of Understanding (MOU) between the U.S. Department of Transportation (DoT) and EPA in 1971 set out the definitions of transportation- and non-transportation-related facilities and Agency responsibilities. Among other things, this MOU identified that the regulatory authority for all oil storage and transfers of oil within a non-transportation-related facility rests with EPA. Another MOU between EPA, the U.S. Department of Interior (DoI), and DoT in 1994 re-delegated the responsibility to regulate certain offshore facilities from DoI to EPA.

In 1973, EPA originally promulgated the SPCC regulations under the CWA. The regulation established spill prevention procedures, methods, and equipment requirements for non-transportation-related onshore and offshore facilities with aboveground storage capacity greater than 1,320 gallons (or greater than 660 gallons in a single container), or completely buried oil storage capacity greater than 42,000 gallons. Regulated facilities were also limited to those that because of their location could reasonably be expected to discharge oil in harmful quantities into the navigable waters of the United States or adjoining shorelines. The fundamental requirement established by this rule that has not changed in nearly 30 years is that facilities covered by these regulations are required to prepare an SPCC Plan and that Plan must be certified by a licensed Professional Engineer (PE).

Since the original regulations were promulgated, EPA has proposed amendments to the SPCC requirements a number of times to reduce reporting burdens and to clarify certain requirements, to make technical modifications, and to add elements like a response plan requirement for facilities without secondary containment, updated integrity testing requirements, prevention training, and an evaluation of tank brittle fracture conditions (brittle fracture is a metallurgical term for tank side wall failure under certain conditions). Some of these proposed amendments were driven by the catastrophic storage tank failure at the Ashland Oil facility in Pennsylvania and a subsequent task force and GAO report in which recommendations were presented to EPA to improve oil spill prevention.

In 2002, EPA published final amendments to the original SPCC regulations. These amendments included a number of relief and clarification provisions, such as raising the threshold quantity for applicability, increasing the de minimus container size, exempting certain underground storage tanks, offering the flexibility of the environmental equivalence option, and introducing a flexible SPCC Plan format. New provisions included certain tank integrity testing requirements and brittle facture evaluation considerations.

After publication of this rule in 2002, several members of the regulated community filed legal challenges to certain aspects of the rule. All of the issues raised in the litigation have been settled except the definition of navigable waters (this issue is currently before the U.S. District Court for the District of Columbia). The Agency published in the Federal Register the results of the settlement discussions; the results also are included as an attachment to my testimony.

Since then, EPA has extended the dates for revising and implementing SPCC Plans several times primarily to provide the regulated community with sufficient time to understand the 2002 revised rule and clarifications that resulted from the litigation. EPA has made a dedicated effort to listen to the concerns of the regulated community and to take action to address these concerns while at the same time maintaining protection of public health and the environment by preventing the discharge of oil to navigable waters.

WHY DO WE CARE ABOUT OIL SPILLS?

EPA has information from the National Response Center database that shows that from 1980 to 2001 thousands of oil-related spills occurred annually into inland navigable waters. These spills result in considerable environmental, response and socio-economic costs. As you know, oil spills contaminate drinking water, impact fisheries, agriculture, tourism and recreation, cause natural resource damage, and harm wildlife. EPA believes that the SPCC program is working, with oil spills from regulated facilities decreasing even though oil consumption has increased.

It costs far less to take reasonable steps to prevent an oil spill than it does to clean it up. And, as demonstrated in the actions described below, EPA has worked to establish flexible and appropriate oil spill prevention requirements for the wide variety of industries and facilities that produce, store, or use oils. These proposed

actions to tailor the SPCC requirements are an effort to improve compliance with the oil spill prevention rules, which EPA believes will lead to increased oil spill prevention and protection of the Nation's water resources from the threats posed by oil spills.

ACTIONS BY EPA ON SPCC

Following settlement of the litigation, EPA met with trade associations and other members of the regulated community who raised concerns about various provisions in the SPCC requirements. It is well known that the SPCC requirements apply to a significant number of industry sectors and that "performance-based" requirements are much preferred to "command and control" or "one-size-fits-all" approaches. The SPCC requirements are designed to be performance based, offering a range of flexibility so that appropriate requirements can be tailored to particular industry sectors. Despite our past efforts in this regard, we acknowledged and welcomed opportunities to meet with the regulated community to discuss their particular issues and to consider whether additional modifications or clarifications of the rule requirements were necessary. The remainder of my testimony will generally describe the input we received and how we are responding to those concerns.

EXTENSION OF COMPLIANCE DATES

EPA has issued a proposed rule to extend the dates by which facilities will need to amend and implement an SPCC Plan to October 31, 2007. EPA is taking this action to allow time for the Agency to finalize amendments to the SPCC requirements that were recently proposed (and which I will describe below). We also want to provide sufficient time for facilities to understand these modifications, to review and understand the guidance we recently issued, and to make appropriate changes to their facilities and to their SPCC Plans as a result of the rule modifications and the guidance. Finally, the Agency is concerned that the effects of the recent hurricanes on many industry sectors might adversely impact their ability to meet the upcoming compliance dates if no extension is provided.

SMALL BUSINESS

EPA has participated in several Small Business Administration (SBA) Roundtable Meetings to hear feedback from not only SBA but also from a variety of industry sectors such as the food, construction, electric utility, aviation, and automotive industry. As a result of these meetings, EPA embarked on an effort to streamline, focus, and clarify the SPCC requirements and to provide guidance to EPA inspectors to illustrate the flexibility built in to the regulations. In the fall of 2004, EPA published two Notices of Data Availability (NODAs). The first NODA made available and solicited comments on submissions to EPA suggesting more focused and streamlined requirements for facilities subject to the SPCC rule that handle oil below a certain threshold amount of oil. The second NODA made available and solicited comments on whether alternate regulatory requirements would be appropriate for facilities with oil-filled and process equipment. Comments submitted on these NODAs informed our development of the recent proposed rule to modify the SPCC requirements.

As a result of the Roundtable sessions and comments on the NODAs, we learned that the major concern for small businesses is the requirement for certification of SPCC Plans by a licensed Professional Engineer (PE). Consequently, after consideration of options, we developed the approach in the proposed rule that would provide small facilities (those handling less than 10,000 gallons of oil) the option to self-certify their plans. In addition, we are proposing additional flexibility for these smaller facilities with respect to tank integrity inspections and facility security.

AIRPORTS

In meetings with, and correspondence from, airport trade association representatives and an airport coalition, EPA learned about the concerns of airport facility operators with the SPCC requirements and Federal Aviation Administration (FAA) standards for airport mobile refuelers. The 1971 MOU with DoT vests regulatory authority for all oil storage and transfers of oil within a non-transportation-related facility with EPA. We recognize the unique circumstances regarding these mobile refueling vehicles and the difficulty associated with providing sized secondary containment while the vehicle is moving, engaged in transferring fuel, or parked. Given these unique circumstances, EPA agrees that airport owners and operators should have greater flexibility in fuel spill prevention and has proposed to modify the regulations to make airport mobile refuelers subject to the general secondary contain-

ment requirements, rather than the sized secondary containment requirements. EPA believes the general secondary containment requirements are more flexible and reflect the kinds of active and passive fuel spill prevention measures already used by many airports in their fueling operations.

For example, some large airports have elaborate drainage systems that can capture runoff from all paved areas. The runoff is contained and measures are taken to ensure that any oil or fuel that might be contained in this runoff is separated from water before the runoff is discharged to a waterway. This is a reasonable approach to oil spill prevention and it satisfies the requirements of the SPCC regulations. For smaller airports that may not have such a system, under the general containment requirements the airport owner and operator would determine the likely amount of fuel that could be spilled from the mobile refueler, where it would spill from and when (e.g., a leak from a hose), and institute appropriate active or passive measures and response capability (such as diversions or absorbent materials) to ensure that the fuel does not get discharged to a waterway.

AGRICULTURE

Through the SBA Roundtables and in separate meetings and correspondence with agricultural representatives and the U.S. Department of Agriculture (USDA), EPA has learned of the concerns of farmers with respect to compliance with the SPCC requirements. EPA recognizes that the number of farms covered by the SPCC regulations is significant and that the unique characteristics of farms pose unique challenges to SPCC compliance. Consequently, EPA is taking several steps: initially, farmers will have the option to take advantage of the flexibility offered by the small facility proposal and the exemption for motive power described below. Further, EPA is proposing to extend the 2002 rule compliance dates for all facilities including farms until October 31, 2007; and to extend the 2002 rule compliance dates indefinitely for farms storing 10,000 gallons of oil or less. Finally, EPA has committed to work with USDA and farm representatives to determine how to properly address farms under the SPCC regulation.

EDIBLE OILS

EPA has also met with and received correspondence from the food industry regarding animal fats and vegetable oils (AFVO) and the SPCC requirements. This sector has long maintained that food oils are not the same as petroleum oils and therefore should have different regulatory requirements that reflect these technical differences. Indeed, the Edible Oil Regulatory Reform Act (EORRA) of 1995 required most Federal agencies to differentiate between, and establish separate classes for, various types of oil, specifically, between animal fats and oils and greases, and fish and marine mammal oils and oils of vegetable origin, including oils from seeds, nuts, and kernels; and other oils and greases, including petroleum. In our current proposal, EPA is requesting input on whether specific provisions in the SPCC requirements need to be modified to account for differences between AFVO and petroleum oils.

EPA has previously reviewed this issue and determined that many animal fats and vegetable oils can be harmful to the environment. Although we might enjoy consuming various food oils in small amounts, a large spill of oil into a waterway could contaminate drinking water supplies and cause oxygen depletion, fish kills and other aquatic impacts. At the same time, EPA does recognize that there are some requirements in the SPCC rules that are not appropriate for AFVO—for example, the requirements for onshore oil production facilities—and we are proposing to remove those requirements.

ELECTRICAL UTILITIES AND OTHER OIL FILLED EQUIPMENT USERS

Regarding the oil-filled operational equipment issue, EPA met with and received correspondence from several stakeholders about the SPCC requirements and the nature of oil-filled operational equipment in comparison to other bulk oil storage containers. Oil-filled operational equipment includes transformers, hydraulic equipment and lubrication systems. In light of these issues raised and the unique nature of this kind of equipment, EPA is offering in the current proposal a streamlined regulatory option. A facility owner or operator can choose to satisfy the SPCC requirements through inspection and monitoring systems and contingency planning rather than through general containment requirements. In doing so, the proposal provides the electrical utilities and other industrial facilities with an additional prevention option for this unique equipment.

MOTIVE POWER

In contrast to the airport mobile refuelers described above, a "motive power container" is an integral part of a motor vehicle (including aircraft) that provides fuel for propulsion or some other operational function, such as lubrication of moving parts or for operation of onboard hydraulic equipment. Motive power containers on vehicles used solely at non-transportation-related facilities fall under EPA jurisdiction and are subject to the SPCC regulation. The types of vehicles and facilities that are potentially subject to the SPCC requirements solely because of the oil contained on-board the vehicles are: buses at terminals or depots; recreational and some sport utility vehicles parked at dealerships; heavy earthmoving vehicles at construction sites; aircraft; and large farming and mining equipment. EPA recognizes that, in most cases, the SPCC requirements are not practical for motive power containers on-board these types of vehicles at SPCC regulated facilities. Consequently, EPA is proposing to exempt them from coverage under the rule. However, transfers between bulk storage containers and these vehicles remain subject to the SPCC requirements.

OIL EXPLORATION AND PRODUCTION

The oil exploration and production industry has raised concerns about the SPCC requirements. Such concerns include requirements applicable to produced water, the costs and practicality of certain compliance requirements (particularly those related to secondary containment), and potential impacts on the Nation's marginal wells. Although our current proposal was originally intended to address only certain targeted areas of SPCC requirements, EPA is working to identify additional areas where regulatory reform may be appropriate. For these additional areas, the Agency expects to issue a proposed rule in 2007. In the current proposal, EPA requests comments from stakeholders on the scope of potential future rulemakings. Additionally, EPA in conjunction with the Department of Energy will be conducting an energy impact analysis of the SPCC requirements, and will consider the results of this analysis to inform any future rulemaking.

While EPA is not taking any specific action with respect to the oil exploration and production industry at the present time, this sector can take advantage of the small facility and oil-filled operational equipment flexibility offered by EPA's proposed rule and can examine the additional flexibility offered by other provisions as described in the SPCC guidance described below. EPA is willing to work with this sector to determine whether other appropriate requirements exist to increase compliance and thereby reduce the amount of oil lost to water.

GUIDANCE

Finally, EPA has issued the SPCC Guidance for Regional Inspectors. This guidance is intended to assist regional inspectors in reviewing a facility's implementation of the current SPCC rule. The document is designed to foster a better understanding of how the rule applies to various kinds of facilities and to help clarify the role of the inspector in the review and evaluation of the performance-based SPCC requirements. Another reason for the guidance is to respond to stakeholder requests for consistent national policy on several SPCC-related issues.

The guidance is available on our website both to owners and operators of facilities that may be subject to the requirements of the SPCC rule and to the general public. EPA welcomes comments on this guidance; it is a living document and will be revised, as necessary, to reflect any relevant future regulatory amendments. EPA believes it is important for all stakeholders to review, understand and make use of this guidance. The guidance should clarify many of the recent issues raised by the regulated community.

C0NCLUSION

EPA has made a concerted effort to address the concerns of various sectors of the regulated community regarding the SPCC regulations while maintaining an environmentally protective SPCC program. In fact, EPA estimates that, overall, the proposed amendments would reduce annual compliance costs by $98 million. EPA estimates that the proposed rule would lower compliance costs by $24 million for facilities with less than 10,000 gallons of oil storage capacity. The most important consideration, however, is that EPA is working to make compliance easier thereby leading to greater oil spill prevention and protection of public health and the environment.

RESPONSES BY THOMAS P. DUNNE TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. Can you please clarify for the committee which farms are covered by the indefinite compliance extension proposed in the December 2005 rule? Does it apply to only those farms that are in full compliance with the 1973 regulation and that have less than 10,000 gallons storage capacity?

Response. The proposed indefinite compliance date extension for farms would apply to farms that have a total oil storage capacity of 10,000 gallons or less as follows:

- a farm that was in operation on or before August 16, 2002, would have to maintain its Spill Prevention, Control and Countermeasure (SPCC) Plan during the indefinite extension, but would not be required to amend that Plan in accordance with the 2002 revisions until a new compliance date is established;
- a farm that came into operation after August 16, 2002 would not be required to have a Plan during the indefinite extension until a new compliance date is established.

[Note that the Agency has extended the compliance date before (i.e., January 9, 2003 (68 FR1348), April 17, 2003 (68 FR 18890) and August 11, 2004 (69 FR 48794)) and has just extended the compliance date again until October 31, 2007. In all of these instances, facilities, including farms that were in operation on or before August 16, 2002, were required to maintain their SPCC Plan.]

Question 2. In the cost analysis for the 2002 rule, EPA argues that its change from "should" in the rule to "shall" does not constitute regulatory requirements and therefore had no cost impact on the proposal. EPA argued that 'should' always meant that the actions were requirements not recommendations. However, in a 1989 GAO report, EPA attorneys and program officials stated that they considered these provisions guidelines or recommendations-not requirements. Further in the Oil Spill Task Force's 1988 report one of its recommendations is that the "shoulds" be changed to "shalls" because "these changes to the regulations will require certain practices rather than only encouraging them."

How do you account for the obvious discrepancy between statements of the attorneys working on the program in 1989 and the Agency's contention in 2002 that many of these provisions were always requirements? If in fact there was any doubt as to whether or not these provisions were required, should EPA have considered that uncertainty in the 2002 cost analysis?

Response. Since EPA's SPCC regulation was promulgated in December 1973, an owner and operator of a facility has always been required to have an SPCC Plan that was certified by a Professional Engineer as adhering to good engineering practices (see 40 CFR §112.3(a-d)(1973-2002); 40 CFR §112.3(a-d)(2003-2005)). See, for example, 38 FR 34165-34166 (December 11, 1973) where it states,

"112.3(a) Owners or operators of onshore and offshore facilities in operation on or before the effective date of this part that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare a Spill Prevention Control and Countermeasure Plan (hereafter "SPCC Plan"), in accordance with §112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within 6 months after the effective date of this part and shall be fully implemented as soon as possible, but not later than one year after the effective date of this part—(d) No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. By means of this certification, the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of an onshore or offshore facility of his duty to prepare and fully implement such Plan in accordance with §112.7, as required by paragraph (a), (b) and (c) of this section." (emphasis added) EPA's position consistently has been that the regulation imposes a mandatory requirement to have an SPCC plan, recognizing that the regulation also contains some appropriate flexibility as to the actual contents of that plan. The United States has taken that position in litigation when the regulatory requirement to have an SPCC Plan was unsuccessfully challenged in Federal court. See United States v. Texaco Exploration & Production, Inc., et al., Case Nos. 2:98-CV-0213S & 2:98-CV-0220S (D. Utah May 26, 1999)(Mobil Oil tried to dismiss a Federal enforcement case involving this issue). The judge in this case stated:

"Mobil also asks this court to dismiss the Government's claim for violation of 40 C.F.R. §112.7 because that section sets forth only discretionary 'guidelines' that 'should' be included in SPCC plans—

"The Government explains that its claim is actually brought under §112.3(b) which is a mandatory provision. It states that the owner or operator of an onshore facility 'shall' prepare an SPCC plan in accordance with §112.7 and that each plan 'shall be a carefully thought out plan' which 'shall follow the sequence—and include a discussion of the facility's conformance with the appropriate guidelines.' Section 112.3(b)——

"The defendant's motions to dismiss are therefore denied."

EPA understood, however, that the 1973 regulations' efforts to provide owners and operators with maximum discretion in meeting the requirements of Section 112.3 had unfortunately led a number of owners and operators to mistakenly view every spill prevention responsibility in Section 112.7 as voluntary. This was noted by the Oil Spill Task Force 1988 Report's finding that "Compliance with many aspects of the SPCC regulations is currently performed on a discretionary basis." Nevertheless, as the Mobil court understood in 1999, even discretion has its limits, and the limits imposed by the 1973 regulations were expressed in 40 CFR §112.3.

Owners and operators, no matter how they handled many specific details, needed an SPCC plan that was certified by a Professional Engineer that met the requirements of Part 112 by effectively, preventing oil spills through the use of good engineering practices in all relevant aspects.

To resolve the potential for misunderstanding, EPA changed "shoulds" in 40 CFR 112.7 to "musts" in the 2002 SPCC regulatory amendments, noting that "we have always interpreted and enforced our rules as mandatory requirements" (see 67 Federal Register 47052, July 17, 2002).

At the same time that EPA made this change, it also explicitly permitted Professional Engineers to make "environmental equivalence" demonstrations for all but secondary containment requirements (40 CFR §112.7(a)(2)). Any owner or operator, before or after August 2002, could satisfy the ultimate requirements of 40 CFR §112.3 by either following the various listed relevant provisions of 40 CFR part 112, or by adopting another "environmental equivalent" measure where allowed by the rule. There was no increase in regulatory burden by this 2002 change, only a more clearly written rule.

Question 3. Can you also detail the history of the wastewater treatment exemption including any documentation with regard to produced water and the wastewater treatment exemption?

Response. The wastewater treatment exemption was not promulgated until July 2002 and is based on a comment from General Motors (submitted to an SPCC rule making proposal published in October, 1991). GM suggested that "§112.1 exceptions should be expanded to include facility storage and treatment tanks associated with 'non-contact cooling water systems' and/or 'stormwater retention and treatment systems.'" The commenter said that the concentration of oil in the

water "would be insignificant." The commenter believed that the "cost to contain these structures could be better spent on other SPCC regulatory requirements."

Pursuant to the 2002 rulemaking, EPA agreed that certain wastewater treatment facilities or parts thereof should be exempted from the rule, if used exclusively for wastewater treatment and not used to meet any other requirement of part 112. Typically, a wastewater treatment plant treats large quantities of water contaminated with very small or insignificant quantities of oil. Conversely, produced water may contain significantly greater quantities of oil than in wastewater. Therefore, EPA did not consider treatment facilities or parts there of that treat produced water at an oil production, oil recovery, or oil recycling facility to be wastewater treatment for purposes of the rule. In the preamble of the 2002 rule, EPA explained why the wastewater treatment exemption does not include oil production, oil recovery or oil recycling facilities. "These facilities generally lack NPDES or state-equivalent permits and thus lack the protections that such permits provide.

Production facilities are normally unmanned and therefore lack constant human oversight and inspection. Produced water generated by the production process normally contains saline water as a contaminant in the oil, which might aggravate environmental conditions in addition to the toxicity of the oil in the case of a discharge." (67 FR 47068) EPA's rationale in promulgating the 2002 rule was that the goal of an oil production, oil recovery, or oil recycling facility is to maximize the production or recovery of oil, while eliminating impurities in the oil, including water, whereas the goal of a wastewater treatment facility is to purify water for discharge back into the environment. Neither an oil production facility, nor an oil recovery or oil recycling facility treats water; instead they treat oil.

For purposes of this exemption, produced water was not considered wastewater and treatment of produced water was not considered wastewater treatment. The EPA requires containment around oil and gas process vessels. For fired vessels such as heater-treaters, this can present a serious safety hazard, and containment is impractical for pressurized vessels. EPA's rules are inconsistent in regards to process/operating equipment among the different industrial sectors. At non-exploration and production sites, it is excluded from the definition of bulk storage containers, whereas at E&P facilities, this type of equipment is considered bulk storage containers and subject to secondary containment requirements. The purpose of oil and gas process equipment such as heater treaters is to process oil/water mixtures, and is not used as a storage container. Why does EPA treat oil and gas process equipment differently and what data does EPA have to support this action?

Response. Since the SPCC rule was promulgated in 1973, separation and treating facility installations (also referred to as tank battery and central treating plant installations) at production facilities have been required to have secondary containment in accordance with the bulk storage container provisions for production facilities. Separation and treating facility installations include heater-treaters, gun barrels and other types of oil/water separators.

EPA has always viewed, production facilities as unique from other oil handling and processing facilities in that they are continuously operating, may generate a constant flow of oil, are normally unmanned, and lack regular human oversight and inspection to prevent spills. At other types of SPCC-regulated industrial facilities, the oil-filled manufacturing equipment is subject to the general secondary containment requirements of the rule.

Even though production facilities are treated differently, the July 2002 rule does provide flexibility in the type and design of secondary containment and allows for the use of, for example, drainage systems to prevent oil discharges from becoming a safety hazard. Finally, a facility may determine that secondary containment for these bulk storage containers is impracticable and may choose to comply with the requirements of §112.7(d) in lieu of secondary containment. The Plan must clearly must clearly explain why such measures are not practicable; for bulk storage containers, conduct both periodic integrity testing of the containers and periodic integrity and leak testing of the valves and piping; and, unless the facility has submitted a response plan under 40 CFR 112.20, provide in the SPCC Plan the following:

(1) An oil spill contingency plan following the provisions of 40 CFR Part 109;

(2) A written commitment of man power, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.

Question 4. In the preamble to the rule EPA states that "there are factors concerning the physical layout of a farm that make this sector unique within the universe of SPCC-regulated facilities. For example, farms vary considerably in design and size—Further, the environment in which farms operate varies considerably from other industries. Farmers often own and/or farm lands that are non-continuous and may be separated by roads and other obstacles. Oil is generally not centrally stored and oil containers may be widely dispersed." The Agency goes on to list several other issues that affect farms and justify the extension of the compliance dates for the 2002 rule.

However, when the Agency finalized the 2002 rule, it argued that it would simplify compliance and provide flexibility to the regulated community. Given that EPA has long maintained that the 2002 rule simply clarified the requirements of the 1973 program and made few substantive changes and in fact streamlined the process, it is illogical to then conclude that farmers cannot comply with the more streamlined program but can with the more complicated and onerous 1973 program. Can you please explain this inconsistency?

Response. The preamble discussion cited in this question was not intended to explain why the Agency believes that farms cannot comply with the 2002 final rule but, rather, why the Agency is considering development of tailored or streamlined requirements specific to farms that store below a certain amount of oil.

In the December 2005 notice, the Agency proposed streamlined requirements for "qualified facilities" (i.e., facilities that store 10,000 gallons or less of oil and meet other qualifying criteria) . Those streamlined requirements also would be available to farms (i.e., those that store 10,000 gallons or less) that meet the qualifying criteria. However, at the time of the proposal, the Agency was not convinced that those particular streamlined requirements were appropriate or always necessary for farms that stored 10,000 gallons of oil or less. The Agency believes that such farms can be distinguished from other facilities that store 10,000 gallons of oil or less based on a number of characteristics, some of which were described in the preamble and,

because of those unique characteristics, requirements specific to farms maybe appropriate. The Agency, therefore, proposed to extend the compliance dates for farms that store 10,000 gallons of oil or less indefinitely to allow time for the Agency to consider streamlined requirements specific to the needs of such farms. The unique characteristics of farms described in the preamble would be among those the Agency would consider in developing such streamlined requirements.

RESPONSES BY THOMAS P. DUNNE TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Please explain the effect of oil in water. Include a description of the effect of small quantities and large quantities of oil in water on waterways, ecosystems, and aquatic life. Include a description of the effects of animal fats and oils, vegetable oils, etc.

Response. When oil of any kind, including animal fats and vegetable oil (AFVO), is spilled into water, it may pose serious threats to fresh water and marine environments. It affects surface resources and a wide range of subsurface plants and animals that are vital to ecosystem health.

Spilled oil can harm the environment in several ways, including the physical damages that directly impact wildlife and their habitats (such as coating birds or mammals with a layer of oil), adversely impacting water quality, and the toxicity of oil itself or components in the oil, which can poison exposed organisms or contaminate drinking water supplies. Even small quantities of oil spilled into shallow, sensitive water bodies such as wetlands can cause substantial harm to indigenous species.

Petroleum and non-petroleum oils, including AFVO, share common physical properties and produce similar environmental effects. Common properties such as solubility, specific gravity,and viscosity are responsible for the similar environmental effects of petroleum and vegetable oils and animal fats. Petroleum oils and AFVO can enter all parts of an aquatic system and adjacent shoreline, and similar methods of containment, removal and cleanup are used to reduce the harm created by spills of petroleum oil and AFVO. For more information, please refer to the denial of a petition to amend the Facility Response Plan (FRP) rule published October 20, 1997 (62 FR 54508) in which the Agency addressed several issues related to AFVO, including the petitioner's claims that AFVO are non-toxic and biodegradable.

Question 2. How does the Agency believe that removing the PE certification requirements for small facilities will change the likelihood of a spill?

Response. First, it should be noted that the Agency is proposing self-certification by the owner and operator of its SPCC Plan as an alternative to the existing requirement. That is, a qualified facility may decide, based on facility specific circumstances, to continue to have a PE certify its Plan. However, the Agency has received numerous comments stating that smaller oil storage facilities have difficulty complying with the SPCC rule because of the high cost associated with the PE certification of SPCC Plans. The Agency believes that allowing the owner and operator of a facility to self-certify as opposed to obtaining a PE certification of its SPCC Plan for a qualified facility will increase options for compliance, provide flexibility, reduce the regulatory burden for Plan development and thus encourage owners and operators of facilities to develop and implement SPCC Plans. Further, these smaller facilities are likely to be simple and less complex and involve straight forward oil spill prevention practices. As a result, we expect an increase in compliance with the rule requirements, reducing the likelihood of a spill.

Question 3. In response to my question during the hearing about the evolution of modern science as it relates to oil spills and the fact that toxic components remain in the environment for an extended time period, you responded that this did not have an impact on the EPA proposal. It seems that information regarding the severity of the impact of oil spills would be a critical piece of information in determining to what extent facilities should go to prevent such spills.

Is EPA aware of the article published in Science magazine on this topic that I submitted for the record, and is it in fact true that the Agency did not consider this information when proposing changes to the SPCC rule?

Response. The Agency has considered the impact of oil spills on the environment in developing its regulatory actions, and continues to review new science as it is developed. EPA is obliged to conduct cost/benefit analyses in support of regulatory actions, and there is no better way to show environmental benefits than by using the most recent scientific thinking that incorporates lessons learned and illustrates the impact of harmful oil spills. EPA is aware of the article you cite but did not specifically use the findings for development of the proposed amendments because these amendments are focused on tailoring and streamlining requirements to make the

SPCC regulation more effective, not at changing the basic premise that an SPCC Plan is warranted for facilities that handle oils to prevent spills and/or minimize the environmental consequences if one should occur.

Question 4. In response to a question from Senator Murkowski, you stated that, "The smaller airports are not going to be subject to the same secondary containment as a larger airport, and they are going to be able to make a decision in terms of what is the best way." This is inconsistent with my understanding of the regulation proposed by EPA. In the summary of the Federal Register notice, EPA states, "The EPA is today proposing to amend the SPCC Plan requirements to reduce the regulatory burden for certain facilities by:—exempting airport mobile refuelers from the specifically sized secondary containment requirements for bulk storage containers." In reading through the entire proposal, the EPA proposes to exempt airport mobile refuelers from only specifically sized secondary containment requirements. Secondary containment still applies. In addition, there is no mention of a proposal to exempt small airports. Does the Agency intend to exempt small airports? If so, on what basis and where in the EPA proposed rule is this issue addressed? In addition, please respond to Senator Murkowski's question for the record—what will the effect be on Alaska's very small airports—what will they have to do to comply with the SPCC regulations as proposed by EPA?

Response. In the December 12, 2005 notice, EPA proposed that the general secondary containment requirements at 40 CFR Part 112.7(c) would apply to airport mobile refuelers versus the sized secondary containment requirements in §112.8(c)(2) and 112.8(c)(11)]. This proposed approach applies to all airports, regardless of size, including Alaska's airports. The existing general secondary containment provisions under the SPCC rule provide considerable flexibility to an owner/operator as to what secondary containment option is best for the particular airport or even specific fueling operations and logistics at an airport. Thus, an oil spill containment practice at a large hub airport (e.g., large-scale drainage system with oil/water separators coupled with related storm water structures) may not be appropriate for a general aviation airport (e.g., attachment basin). In addition, airports, particularly small airports like those that maybe in Alaska, may choose to take advantage of the qualified facility option which would allow the airport to self-certify its SPCC Plan. In the hearing, Mr. Dunne wanted to communicate that airports will have more flexibility under the proposed approach to choose a secondary containment option more suitable and cost effective for a given airport's size and configuration. Please note that we did not propose to exempt any airports from the SPCC requirements at 40 CFR 112; the proposal specifically applies to mobile refuelers at all airports that store above 1,320 gallons of oil which due to its location could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines, as well as other waters as described in 40 CFR 112.1(b) in quantities that maybe harmful.

Question 5. I want to ask a few questions about airports and mobile refuelers. Mobile refuelers are significant sources of petroleum products. At Reagan National Airport alone, there are 18 mobile refuelers carrying up to 100,000 gallons at any one time. This is not a small quantity of fuel. I am concerned that the Agency appears to be willing to consider exempting all mobile refuelers from general secondary containment requirements if they are in compliance with National Fire Protection standards. How do these standards ensure that as spilled fuel is moved rapidly away from parked aircraft, it is not moved away from aircraft and into aquatic environments? Do these standards apply to all sizes of airports, including general aviation?

What is the compliance mechanism of these fire protection standards, for example, are there third party audits or other external verification procedures?

Response. While the proposed rule indicates that the Agency is considering whether National Fire Protection Association (NFPA) codes and standards could serve to prevent oil spills to the environment, EPA did not move forward with such a proposal. EPA understands that an airport could potentially satisfy both fire code requirements and prevent fuel discharges if the system is properly designed and implemented. EPA understands that the NFPA codes require that drainage systems be designed to carry away combustible or flammable liquids into a safely located, approved containment. The purpose of soliciting comment on this in the proposed rule is to test this hypothesis and collect information from the public and the aviation industry about the compliance mechanisms; range of applicability, and designs associated with fire protection and airport mobile refuelers.

Question 6. During the hearing, you mentioned fire codes and some FAA requirements that apply to tanks as protection measures applying to fuel tanks. In the EPA proposal, the Agency states that: "The Agency did not propose this approach

because NFPA 407 and NFPA 415 are designed for fire protection rather than environmental protection; a properly designed drainage system that meets the intent of NFPA 407 and NFPA 415 might not adequately prevent fuel from being discharged in quantities that maybe harmful. In addition, EPA has no information on the degree of compliance with, alternatives to, or applicability of NFPA 407 and NFPA 415 to all airport facilities." Are these the fire codes you were referring to, and is the Agency in possession of new information obtained since the publication of your proposed rule that would lead you to believe that they would offer some level of protection from oil spills? Please describe the information you have collected, if any. If not, on what do you base your testimony? Does the Agency plan to collect information on this topic? If so, please describe the information you believe you need to make a determination and your acquisition plan for this data.

Response. Yes, these are the fire codes Mr. Dunne referred to in his testimony. As stated in the previous question and answer, depending on the design and applicability, these codes may play a role in preventing oil spills from reaching waters of the United States. As stated in the proposal, we are not moving forward with an approach that would rely on the fire code measures as an oil spill prevention mechanism until more information is collected and understood. We expect to work with the Federal Aviation Administration (FAA) and to learn from public comments submitted on the proposed rule. EPA would need to know the extent that these codes apply to all airports and whether the design of such drainage systems meet oil spill prevention requirements.

Question 7. Senator Thune asked during the hearing whether the Agency had responded to the GAO recommendation that inspection priorities for the SPCC program be established. Has the Agency established inspection priorities, and if so, what are they? In the hearing you stated that, "I can tell you this, Senator, we are not specifically going to be targeting small farmers. In fact, I will guarantee you that we will not be." Please describe the basis for this statement and provide a copy of any correspondence or documentation that you have exchanged with OECA to establish this policy.

Response. EPA typically uses the following factors/resources to target facilities for SPCC inspections:

-Quantity of oil stored
-Geographic location, proximity to sensitive environments and water bodies
-State, Federal and local referrals, public complaints, and counties with high spill histories
-State permit databases
-Age of infrastructure
-Industry sector

EPA Regional Offices include input from State and local authorities on inspection priorities and target inspections in response to spill or complaint referrals. Regions routinely receive informationn from state and local authorities about facilities that should be targeted for inspections. When EPA conducts Facility Response Plan (FRP) inspections at high volume storage facilities, we will often conduct an SPCC inspection. EPA headquarters and Regional oil program staff coordinate regularly on inspection priorities and program implementation.

With regard to SPCC inspections of farms, EPA has informed the public and the regulated community that it intends to address concerns raised by the farming sector about the SPCC requirements and consider further differentiation of requirements for farms during the proposed indefinite extension. Because there is such a large number and a wide variety of industrial facilities subject to the SPCC requirements that handle oil in storage capacities greater than 110,000 gallons, in light of the factors noted above for targeting facilities for inspection, a farm inspection is typically a very low priority. In addition, EPA believes that the farm sector will needd the time provided by the extension to better take advantage of the guidance recently published and any further amendments that are promulgated as a result of the recent proposed amendments.

Question 8. Please explain the agriculture exemption in the EPA proposal. Does it apply to all farms for all requirements of the SPCC program or only those requirements that would have been added by the 2002 rule and the 2005 proposed rule?

Response. The Agency did not propose an exemption for agricultural facilities; rather we proposed an indefinite compliance date extension for certain farms. The proposed extension for farms would affect those farms that have a total oil storage capacity of 10,000 gallons or less as follows:

a farm that was in operation on or before August 16, 2002, would have to maintain its SPCC Plan (as required by the 1973 regulation) during the indefinite extension, but would not be required to amend that Plan according to the 2002 rule until

a new compliance date is established; for farms that came into operation after August 16, 2002, they would not be required to have a Plan according to the 2002 rule and the 2005 proposed modifications until a new compliance date is established

Question 9. Regarding the indefinite exemption of agriculture sites from the requirements of the rule. Farms that meet the size requirements, having an equivalent of 24, 55 gallon drums onsite, have been required to have a spill prevention plan in place for close to 35 years. In Dr. Corbett's testimony, he points out that agriculture uses almost the same percentage of petroleum as the commercial sector. What analysis have you conducted to justify this change and what were your findings?

Response. As noted above, the indefinite extension applies to certain farms as defined in the proposed rule, not to all agricultural facilities. EPA believes that farms with a total oil storage capacity of 10,000 gallons or less, as described in the proposed rule, have unique characteristics that distinguish them from other agriculture, food oil or petroleum oil facilities. These differences are described in the preamble of the proposed rule (see 70 FR 73524 at 73542).

EPA is currently working with the U.S. Department of Agriculture to gather data regarding possible streamlined or tailored requirements for these facilities.

Question 10. For qualified facilities, generally those facilities with a storage capacity of 10,000 gallons or less and no discharges during the past decade, EPA's proposal allows owner and operators to make their own security and integrity testing decisions without consulting with a professional engineer provided industry standards are met. Please explain why EPA limited flexibility in this way and why flexibility should not be extended for environmental equivalency and impracticability requirements.

Response. EPA considers the proposed 10,000 gallon threshold to be a reasonable volume that addresses the concerns of facilities with relatively smaller volumes of oil at simpler, less complex facilities, while balancing the public health and welfare given the potential for environmental damage for a spill of that magnitude. EPA believes that in general, without the advantage of the expertise and knowledge that a Professional Engineer (PE) brings to the development of an SPCC Plan, deviations based on environmental equivalence and contingency measures in lieu of secondary containment may not be adequate or appropriate. Because we have not extended these performance-based provisions to qualified facilities, EPA is proposing that qualified facilities have additional flexibility in the security and tank integrity testing provisions. EPA believes that qualified facilities, because of their smaller oil storage quantity and likely simpler operations, should be provided with a stream lined set of basic security measures and integrity testing requirements. The flexibility in these proposed exceptions would be analogous to the flexibility provided under the environmental equivalence provision (§112.7(a)(2)), which allows for deviations from the security requirements (§112.7(g)) and tank integrity testing requirements (§112.8(c)(6)) that would not be available to qualified facilities because a PE is not certifying the Plan.

Question 11. As a basis for proposing these changes to the SPCC requirements, did the EPA conduct a risk analysis that evaluated potential impacts on human health and the environment, and what factors did the EPA consider?

Response. EPA did not do a classic risk assessment or risk evaluation. Instead, based on a qualitative potential for environmental harm, EPA determined that the changes we are proposing work to maintain appropriate protection while streamlining the requirements for certain facilities, equipment types, and sectors.

Question 12. Can you explain how the provisions of 2002 rule will be enforced? In other words, the Agency has delayed the implementation of that rule through 2007. Therefore, the requirements of the rule stand as published in 1973. Will the Agency be enforcing the current program, and, if you have an alternative approach in mind, can you explain the legal basis for this approach?

Response. The Agency expects to enforce the 2002 rule, which allows owners and operators who have received an extension to 2007 to maintain their SPCC Plans that incorporate 1973 rule requirements . It should be noted that on February 10, 2006 the EPA Administrator signed a final rule extending the compliance date by which all facilities must prepare or amend and then implement their SPCC Plans. This extension affects only requirements of the July 2002 final SPCC rule that impose new or more stringent compliance obligations than did the 1973 SPCC rule. Any provision in the July 2002 rule that provides regulatory relief is not affected by these compliance date extensions because such provisions are not ones for which it would be "necessary" to amend existing Plans "to ensure compliance with" the July 2002 amendments (see §112.3). This issue was discussed by the Agency in two

previous extension notices on April 17, 2003 (see 68 FR 18890, at 18892-3), and on August 11, 2004 (see 69 FR48794, at 48796).

Question 13. What flexibility has EPA provided to qualified facilities in this proposal and how does it differ from the 2002 requirements?

Response. The 2002 rule already provides some flexibility for owners and operators to comply with the SPCC requirements. In the December 2005 proposal, EPA is proposing to provide an additional option for compliance and other flexibility to qualified facilities. The owner/operator would have the option to self-certify the SPCC Plan in lieu of a review and certification by a Professional Engineer (PE). The cost of a PE certification has been the major concern for small businesses. In addition, facilities that qualify and choose this option have greater flexibility on oil storage area security requirements and tank integrity testing than that offered by the 2002 rule. The 2002 rule includes specific security requirements, while the 2005 proposal asks that facility owners and operators develop their own security measures suitable to their situation. On tank integrity testing, the 2005 proposal allows facility owners and operators to satisfy this requirement through the use of industry tank inspection standards rather than the more specific requirement in the 2002 rule.

Ultimately the decision to use the "qualified facilities" option is up to the facility owner and operator. Some facilities may have developed plans in accordance with 2002 amendments and may choose to maintain that plan which provides the flexibility provided by a PE certified plan. Conversely, a facility may choose to develop a self-certified plan, forgo the cost of PE certification because the facility operations are simple and the flexibility provided by a PE certified plan is not required. The owner and operator decision will be driven by the costs, site specific factors and the overall complexity of the site operation. Many smaller capacity "end users" of oil may find the "qualified facilities" proposal a cost effective option for compliance with the rule requirements.

Question 14. The universe covered by the SPCC requirements is large and varied. I understand that EPA has inspected less than 2 percent of the facilities covered by these regulations. By allowing self-certification, how can EPA ensure adequate consideration has been given by a qualified professional when it comes to oil spill preparedness?

Response. On average, a full SPCC inspection is conducted at about 1,100 facilities per year. In addition, EPA personnel will review SPCC and Facility Response Plans (FRP) and respond to hundreds of oil spills each year at a variety of other facilities.

EPA's proposal for self-certification at smaller oil storage capacity facilities with a demonstrated clean spill history is based on the likelihood that these facilities are simple and less complex than larger storage facilities. EPA also believes that the owner or operator of such a facility who chooses to self-certify will be competent and able to certify that his facility is in compliance with the SPCC requirements and that his Plan works to prevent oil discharges, especially since the owner or operator will himself have to certify to the following: (1) that he is familiar with the requirements of the SPCC rule; (2) that he has visited and examined the facility; (3) that the Plan has been prepared in accordance with accepted and sound industry practices and standards and with the requirements of the SPCC rule; (4) that procedures for required inspections and testing have been established; (5) that the Plan is being fully implemented; (6) that the facility meets the qualification criteria for qualified facilities; (7) that the Plan does not include any environmental equivalence measures or determinations of impracticability; and (8) the Plan and the individuals responsible for implementing the Plan have the full approval of management and the facility has committed the necessary resources to fully implement the Plan. In fact, EPA believes that this simpler approach to the SPCC requirements will trigger increased compliance without a PE having to certify every Plan and without EPA having to inspect every covered facility.

Question 15. In 1995, the GAO found that EPA had not taken action on any of their recommendations for the SPCC program made in 1989. Please summarize how the EPA has responded to the GAO findings in their 1989 and 1995 reports?

Response. In the conclusions section of the 1995 GAO report, GAO noted that "EPA generally agreed with the seven recommendations in the 1989 report on the regulation and inspection of above ground storage tanks (ASTs), and it has taken some steps to implement them. In 1994, EPA partially implemented the GAO recommendation on contingency planning, and by 1996 it expects to implement three more recommendations (on inspection procedures and documentation, training for inspectors, and penalties for noncompliance). EPA is uncertain when the other three recommendations (on tank construction and design and on targeting inspections)

will be implemented." Since this GAO report was issued, EPA has completed the following actions:

RECOMMENDATION: ABOVE GROUND OIL STORAGE TANKS SHOULD BE BUILT AND TESTED IN ACCORDANCE WITH INDUSTRY OR OTHER SPECIFIED STANDARDS

In response to this recommendation, EPA strengthened the Professional Engineer (PE) certification requirements in the SPCC rule by adding this statement: "the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards." EPA also elaborated on relevant industry tank construction and inspection standards in the preamble to the 2002 SPCC rule. In addition, the Agency routinely coordinates with industry standards setting organizations in the development of relevant standards, such as the Steel Tank Institute's (STI) SP001 Standard Revision Committee.

RECOMMENDATION: FACILITIES SHOULD HAVE A PLAN FOR HOW TO REACT TO A SPILL THAT OVERFLOWS THEIR BOUNDARIES.

The Facility Response Plan (FRP) rule, issued in July 1994 and amended in June 2000, requires facility owners and operators to prepare plans for responding to a worst-case discharge of oil and to a substantial threat of such a discharge, as well as small and medium discharges of oil. The FRP rule also requires facility owners and operators to have a program of response drills and exercises that follows the National Preparedness for Response Exercise Program (PREP). The general requirements for an SPCC Plan were amended in 2002 to require certain spill response and reporting planning requirements.

RECOMMENDATION: STORM WATER DRAINAGE SYSTEMS SHOULD BE DESIGNED AND OPERATED TO PREVENT OIL FROM ESCAPING.

In the 2002 SPCC amendments, the layout of the SPCC rule was reorganized with specific sectionss entitled "Facility Drainage" in relevant subparts of the rule to highlight the need to prevent oil discharges from storm water drainage systems.

RECOMMENDATION: DEVELOP, IN COORDINATION WITH STATE AND LOCAL AUTHORITIES, A SYSTEM OF INSPECTION PRIORITIES ON THE BASIS OF A NATIONAL INVENTORY OF TANKS.

EPA often targets inspections in response to spills or complaint referrals. We also use information received from State and local authorities. EPA typically uses the following factors/resources to target facilities for SPCC inspections:

-Quantity of oil stored
-Geographic location, proximity to sensitive environments and water bodies
-State, federal and local referrals, public complaints, and counties with high spill histories
-State permit databases
-Age of infrastructure
-Industry sector

RECOMMENDATION: DEVELOP INSTRUCTIONS FOR PERFORMING AND DOCUMENTING INSPECTIONS

A national guidance for SPCC inspections was issued in December 2005 (SPCC Guidance for Regional Inspectors, available at www.epa.gov/oilspill) . This guidance includes checklists for Regional personnel to use in documenting inspections. Updated guidance for FRP coordinators and inspectors is currently being developed with respect to substantial harm determinations, plan review, inspections and the conduct/evaluation of Government-initiated unannounced exercises.

RECOMMENDATION: DEFINE AND IMPLEMENT MINIMUM TRAINING NEEDS FOR INSPECTORS

EPA has developed and implemented a comprehensive 40-hour program for inspector training that includes a mock facility inspection. From 1996 through 2000, the 40-hour training course was conducted in 8 regions, with staff from all 10 regions attending. EPA provides SPCC refresher training at the yearly On-Scene Coordinator (OSC) readiness training program. Three training refreshers on the 2002 rule amendments have been held and we are currently updating the 40-hour course for delivery this year. In addition, the Agency recently completed a train-the-trainer program on the inspector guidance document for senior inspectors.

RECOMMENDATION: ESTABLISH A NATIONAL POLICY FOR FINING VIOLATORS

EPA's Office of Enforcement and Compliance Assurance (OECA) has developed a national enforcement policy document. The document is available at http://epa.gov/compliance/resources/policies/civil/cwa/311pen.pdf.

Question 16. One of the outstanding elements in the litigation on the 2002 rule deals with the definition of navigable waters. This is an extremely controversial issue with broad implications for the Clean Water Act. Do you intend to address this issue through settlement in the lawsuit on the SPCC program filed by the American Petroleum Institute?

Response. The issue of the definition of navigable waters was not included in the settlement agreement which EPA reached with plaintiffs who challenged the 2002 rule. The issue is still being litigated in the U.S. District Court for the District of Columbia.

Question 17. Can you describe about how many facilities you believe will receive regulatory relief as a result of each of the proposed changes to the SPCC rules?

Response. EPA estimates that a total of about 618,000 facilities are currently subject to the SPCC regulations. The following provides the proposed change and our best estimate of the facilities that would receive regulatory relief if these proposed changes were adopted:

Qualified Facility: As proposed, the qualified facility (10,000 gallons or less of oil storage capacity and it meets other qualification criteria) approach is optional and depends on circumstances at a particular facility. A facility may find that it needs to use a Professional Engineer (PE) for an impracticability or environmental equivalence claim in its Plan. EPA does not know how many facilities would meet the criteria and choose to take advantage of the "Qualified Facility" option. Therefore, EPA examined the impact of the "Qualified Facility" option under 3 scenarios: 25 percent, 50 percent, and 75 percent of facilities would likely meet "Qualified Facility" status and decide to implement this approach. EPA estimated that 84,000 facilities would choose to take advantage of this option under the 25-percent scenario; 167,000 facilities under the 50-percent scenario, and 251,000 facilities under the 75 percent scenario.

Qualified Oil-filled Operational Equipment: EPA focused its economic analysis on the electric utility sector for the, qualified oil-filled operational equipment option in the proposed rule. We recognize, however, that many more facilities outside of the electric utility sector with oil-filled operational equipment may choose this option. As above, since this is an optional approach, some facilities may choose not to take advantage of this flexibility. EPA estimates that the total number of new facilities with oil-filled operational equipment that would elect to use the flexibility in this approach would be approximately 2,040 in the first year. Over the next 10 years, approximately 2,450 new facilities are expected to be added annually on average.

Motive Power: EPA has no empirical data on the number of facilities with motive power containers with oil storage of 55 gallons or greater. To estimate the number of facilities affected by the 'Motive Power' proposed rule, EPA examined 3 scenarios: 10 percent, 25 percent,and 50 percent of the facilities in sectors likely to have motive power containers may be affected by the proposed regulatory option. EPA estimated that 29,000 facilities have 'motive power' oil storage under the 10 percent scenario; 72,000 facilities under the 25 percent scenario; and 143,000 facilities under the 50 percent scenario.

Airport Mobile Refuelers: EPA estimated the total number of airports that will benefit from the proposed modification at 479 in the first year. EPA assumed one to three mobile refuelers per airport, or approximately two per airport on average.

Question 18. Can you explain how and why the proposed rule differentiates between mobile vehicles that use petroleum products for propulsion or for the function of the equipment and mobile vehicles that carry large tanks of fuel?

Response. The 1971 Memorandum of Understanding between EPA and the Department of Transportation (DOT) states that "highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a non-transportation-related facility and which are not intended to transport oil in interstate or intrastate commerce" are considered non-transportation-related, and therefore fall under EPA's regulatory jurisdiction. For example, some oil refinery tank trucks and fueling trucks dedicated to a particular facility (such as a construction site, military base, or similar large facility) fall under this category. Vehicles used to store oil, operating as on-site fueling vehicles at locations such as construction sites, military, or civilian remote operations support sites, or rail sidings are generally considered non-transportation-related. In a sense, the container on the vehicle is a

mobile oil storage tank and would be subject to SPCC requirements at a regulated facility.

However, there are certain motor vehicles (including aircraft) that contain oil solely for the purpose of providing fuel for propulsion, or solely to facilitate the operation of the vehicle. The concept of "motive power" is not addressed in the SPCC regulations, but the EPA-DOTMOU in Appendix A to 40 CFR Part 112 specifically refers to the transportation of oil, not to transportation in the general sense. As a result, oil storage containers with a capacity greater than 55 gallons used for motive power technically fall under the SPCC rule where secondary containment and other SPCC requirements would apply. EPA never intended to regulate motive power containers under the SPCC rule; moreover, attempting to comply with the SPCC rules for motive power containers would be extremely challenging. Therefore, the Agency proposed to exempt motive power containers such as those on buses, sport utility vehicles, small construction vehicles, aircraft and farm equipment, or at facilities or locations such as heavy equipment dealers, commercial truck dealers, or certain parking lots that maybe subject to the SPCC requirements (including secondary containment, inspection, and over fill protection) solely because of the presence of motive power containers.

Question 19. Can you explain the history of the applicability of the SPCC regulations to the aviation industry?

Response. Since 1974 (with subsequent amendments in 2002), any facility, including an airport, with a total oil storage capacity greater than 1,320 gallons and with a reasonable expectation of a discharge to navigable waters and adjacent shorelines, must comply with the SPCC regulations. Airports, especially large facilities, are likely to have large stationary on site bulk storage containers of aviation fuel (an oil) making them subject to the SPCC requirements. In addition, many airports have vehicles equipped with onboard bulk storage containers that receive fuel from the stationary onsite bulk storage containers and subsequently transfer fuel from the onboard bulk storage containers to aircraft; essentially a "tank/container on wheels." These vehicles generally carry the fuel in a large tank/container and are often called "mobile refuelers" because they provide fuel to the aircraft or other airport equipment. The mobile refuelers engage in fuel transfers to aircraft but when not fueling aircraft serve as a bulk storage container storing the remaining fuel until the next transfer occurs. EPA has always regarded these trucks as "mobile or portable bulk storage containers" subject to the SPCC requirements.

In addition, in 1971, EPA and the Department of Transportation (DOT) jointly signed a Memorandum of Understanding (MOU) that vests regulatory jurisdiction for all oil storage and transfers within an SPCC facility with EPA, including airports and aviation facilities. An airport or other aviation facility unfamiliar with the MOU might conclude that because an airport is involved in transportation, it is not subject to the SPCC rule. However, the MOU divides jurisdiction based on the movement/storage of "oil" within and between facilities and not the act of transportation associated with aviation itself (in which "aircraft" move within or between facilities). As stated above, the memo, which has been included as an appendix to the SPCC rule since 1973, clearly outlines these principles. Thus, the activities within an airport related to movement and storage of oil are non-transportation and subject to EPA jurisdiction and the SPCC requirements.

Question 20. What level of funding would the EPA need to annually inspect 30 percent of the facilities subject to the SPCC program?

Response. To inspect 30 percent of the facilities subject to the SPCC program annually (about 200,000 facilities), EPA would need an increase in funding which would be used partly to increase the number of trained inspectors. However, we would also note that while it is important for EPA to maintain an enforcement, inspection, and compliance assistance effort and presence in the field, we also believe it is important to establish simple, flexible regulatory requirements that encourage increased compliance and good prevention practices without EPA having to inspect every regulated facility.

Question 21. The proposed rule states that it does not have federalism implications as defined in Executive Order 13132. However, the proposed rule would preempt State engineering licensing laws because it allows small facilities to make engineering judgments. How does EPA justify this Federal preemption of State law that would allow non-engineers to engage in the practice of engineering without a license?

Response. In the current SPCC' requirements, the Professional Engineer (PE) certifies that the SPCC Plan "has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR part 112; that procedures for required inspections and testing have

been established; and that this Plan is adequate for the facility." EPA is proposing that the owner or operator of a qualified facility can self-certify, among other things, that "the Plan has been prepared in accordance with accepted and sound industry practices and standards." This is merely a statement that the owner or operator is satisfied that his facility meets this requirement. A facility owner or operator may need to rely on licensed professional engineering services for the design and construction of equipment according to accepted and sound industry practices and standards. However, EPA is only proposing that the owner or operator certify that this requirement is met. In addition, EPA is not proposing to allow owners or operators of qualified facilities to use certain provisions (environmental equivalence and impracticability) because these provisions require an evaluation by a PE. Finally, we note that in the preamble, EPA makes clear that these rules, if adopted, would not pre-empt State requirements that are more stringent; see, for example, "Under CWA section 311(o), States may impose additional requirements, including more stringent requirements, relating to the prevention of oil discharges to navigable waters. EPA encourages States to supplement the Federal SPCC program and recognizes that some States have more stringent requirements. 56 FR 54612 (October 22, 1991)."

Question 22. In drafting your proposal, did EPA evaluate whether the changes for smaller sites creates an incentive for facility managers to disperse their oil storage facilities, thereby increasing the opportunities for spills, and what did you find?

Response. While EPA did not explicitly consider the possibility that the proposal might lead persons to disperse facilities and thereby increase the opportunities for spills, an owner or operator determines the aggregate oil storage capacity at the facility to determine if he is subject to the SPCC requirements (quantity greater than 1,320 gallons) and whether he can take advantage of the qualified facility option at the 10,000 gallon threshold. Consequently, it doesn't matter if an owner or operator has one, 10,000 gallon tank on the facility or 5, 2,000 gallon tanks; in this case the aggregate oil storage capacity of the facility is 10,000 gallons. However, EPA does recognize that there maybe sites (e.g., farms) where tanks are located on separate, non-contiguous land parcels. In this case, the facility owner or operator may choose to document that each separate, non-contiguous parcel is a separate facility and only the oil storage capacity located on the single parcel needs to be aggregated. For example, a farm might consist of two or more separate land parcels each with its own 1,000 gallon oil storage tanks. In this case, the farmer could choose not to aggregate the, tank storage capacity as allowed by the SPCC definition of facility. The definition of facility in the SPCC rule (§112.2) provides factors an owner or operator may use to make this facility determination as described above.

Question 23. Please provide a comprehensive list of the agricultural commodities that are included in the term, "animal fats and oils or greases."

Response. Please see the following web site for a list of the major known agricultural commodities that would be included in the term "animal fats and oils or greases": http://www.usc.miUvrtp/faq/oil.shtml (U.S. Coast Guard list of oils).

RESPONSE BY THOMAS P. DUNNE TO AN ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. My farmers in Ohio have had justifiable concerns about how they are impacted by the Spill Prevention Control and Countermeasure program. It is important to fully and fairly clarify how entities are subject to this ruling, and I need to be able to explain this to my constituents. Prior to the Environment & Public Works hearing we just held, it was my understanding that-in general-farmers with fewer than 10,000 gallons of petroleum on site can take advantage of the indefinite extension of the deadlines. However, subsequently, it was brought to my attention thatsuch farmers can only take advantage of this indefinite extension if they are already in compliance with the 1973 regulations, which would essentially mean few farmers would be able to take advantage of this new proposal as few farmers knew they were subject to this rule prior to 2002. I did not believe this was the case. Please clarify this point for me and my constituents.

Response. Under the proposed indefinite compliance extension, a farm with a total oil storage capacity of 10,000 gallons or less that was in operation on or before August 16, 2002, would need to maintain its SPCC Plan during the indefinite extension period. However, farms that came into operation after August 16, 2002 would not be required to develop or implement a Plan during the indefinite extension period until a new compliance date is established.

With regard to SPCC inspections of farms, EPA has informed the public and the regulated community that it intends to address concerns raised by the farming sec-

tor about the SPCC requirements and consider further differentiation of requirements for farms during the proposed indefinite extension. Because there is such a large number and a wide variety of industrial facilities handling quantities of oil greater than 10,000 gallons subject to the SPCC requirements, in light of the factors noted above for targeting facilities for inspection, a farm inspection is typically a very low priority. In addition, EPA believes that the farm sector will need the time provided by the extension to better take advantage of any further amendments to the SPCC rule that are promulgated as a result of the recent proposed amendments.

RESPONSES BY THOMAS P. DUNNE TO ADDITIONAL QUESTIONS FROM SENATOR BAUCUS

Question 1. Does the EPA have an inspection/monitoring program to ensure regulated facilities adhere to the proposed rule?

Response. Yes; on average, a full SPCC inspection is conducted at about 1,100 facilities per year. As we discuss in the answer to the next question and in response to question No. 7 under the Questions from Senator Jeffords, the Agency has various criteria in determining which facilities should be inspected/visited. In addition, EPA personnel will review SPCC and Facility Response Plans (FRP) and respond to hundreds of oil spills each year.

Question 2. The regulated community under the SPCC rule is quite large. Does the EPA prioritize facilities to ensure that those large facilities, which pose the greatest risk to the environment, are inspected before small, family owned facilities? Please describe your efforts in this area.

Response. Capacity of oil storage is certainly one factor among many that the Agency considers when prioritizing inspections of SPCC-regulated facilities. For example, EPA inspects facilities that are required to submit Facility Response Plans (FRP). These facilities (which by definition are also SPCC facilities) generally store greater than one million gallons of oil and meet certain applicability criteria which identifies that they have the potential to cause substantial harm to the environment by discharging oil into or on navigable waters or adjoining shorelines. In an effort to maximize inspection resources and travel funding, regional inspectors of 10 conduct both SPCC and FRP inspections when visiting these facilities. The Agency also considers other factors in determining priorities for inspections such as spill history, geographic location and proximity to navigable waters. [See also response to Question No. 7 from Senator Jeffords.]

REVIEW

Long-Term Ecosystem Response to the Exxon Valdez Oil Spill

Charles H. Peterson,[1*] Stanley D. Rice,[2] Jeffrey W. Short,[2] Daniel Esler,[3] James L. Bodkin,[4] Brenda E. Ballachey,[4] David B. Irons[5]

The ecosystem response to the 1989 spill of oil from the Exxon Valdez into Prince William Sound, Alaska, shows that current practices for assessing ecological risks of oil in the oceans and, by extension, other toxic sources should be changed. Previously, it was assumed that impacts to populations derive almost exclusively from acute mortality. However, in the Alaskan coastal ecosystem, unexpected persistence of toxic subsurface oil and chronic exposures, even at sublethal levels, have continued to affect wildlife. Delayed population reductions and cascades of indirect effects postponed recovery. Development of ecosystem-based toxicology is required to understand and ultimately predict chronic, delayed, and indirect long-term risks and impacts.

Before the Exxon Valdez oil spill, information available for constructing risk assessment models to predict ecological impacts of petroleum hydrocarbons was limited to selective, largely short-term monitoring after previous oil spills and to tests of acute toxicity in laboratory-tolerant taxa (*1*). After the tanker Exxon Valdez grounded on Bligh Reef in northern Prince William Sound on 24 March 1989, the magnitude of the spill, extent of shoreline contamination, and evident high mortality of wildlife prompted an evaluation of ecological impacts of unprecedented scope and duration extending now for more than 14 years (*2–5*). The release of 42 million liters of Alaskan North Slope crude oil contaminated to some degree at least 1990 km of pristine shoreline. Prince William Sound was most severely affected, but the oil spread more than 750 km to the southwest along the Kenai Peninsula, Kodiak archipelago, and the Alaska Peninsula (Fig. 1). Years of study provide a new understanding of long-term biological impacts and recovery processes in a coastal ecosystem populated by abundant marine mammals, seabirds, and large fishes (*2–5*).

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Delays in recovery and emergence of long-term impacts are understood by bringing an ecosystem perspective to ecotoxicology (*6*). The ecosystem framework extends ecotoxicology to include interactions among multiple abiotic and biological components rather than treating each species separately and restricting assessment to acute short-term impacts (*7*). Disagreements exist between Exxon- and government-funded scientists (*8*), and unknowns persist, especially in understanding how multiple processes combine to drive observed dynamics. Nevertheless, these uncertainties do little to diminish the general conclusions: oil persisted beyond a decade in surprising amounts and in toxic forms, was sufficiently bioavailable to induce chronic biological exposures, and had long-term impacts at the population level. Three major pathways of induction of long-term impacts emerge: (i) chronic persistence of oil, biological exposures, and population impacts to species closely associated with shallow sediments; (ii) delayed population impacts of sublethal doses compromising health, growth, and reproduction; and (iii) indirect effects of trophic and interaction cascades, all of which transmit impacts well beyond the acute-phase mortality.

Acute-Phase Mortality

After the release of crude oil from the Exxon Valdez into Prince William Sound (PWS), acute mortality followed a pattern largely predictable from other oil spills. Because marine mammals and seabirds require routine contact with the sea surface, these taxa experience high risk from floating oil (*2, 6*). Oiling of fur or feathers causes loss of insulating capacity and can lead to death from hypothermia, smothering, drowning, and ingestion of toxic hydrocarbons. Accordingly, mass mortalities of 1000 to 2800 sea otters (*9*) and unprecedented numbers of seabird deaths estimated at 250,000 (*10*) were documented during the days after the spill. An estimated 302 harbor seals, a short-haired marine mammal, were killed not by oiled pelage but likely from inhalation of toxic fumes leading to brain lesions, stress, and disorientation (*2*). Mass mortality also occurred among macroalgae and benthic invertebrates on oiled shores from a combination of chemical toxicity, smothering, and physical displacement from the habitat by pressurized wash-water applied after the spill (*5, 7*).

Persistence of Oil: Ecosystem Sequestration

Only early phases of transport and transformation of the petroleum hydrocarbons followed expectations (*11*). About 40 to 45% of the oil mass grounded in 1989 on 787 km of PWS beaches; another 7 to 11% was transported to contaminate 1203 km of Gulf of Alaska shoreline (*11, 12*). About 2% remained on intertidal PWS beaches after 3.5 years (*11*); this reflected an exponential decay rate of -0.87 year^{-1}, which in turn produced a loss of 58% over a year. Unexpectedly (*3*), rates of dispersion and degradation diminished through time, as most oil remaining after October 1992 was sequestered in environments where degradation was suppressed by physical barriers to disturbance, oxygenation, and photolysis (*12*). A 2001 survey of intertidal PWS shorelines revealed 55,600 kg of often little weathered, Exxon Valdez oil in intertidal subsurface sediments and a perhaps equal mass of high-intertidal degraded surface oil and lower-intertidal, minimally weathered subsurface oil (*13*). This represents a decay rate from 1992–2001 of only -0.22 to -0.30 year^{-1} (20 to 26% loss over a year) from the 806,000 kg estimated to be present on PWS beaches in 1992.

Sedimentary refuges inhibited degradation and sequestered persistently toxic oil in the intertidal zone of coarse-grained gravel shores where geomorphologic armoring by boulders and cobbles inhibited disturbance by waves (*12*). Some of this oil was similarly trapped under mussel beds providing an

enduring route of entry into many food chains (*14*). The subsurface cobbles and gravels of stream banks (*15*) harbored biologically available oil, exposing and killing pink salmon embryos through at least 1993 (*16*). Thus, heavily oiled coarse sediments formed and protected subsurface reservoirs, sequestering oil from loss and weathering in intertidal habitats containing fish eggs and invertebrate predators (sea otters, seaducks, and shorebirds).

Long-Term Population Impacts

Chronic exposures of sediment-affiliated species. Chronic exposures for years after the spill to oil persisting in sedimentary refuges were evident from biomarkers in fish (*17*), sea otters (*18*), and seaducks (*19*) intimately associated with sediments for egg laying or foraging. These chronic exposures enhanced mortality for years. In 1989, prediction of oil risk to fishes was based largely on testing acute toxicity in short-term (~4-day) laboratory exposures to the water-soluble fraction dominated by 1- and 2-ringed aromatic hydrocarbons (*8*). After the spill, fish embryos and larvae were chronically exposed to partially weathered oil in dispersed forms that accelerate dissolution of 3-, 4-, and 5-ringed hydrocarbons largely missing from the traditional laboratory toxicity assays (*15*). Laboratory experiments showed that these multiringed polycyclic aromatic hydrocarbons (PAHs) from partially weathered oil at concentrations as low as 1 ppb are toxic to pink salmon eggs exposed for the months of development and to herring eggs exposed for 16 days (*20, 21*). This process explains the elevated mortality of incubating pink salmon eggs in oiled rearing streams for at least 4 years after the oil spill (*16*).

After 1989, sea otter recovery of about 4% per annum (averaged throughout western PWS) has fallen far short of the 10% expected from earlier population recovery after termination of trade in sea otter pelts (*22*). At heavily oiled northern Knight Island, sea otters have remained at half the estimated prespill numbers with no recovery initiated by 2000, whereas an unoiled Montague Island population doubled just in the period from 1995 to 1998 (*23*). Spring carcass collections in 1976–85 and again in 1989–98 produced age-at-death data, which allowed population modeling to demonstrate that sea otter survival in the oiled portion of PWS was generally lower in the years after the spill and declined rather than increased after 1989 (*24*). This response surprisingly included higher mortality of animals born after the spill, implicating a substantial contribution from chronic exposure. Persistent exposure to oil in 1996–98 is confirmed by higher levels of the detoxification enzyme CYP1A in individuals from northern Knight than from Montague Island (*18*). Abundance of sea otter prey (clams, mussels, crabs) did not differ between Knight and Montague during this period, so prey availability fails to explain suppression of population recovery (*23*). Suspension-feeding clams and mussels concentrate and only slowly metabolize hydrocarbons, which leads to chronically elevated tissue contamination that persisted in one prominent prey of sea otters, the clam *Protothaca staminea*, until at least 1996 (*7*). Sediments in protected areas, including oiled mussel beds and shallow eelgrass habitats (*25*), also retained contamination, with recovery to background in oiled mussel beds estimated from repeated sampling to require up to 30 years (*14*). Thus, foraging sea otters suffered chronic exposure to residual petroleum hydrocarbons from both sediment contact and ingestion of bivalve prey. In contrast, piscivorous river otters showed little evidence of chronic oil exposure even along heavily oiled shorelines, implying that foraging in sediments entails greater risk (*18*).

Among marine birds, harlequin ducks exhibited the most unanticipated chronic impact. Radio tracking of adult females revealed higher mortality rates while overwintering in 1995–96 through 1997–98 on heavily oiled Knight and Green Island shores (22%) than on unoiled Montague Island (16%), a difference with significant implications for population trajectories (*26*). Harlequin ducks, which prey on intertidal benthic invertebrates, showed induction of the CYP1A detoxification enzyme in 1998, which in the absence of corresponding patterns in other potential inducers like polychlorinated biphenyls (PCBs) indicates ongoing exposure to oil 9 years after the spill (*20*). Body mass of harlequins in late winter was negatively related to CYP1A levels in 1998, which suggests that a mechanism involving energetics led to the observed elevation in over-winter mortality rates (*27*). Reflecting the sensitivity of harlequin duck population dynamics to adult female survival, fall PWS densities of harlequins on oiled shores declined at an annual rate of about 5% in 1995-97, as compared with stable numbers on unoiled shores (*26*).

Other marine birds that forage in shallow sediments showed evidence of persistent exposure to residual oil after the spill. Barrow's goldeneye, a seaduck that overwinters in coastal Alaska and forages in intertidal mussel beds, declined in abundance in oiled relative to unoiled bays immediately after the spill with no evidence of recovery through 1991 (*28*). Along oiled Knight Island shorelines, Barrow's goldeneye showed chronic exposure to oil into winter 1996–97, as evidenced by induction of CYP1A (*19*). The association between foraging on littoral benthic invertebrates and chronic exposure to residual toxins from the oil is illustrated by differences among age classes in pigeon guillemots. This seabird, which restricts its foraging to the near-shore environment, suffered acute mortality during the spill (*10*). In 1999, 10 years after the oil spill, the chicks of pigeon guillemots, which are fed only fish, showed no evidence of ongoing exposure to toxics, whereas the adults, which include shallow-water benthic invertebrates in their diets, had elevated CYP1A in their livers (*29*).

Sublethal exposures leading to death from compromised health, growth, or reproduction. Several studies documented cascades of

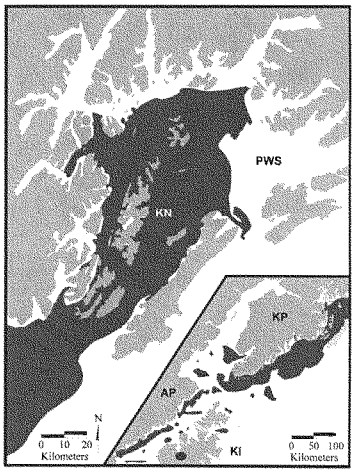


Fig. 1. Map of the spread of oil and the shorelines (indicated in black) contaminated to some degree after the grounding of the Exxon Valdez at Bligh Reef in northern Prince William Sound. Oil was transported to the southwest, striking Knight (KN) and other PWS islands, the Kenai Peninsula (KP), the Kodiak Island archipelago (KI), and the Alaska Peninsula (AP).

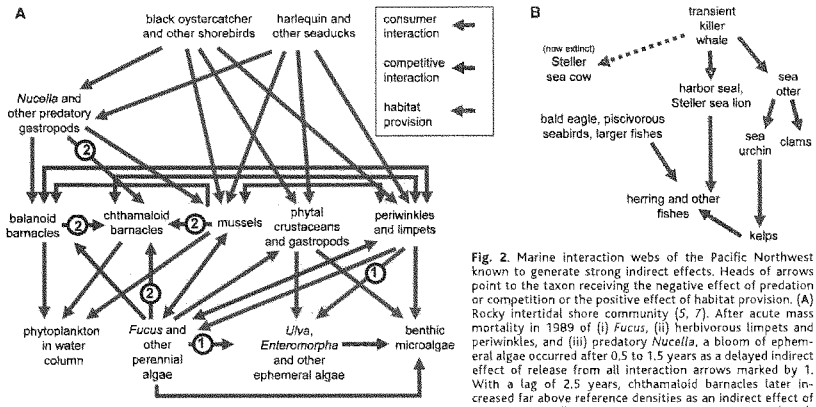


Fig. 2. Marine interaction webs of the Pacific Northwest known to generate strong indirect effects. Heads of arrows point to the taxon receiving the negative effect of predation or competition or the positive effect of habitat provision. (**A**) Rocky intertidal shore community (*5, 7*). After acute mass mortality in 1989 of (i) *Fucus*, (ii) herbivorous limpets and periwinkles, and (iii) predatory *Nucella*, a bloom of ephemeral algae occurred after 0.5 to 1.5 years as a delayed indirect effect of release from all interaction arrows marked by 1. With a lag of 2.5 years, chthamaloid barnacles later increased far above reference densities as an indirect effect of release from all interaction arrows marked by 2 (*4, 7*). (**B**) Subtidal kelp forest community (*36, 41*). Despite acute loss of over 50% of the sea otters at heavily oiled northern Knight Island, there exists only limited evidence of initiation of this potentially strong trophic cascade. Some patches of larger sea urchins have appeared but no explosion of their abundance and no evident overgrazing of kelp have been seen even in the absence of sea otter recovery to date (*22, 23*).

events indirectly affecting individual survival or reproduction after sublethal exposures. Oil exposure resulted in lower growth rates of salmon fry in 1989 (*8*), which in pink salmon reduce survivorship indirectly through size-dependent predation during the marine phase of their life history (*30*). After chronic exposures as embryos in the laboratory to <20 ppb total PAHs, which stunted their growth, the subsequently marked and released pink salmon fry survived the next 1.5 years at sea at only half the rate of control fish (*21*). In addition, controlled laboratory studies showed reproductive impairment from sublethal exposure through reducing embryo survivorship in eggs of returning adult pink salmon that had previously been exposed in 1993 to weathered oil as embryos and fry (*31*). These definitive experimental demonstrations of compromised survival and reproduction from sublethal dosing conform with a growing understanding of how exposure to xenobiotics at sensitive early stages in vertebrate development can lead to enhanced mortality and reproductive impairment later in life through endocrine disruption and developmental abnormalities (*32*). Abnormal development occurred in herring and salmon after exposure to the Exxon Valdez oil (*14, 20*).

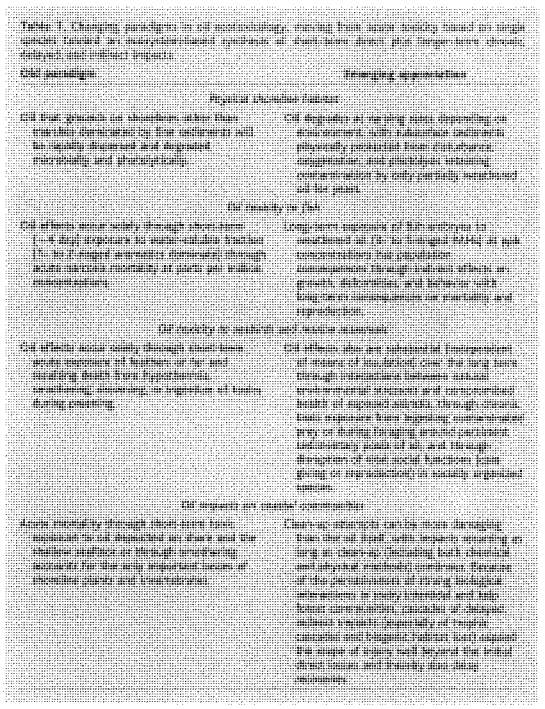
Support for the inference that sublethal effects of chronic exposure to toxics through ingestion of oil led to population-level impacts on shorebirds comes from studies of the black oystercatcher. In summer 1989, pairs of black oystercatchers with foraging territories on heavily oiled shores showed reduced incidence of breeding and smaller eggs than those that bred elsewhere (*33*). Chick mortality was enhanced in proportion to degree of shoreline oiling in both 1989 and 1990. Subsequent study (*34*) revealed that black oystercatchers indeed consumed oiled mussels and that parents gathering prey on oiled shores in 1991 and 1992 fed chicks more to achieve less growth than on unoiled shores, which implies energetic or developmental costs and reproductive impairment from ingestion of toxics 3 years after the spill. Fledging late or at small size has negative implications for chick survivorship.

Cascades of indirect effects. Indirect effects can be as important as direct trophic interactions in structuring communities (*35*). Cascading indirect effects are delayed in operation because they are mediated through changes in an intermediary. Perhaps the two generally most influential types of indirect interactions are (i) trophic cascades in which predators reduce abundance of their prey, which in turn releases the prey's food species from control (*36*); and (ii) provision of biogenic habitat by organisms that serve as or create important physical structure in the environment (*37*). Current risk assessment models used for projecting biological injury to marine communities ignore indirect effects, treating species populations as independent of one another (*7, 8*), even in rocky-shore systems, where basic community ecology would indicate otherwise (*38*).

Indirect interactions (Fig. 2A) lengthened the recovery process on rocky shorelines for a decade or more (*7*). Dramatic initial loss of cover by the most important biogenic habitat provider, the rockweed *Fucus gardneri*, triggered a cascade of indirect impacts. Freeing of space on the rocks and the losses of important grazing (limpets and periwinkles) and predatory (whelks) gastropods combined to promote initial blooms of ephemeral green algae in 1989 and 1990 and an opportunistic barnacle, *Chthamalus dalli*, in 1991. Absence of structural algal canopy led to declines in associated invertebrates and inhibited recovery of *Fucus* itself, whose recruits avoid desiccation under the protective cover of the adult plants. Those *Fucus* plants that subsequently settled on tests of *Chthamalus dalli* became dislodged during storms because of the structural instability of the attachment of this opportunistic barnacle. After apparent recovery of *Fucus*, previously oiled shores exhibited another mass rockweed mortality in 1994, a cyclic instability probably caused by simultaneous senility of a single-aged stand (*5, 39*). The importance of indirect interactions in rocky shore communities is well established (*38*), and the general sequence of succession on rocky intertidal shores extending over a decade after the Exxon Valdez oil spill closely resembles the dynamics after the Torrey Canyon oil spill in the UK (*40*). Expectations of rapid recovery based on short

generation times of most intertidal plants and animals are naïve and must be replaced by a generalized concept of how interspecific interactions will lead to a sequence of delayed indirect effects over a decade or longer (*7*).

Indirect interactions are not restricted to trophic cascades or to intertidal benthos. Interaction cascades defined broadly include loss of key individuals in socially organized populations, which then suffer subsequently enhanced mortality or depressed reproduction. After exceptionally high mortality of 20% between September 1988 and spring 1989 and another 20% during the following year in the AB pod of resident (fish-eating) killer whales that had been observed to swim through the spill, losses of adult females from these matriarchially organized family groups led to suppressed reproduction (*2*). In another pod (AT1) of transient (mammal-eating) killer whales, the 40% loss during the spill is leading to likely disintegration (*2*). Furthermore, the most compelling example in all of marine ecology of a trophic cascade radically modifying a marine community comes from the Gulf of Alaska kelp ecosystem (*36*). Unless eliminated by killer whales that have lost their traditional, larger marine mammal prey (*41*), sea otters control sea urchin populations, preventing them from overgrazing kelp and other macroalgae, and thereby retaining structural habitat for fishes and invertebrates (Fig. 2B). Given the spill loss of about 50% of the sea otters from PWS, there is potential for this cascade to influence recovery dynamics, but evidence of its operation to date is limited to reduction in otter foraging and increase in urchin sizes (*18*). Nevertheless, should sea otters be eliminated from an area by an oil spill, the repeatability of the otter-urchin-kelp cascade is sufficiently strong that risk assessment models can confidently include its implications. In contrast, limited understanding of the importance of behaviorally mediated indirect effects in driving community dynamics (*42*) still prevents their inclusion in risk modeling.



Implications of Changing Paradigms of Oil Ecotoxicity

It is well known that acute tests of toxicity in the laboratory are insufficient for ecotoxicological risk assessment (*43*). It has also been clear that tests of chronic exposures are needed to fully understand impacts of petroleum and other toxins in the marine environment (*6*). Support grows for inclusion of a range of physiological, biochemical, and histopathological evaluations of toxicity, facilitated by rapid development of molecular tools. Furthermore, ecologists have long acknowledged the potential importance of interaction cascades of indirect effects. Now synthesis of 14 years of Exxon Valdez oil spill studies documents the contributions of delayed, chronic, and indirect effects of petroleum contamination in the marine environment (Table 1). Expanding the scope of the fundamental basis of ecotoxicology beyond reliance on short-term acute toxicity to include delayed, chronic, and indirect effects operating over longer periods is analogous to developing ecosystem-based management of forest (*44*) and fisheries (*45*) resources to embrace the nexus of ecosystem interactions. Our synthesis implies necessary modifications of environmental standards for water quality, stormwater control, chronic low-level oil releases, and many other human activities. Vague concerns about the role of poor water quality in the steady declines of estuarine-dependent fisheries may now find renewed focus on a specific class of contaminants, the multi-ringed PAHs, in physically protected sedimentary spawning and nursery habitats. In light of delayed impacts of the Exxon Valdez (Table 1) and the San Cristobal oil spill in the Galapagos Islands during 2001 (*46*), the growing role played by risk assessment modeling in a priori environmental decision making and a posteriori estimation of natural resource injury needs reconsideration. Much incentive exists for advancing the predictive capacity of ecology to allow more confident modeling of chronic, indirect, and delayed effects of stressors through ecosystem-based frameworks.

References and Notes

1. Preparation of this review involved synthesis of an extensive and still-growing literature. The associated Supporting Online Material (SOM) identifies additional sources of relevant information.
2. T. R. Laughlin, Ed., *Marine Mammals and the "Exxon Valdez"* (Academic Press, San Diego, 1994).
3. P. G. Wells, J. N. Butler, J. S. Hughes, Eds., *"Exxon Valdez" Oil Spill: Fate and Effects in Alaskan Waters* (ASTM (American Society for Testing and Materials), Philadelphia, 1995).

Status of Recommendations from 1989 Report on EPA's Spill Prevention, Control, and Countermeasure (SPCC) Rule[1]

Rec. 1 – Build and test aboveground oil storage tanks in accordance with the industry's or other specified standards

Actions taken:

- The 1990 Oil Pollution Act required EPA to conduct a study on the use of liners or other secondary means of containment for storage facilities near waterways. However, EPA's analysis (issued in draft in 1994) indicated that it would be more costly for the industry to install liners than to remediate after a release.
- EPA's July 2002 final rule strengthened the regulatory language to require that tank materials and construction be compatible with the substances stored in them, and required that tank installations be in accordance with good engineering practices.
- EPA's July 2002 final rule established corrosion protection requirements for partially buried tanks.
- EPA's July 2002 final rule required periodic testing for, among other things, (1) aboveground tanks in general and when material repairs are made, (2) aboveground valves and piping, and (3) tanks, valves and piping where a facility owner could demonstrate that secondary containment measures were impracticable. However, the 2002 final rule eliminated specific language that had been proposed in 1991 concerning how frequently this testing needed to occur.
- EPA's July 2002 final rule required that field-constructed aboveground tanks undergoing, repair, alteration, or change in service be evaluated for brittle fracture (the cause of the Ashland Oil Spill).
- EPA's July 2002 final rule withdrew a 1991 proposed recommendation that construction, materials, installation and use of bulk storage tanks conform to industry standards.
- EPA's December 2005 proposed rule would allow eligible facilities (established under the same proposed rule change) to self-certify deviations from standard tank testing requirements without the approval of a professional engineer. In the proposed rule, EPA indicated that it expects facilities would comply with industry standards.

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[1]GAO, *Inland Oil Spills: Stronger Regulation and Enforcement Needed to Avoid Future Incidents*, GAO/RCED-89-65 (Washington, D.C.: Feb. 22, 1989).

Summary of actions:

To a large extent this recommendation has been addressed. The regulatory language concerning the construction and testing of aboveground storage tanks and associated piping is now stronger than it was at the time of the 1989 report. However, while EPA expects that professional engineers will consider industry standards when certifying facilities' SPCC plans, the use of specific standards has not been required. EPA has argued that requiring specific standards would reduce flexibility and might not be appropriate in all instances. At the same time, the proposal to allow some facilities to certify their own testing procedures without the approval of a professional engineer could be an area of weakness, given that facility owners are not being required to self-certify that they are following specific standards.

Rec. 2 – Plan how to react to a spill that overflows facility boundaries

Actions taken:

- EPA's July 1994 final rule implemented requirements from the 1990 Oil Pollution Act to establish facility response planning for worst case oil spills. EPA regulations now require owners of facilities where oil spills could cause substantial harm to the environment (based on location, storage capacity and a number of other factors) to submit plans for worst case, medium, and small oil spills. EPA's final rule outlined the requirements of these facility response plans including, that facility owners document that they have secured adequate response capabilities. EPA's final rule also gave regional officials the authority to approve the facility response plans for a subset of higher risk facilities.
- In response to the requirements of the Oil Pollution Act, EPA has instituted the National Preparedness for Response Exercise Program (PREP) to periodically conduct drills for facilities required to have a response plan.
- EPA's July 2002 final rule strengthened language outlining SPCC requirements to eliminate confusion about these provisions being optional.
- EPA's July 2002 final rule clarified requirements for SPCC plans including, estimates of the quantity of oils potentially discharged, possible spill pathways, spill prevention measures, spill control measures, spill countermeasures, and provisions for disposal of recovered materials. However, the 2002 final rule also allowed deviation from most of

the rule's substantive requirements (except for secondary containment) if the owner documented the reasons for nonconformance and provided equivalent environmental protection. Owners are not required to submit deviations to EPA, but EPA can require amendments to a facility's SPCC plan if it becomes aware of problems with the deviations through other information submissions or inspections.

- EPA's July 2002 final rule included language that industry standards should be considered when developing the SPCC plans, but not necessarily followed.
- EPA's July 2002 final rule required facility owners review their plans periodically and amend the plans whenever there is a change to a facility that affects its potential to discharge oil.
- EPA's July 2002 final rule provided EPA the authority to require facility owners to amend their SPCC plans following a discharge, but indicated that EPA does not have the authority to approve SPCC plans. The final rule eliminated a requirement that facility owners submit their plans to EPA following a discharge, but gave EPA the authority to require submission of plans on a case-by-case basis.
- EPA's July 2002 final rule required existing facilities to prepare an amended SPCC plan within 6 months of 8/16/02, and implement the plan by 8/18/03. Those facilities becoming operational after 8/16/02 but before 8/18/03 must prepare and implement plan no later than 8/18/03. Those facilities becoming operational after 8/18/03 must prepare and implement a plan before beginning operations.
    - Since the July 2002 final rule, these compliance dates have been continually extended through additional rulemaking in April 2003 and August 2004. Facility owners are now required to develop and implement their amended SPCC plans by 8/18/06.
    - EPA's December 2005 proposed rule would extend compliance dates for SPCC plan amendment and implementation to 10/31/07.
- EPA issued compliance assistance guidance for facility response planning and the SPCC rule in August and October 2002.

Summary of actions:

This recommendation has been partially addressed. The regulatory language concerning the contents and requirement to develop SPCC plans has been strengthened. Additionally, other regulatory changes have been made, such as the requirements for periodic review, which strengthen the spill prevention planning process. At the same time the facility response planning requirements and drills, implemented as a result of the 1990 Act are significant steps towards planning how to react to oil spills. However, given the continual extensions to the compliance deadlines from the 2002 final rule, many of the SPCC planning changes have never really been enforceable, and so the recommendation cannot be considered fully addressed. Finally, there remain some potential areas of weakness in the SPCC planning process. For example, facility owners are not normally required to submit their SPCC plans or "environmentally equivalent" deviations from SPCC requirements to EPA. Under the current regulations, these plans would be certified by professional engineers, although these engineers are not required to be independent, and this requirement could change as a result of proposed rule changes. Therefore, given EPA's limited inspection resources, the agency may not become aware of problems with some facilities' SPCC plans until it is too late to prevent a spill.

Rec. 3 – Design and operate storm water drainage systems to prevent oil from escaping through them

Actions taken:

- EPA's July 2002 final rule strengthened language requiring that drainage from diked storage areas be restrained by valves.
- EPA's July 2002 final rule included additional security requirements for storage facilities.
- EPA's July 2002 final rule required annual training for personnel involved in oil-handling on a variety of topics including general facility operations, discharge protocols and the facility's SPCC plan.

Summary of actions:

These actions address the recommendation. However, as of December 14, 2005, EPA had not provided information on other actions that may address this recommendation.

Rec. 4 – Develop in coordination with state and local authorities, a system of inspection priorities on the basis of a national inventory of tanks

Actions taken:

- In its 1991 proposed rule, EPA put forth an effort to collect data for a national inventory of tanks. However, OMB never approved the data collection effort, and EPA ultimately withdrew the proposed data collection effort as part of the 2002 final rule.
    - Instead EPA undertook a more limited survey of 30,000 facilities that it completed in 1996. EPA used statistical extrapolations of this data to provide information on the regulated universe for the 2002 rulemaking.
- The 1995 GAO reported noted that EPA had taken other steps to target inspections including:[2]
    - Establishing as a national priority that all facilities in each region that were required to develop facility response plans would be inspected between 1995 and 1997,
    - EPA obtained Dun & Bradstreet information on individual facilities which it provided to its regional offices,
    - A couple of regional offices took steps to develop their own targeting strategies based on spill history, potential to cause harm, and referrals/complaints.

Summary of actions:

This recommendation has been partially addressed. EPA has made some efforts to collect data to inventory the regulated community. Further, as of 1995, EPA indicated that it had taken steps to develop a system of inspection priorities. However, as of December 14, 2005, EPA had not provided information on whether the agency established a formal policy on national inspection priorities.

Rec. 5 – Develop instructions for performing and documenting inspections

Actions taken:

- The 1995 GAO report noted that EPA had begun work on developing uniform procedures which it expected to complete by late 1995.

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[2]GAO, *Aboveground Oil Storage Tanks: Status of EPA's Efforts to Improve Regulation and Inspections*, GAO/RCED-95-180 (Washington, D.C.: July 18, 1995).

  - The 1995 report also noted that the two regional offices visited had developed some standardized procedures and documentation, with both similarities and differences.
- In December 2005, EPA issued a guidance document to assist inspectors in reviewing facilities' implementation of the SPCC rule. The guidance provides information on the role of the inspector in reviewing and evaluating environmental equivalence, secondary containment impracticability determinations, and integrity testing. For example, the guidance indicates that among other activities, the inspector should review the SPCC plan to determine compliance with the rule and documentation of any deviations, as well as reviewing tank/piping test records, and inspection checklists used by the facility.

Summary of actions:

These actions address the recommendation. However, as of December 14, 2005, EPA had not provided information on other actions that may address this recommendation.

Rec. 6 – Define and implement minimum training needs for inspectors

Actions taken:

- The 1995 GAO report noted that EPA had begun work on guidance for training SPCC inspectors and expected to complete it in early 1996.
  - The report also noted that from 1992 through 1994 EPA had provided an average of about $900,000 per year for training and other activities to enforce the Clear Water Act. For example, Region 6 developed a series of videotapes to train aboveground storage tank inspectors and shared them with other regions.

Summary of actions:

It is unclear whether this recommendation has been addressed. As of December 14, 2005, EPA had not provided information on whether the agency finalized a formal program or developed guidance for inspector training.

Rec. 7 – Establish a national policy for fining violators

Actions taken:

- The 1990 Oil Pollution Act increased the cost of these penalties from $5,000 per day to $25,000 per day and set additional administrative penalties.
- The 1995 GAO report noted that EPA had drafted guidance and provided it to the regions in 1993. EPA hoped the policy would be completed by the end of 1995.
    - However, the 1995 GAO report also noted that in visits to a couple of regions, there were differences in the extent to which regional officials followed the draft policy.

Summary of actions:

It is unclear whether this recommendation has been addressed. As of December 14, 2005, EPA had not provided information on whether the agency finalized a national policy on fining violators, and whether this is being consistently implemented in the regions.

Rec. 8 – Consider whether to reestablish an oil spill research and development program

Actions taken:

- The 1990 Oil Pollution Act provided some funds for oil spill research but these funds were not part of an EPA-specific program.
- An official with EPA's Office of Research and Development indicated that EPA has some oil spill research and development efforts focused on testing products and on the transport, fate, and remediation of spilled oil. The official noted that the FY 2006 budget for this research is $901,500.

Summary of actions:

These actions are related to the recommendation, but it is unclear whether the recommendation has been fully addressed. The 1989 GAO report noted that one of the problems with the Ashland oil spill was that only about 20% of the spilled oil was ultimately recovered, and that additional research was needed to improve on oil spill remediation technologies that dated from the 1960s. Specifically, the report identified a need for research to improve technologies for controlling spills in fast moving inland waters and cold weather spill control and recovery techniques. While the actions taken indicate that research and development efforts have been made, it is unclear whether these efforts address the specific problems identified in the 1989 report.

Rec. 9 – Determine the advantages and disadvantages of supplementing EPA's own inspection resources by (1) using states and local inspection resources and (2) requiring that facilities obtain certification from independent engineers that facilities are in compliance with regulations

Actions taken:

- EPA's 1991 proposed rule noted that the Clean Water Act does not authorize EPA to delegate elements of the SPCC program to the states. The 1991 proposal encouraged state and local governments to supplement the federal SPCC program using their own authorities and recognized that an increasing number of states have developed their own oil pollution prevention programs, with requirements such as tank licensing and standards. The proposal also noted that many states are assessing the adequacy of programs or considering legislation on aboveground oil storage tanks.
- EPA's July 2002 final rule strengthened requirements that professional engineers attest that (1) they or their agent actually visited the facility, (2) the facility's SPCC plan was prepared according to good engineering practice including consideration of industry standards, (3) procedures for required testing were established, and (4) the plan is adequate for the facility.
    - However, in its 2002 final rule, EPA decided not to require professional engineers to be certified in the state where the facility is located, or that they be independent of the facility. EPA decided that the professional integrity of the engineers, and oversight and licensing boards would be sufficient to prevent abuses.
- EPA's December 2005 proposed rule would allow facilities that store 10,000 gallons or less and have a good history of no discharges to certify their own plans in lieu of having them certified by a professional engineer.
    - Under the proposed rule, facility owners would not be allowed to deviate from SPCC rule requirements as is otherwise allowed, except regarding security and tank integrity testing requirements.

Summary of actions:

This recommendation has been partially addressed. EPA has determined that it is not necessary for professional engineers who certify that facilities' SPCC plans are in compliance with requirements be certified in that state or financially independent of the facility. Additionally,

EPA is currently considering whether some facilities even need to have their SPCC plans certified by a professional engineer. As of December 14, 2005, EPA had not provided information on actions taken to coordinate with state and local governments.

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December 14, 2005

The Honorable James Inhofe
Chairman
Committee on Environment & Public Works
U.S. Senate
410 Dirksen Senate Office Building
Washington, DC 200510

Re: Statement for the Record on "Animal Fats and Vegetable Oils (AF/VO) Used in the US Feed Industry" relative to EPA's SPCC Rulemaking

Dear Chairman Inhofe:

The American Feed Industry Association (AFIA) commends you and your committee for convening today's hearing relative to the Environmental Protection Agency's (EPA) SPCC rulemaking and its consideration of the special and unique requirements of food and agriculture as it relates to the agency's prospective rulemaking in response to Public Law 104-55 (33 USC 2720).

AFIA is the national association representing the manufacturers of primary livestock, poultry feeds and pet foods. It's more than 600 member companies also include firms which process and supply ingredients to feed companies.

Given feed represents more than 70% of the on-farm cost of producing meat, milk and eggs, any federal action which increases the cost of producing feed negatively impacts the cost of production for U.S. farmers and ranchers, and ultimately, the U.S. consumer.

AFIA commends EPA's efforts to respond to Public Law 104-55, 33 (USC 2720), requiring the agency to issue regulations to comply with the Edible Oil Regulatory Reform Act by differentiating animal fats and vegetable oils (AF/VO) from all other oils, and developing more specific guidance for inspectors for facilities storing and using AF/VO products. We are providing the following recommendations and supporting documentation for inclusion in the separate AF/VO title, to be defined in EPA's prospective rulemaking.

Further, AFIA is pleased the agency has been transparent in its proposed rule development, keeping industry apprised of its progress, taking considerable industry input, and holding briefings for affected parties on the implications of it's the prospective rule.

As we have discussed with EPA and previously documented in comments to the agency, AF/VO products used in the U.S. feed industry are non-toxic, biodegradable, non-corrosive, and do no persist in the environment. Any potential spills or leaks are quickly mitigated due to the very limited flowability of these products at normal temperatures. Thus, AF/VO pose a significantly lower risk to the environment than petroleum oils, and should not be regulated by the same standards and requirements as petroleum

oils. AFIA has provided to the agency detailed evidence to further substantiate these product qualities, their significant differences from petroleum products, and the minimal risk they pose to the environment.

Based on this information and the minimal risk reduction verus cost to comply with the SPCC rule, we request EPA implement the following changes, exemptions and/or exclusions in order that EPA will fairly treat these agricultural products and the companies utilizing them to manufacture animal feeds. Our recommendations are as follow:

1. Rack Definition – AFIA is pleased EPA has addressed this important definition. We strongly recommend the final definition of a "rack" in the proposed rule will clearly state AF/VO will be exempted from the "secondary containment" for mobile tanks (e.g., railroad tank cars, tanker trucks) requirements of the present rule.

   This definitional change which recognizes that the minimal risk does not warrant such investment will save the US feed industry an estimated $270 million.

2. Storage Security – AFIA also strongly recommends EPA amend the fencing requirements for AF/VO storage in the final rule, thus exempting this classification of products from the Section 112.7 requirement that the entire property be enclosed with fencing. We are pleased the agency contemplates – at least in the draft proposal we have studied – that a facility may use other means to secure tanks, valves, motors and controls. This will allow a facility the necessary latitude to use best judgment to achieve compliance.

3. Integrity testing – AF/VO products are non-corrosive, outside tanks have significant additional surface insulation protection to provide efficient heating of the product, and potential leaks or spills are easily detected by visual means long before any significant amount of product might be lost from a tank or tank valve. Given this low level of risk and the lack of any historical evidence of AF/VO tank leaks, AFIA recommends EPA adjust the AF/VO regulations for outside tank integrity testing requirements, and proposes this requirement be replaced with a visual inspection program followed by the industry today.

   The draft documents we have seen contemplates allowing for self-certification by a facility if certain criteria are met, i.e. the facility has not had a spill in the past ten years or has not been in operation for ten years but hasn't had a spill. The facility owner or operator is familiar with the operation, the agency has visited the facility, the plan is prepared in acceptance with the rule, the plan is fully implemented, the facility does not utilize the environmental equivalence provisions and the plan has the full approval of management and the facility has committed the necessary resources to fully comply with the plan.

   This change will save an estimated $45-million investment by the U.S. feed industry.

4. Facility Response Plans – AFIA strongly recommends adoption of a three-tier designation of tank storage capacity for the purposes of SPCC plan requirements and that the contemplated tiers be as follows:

   Tier 1: Above 30,000 gal storage - follow existing plan requirements
   Tier 2: 15,000 to 30,000 gal. storage – written plan without a requirement for PE certification
   Tier 3: Up to 15,000 gal. storage – no written plan required, but with substantive compliance

This revised tier levels requirements are appropriate for feed industry facilities which generally receive and store small quantities (6,000 - 30,000 gallons) of AF/VO for nutritional inclusion in animal feed. Re-loading and transporting the bulk material does not occur at feed plants. Most shipments arrive via truck during normal business hours. Thru-put may range from 6,000 gallons per day for large facilities to 6,000 gallons per month for small facilities. These business conditions, combined with the minimal environmental risk of AF/VO products clearly justify the recommended tier change.

EPA appears to be contemplating a 10,000-gallon storage capacity. The aggregate aboveground storage capacity of feed facilities is generally 10,000 gallons or less. Given that many supplier companies require a minimum 10-day lead time on orders for AF/VO. The 10,000 gallon maximum storage will require a facility to have multiple loads on order to meet this small limit.

5. The prospective rule treats storage tanks inside the plant the same as outside tanks. Given the non-corrosive, non-toxic, biodegradable and non-persistent nature of AF/VO products, along with the quick mitigation feature due to the reduced flow ability of these products (all of which has been documented), we request the agency adjust the regulations to remove inside storage tanks for AF/VO from this secondary containment requirement. The cost to comply with this feature would be exorbitant to the industry with minimal risk mitigation.

6. AFIA supports use of 55-gallon drums and one-ton mini totes as temporary storage for AF/VO products, both inside and outside feed plants. The draft documents we have seen do not address this important issue. The product stored in these containers is only unloaded within the plant when it is incorporated as an ingredient in the feed manufacturing process. Thus, EPA must recognize the contemplated requirement for SPCC containment of these containers would be impractical. AFIA strongly requests this specifically be stated in the agency's contemplated rulemaking.

7. AFIA strongly urges EPA to extend these amendments to the rule based on industry segment rather than on an individual company basis. This will eliminate the need for each company to make application and the agency to review, consider and reply to numerous individual applications. This would greatly minimize the paperwork, time and costs incurred for all concerned.

8. EPA has not, thus far, defined the term product mixtures, including AF/VO, as it relates to the SPCC rulemaking and AFIA requests clarification on this definition. For example, how would a liquid feed product (mainly molasses plus nutrients) that contains a percent AF/VO in the product be defined under the regulation?

   This important definition is not addressed in the contemplated rule. This could be a major problem for companies storing or mixing liquid feeds. A feed mill that stores AF/VO and produces liquid feed will exceed the 10,000 gallon aggregate storage capacity if both AF/VO and mixtures count the same. The feedlots in the Midwest and Southwest would be affected in this category with the 10,000 gallon aggregate limit on total capacity if the term "product mixtures" isn't defined.

9. Finally, AFIA strongly urges EPA to provide assurances to industries storing and using AF/VO products that they can expect to be regulated under the Oil Pollution Act of 1990 and Clean Water Act and their regulations. Compliance with many of the SPCC provisions will require

considerable capital investment and time to implement. It is only fair to the industry that the final requirements are clearly established prior to their expected compliance period, and the affected industries' investment of capital and other resources.

Chairman Inhofe, AFIA thanks you again for your time and attention to these critical issues and for calling today's important hearing. Our mutual objective is to achieve a final regulation that adequately protects the environment, but is also practical for implementation by the US feed industry, a critical part of a strong and economical food system in this country.

AFIA appreciates the opportunity to offer recommendations as the agency moves forward in differentiating animal fats and vegetable oils from petroleum products in Spill Prevention, Control and Countermeasure regulation.

Sincerely,

Joel G. Newman

Joel G. Newman
President

AMERICAN FEED INDUSTRY ASSOCIATION

May 7, 1999

Superfund Docket
Docket Number SPCC-10P
Mail Code 5203G
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Dear Docket Clerk:

The American Feed Industry Assn. (AFIA) offers the following comments to the Advanced Notice of Proposed Rulemaking (ANPR) published in the April 8, 1999, *Federal Register*, Vol. 64, No. 67; *"Oil Pollution Prevention and Response; Non-Transportation-Related Facilities"*.

AFIA is the national trade association representing the manufacturers of more than 75% of the primary formula livestock and poultry feed sold annually in the U.S. The AFIA membership also includes pet food manufacturers, ingredient suppliers, animal drug makers, equipment manufacturers, and those who provide goods and services to the industry. AFIA represents more than 700 companies and 3,000 establishments in 50 states.

Introduction

AFIA applauds EPA's efforts to respond to Public Law 105-276 requiring the agency to issue regulations to comply with the Edible Oil Regulatory Reform Act by differentiating animal fats and vegetable oils (AF/VO) from all other oils. On behalf of member companies that handle, store or transport large quantities of AF/VO, and subject to Facility Response Plan (FRP) requirements, AFIA, a member of the AF/VO Coalition, has submitted comments to the EPA in response to the Notice of Proposed Rulemaking on FRP. On behalf of other member companies that handle, store or transport small quantities of AF/VO and subject to SPCC Plan requirements, AFIA submits these comments recommending alternate methodology for AF/VO facilities.

The 30-day ANPR notice and comment period did not provide adequate time for individual AFIA member companies to submit comments specific to their operations. Also, AFIA is aware of other industry groups who were unable to respond due to insufficient time. Realizing significant industry interest in improving SPCC Plan requirements, AFIA recommends the agency move forward with a Notice of Proposed Rulemaking to allow others to respond with recommendations for improvement.

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40 CFR 112, when written, was designed to safeguard the environment from spills of oils of any kind or form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged soil. Initially, owners of feed industry facilities were uncertain how to interpret the regulation relative to their facilities. Over time, however, feed millers and ingredient suppliers have implemented SPCC plans, and through inconsistent interpretation of the regulation, have instituted more safeguards than potential AF/VO spills appropriately deserve.

On Feb. 2, 1998, AFIA submitted comments to EPA's Proposed Rulemaking published in the Dec. 2, 1997 *Federal Register*, Vol. 62, No. 231; "Oil Pollution Prevention and Response; Non-Transportation Related Onshore and Offshore Facilities." A copy is attached. In summary, AFIA supported raising the threshold requiring preparation of a SPCC plan from 660 gallons to 1,320 gallons. Today, AFIA believes that threshold should be even higher. AFIA continues to support alternative SPCC Plan formats if all regulatory requirements are met and sequentially cross-referenced; elimination of certain proposed post-spill reporting information, and extending the SPCC plan review requirement from once every three years to once every five years.

However, AFIA disagrees with the agency's Dec. 2, 1997, Proposed Rule relative to record keeping of stormwater bypass events from diked areas around bulk storage tanks. AFIA believes EPA should allow this activity to be regulated under NPDES permits, but reporting and recording of bypasses should not be required if not required under NPDES.

Description of Feed Industry Facilities

Feed industry facilities subject to SPCC plan requirements generally receive and store small quantities (6,000-20,000 gallons) of AF/VO for nutritional inclusion into animal feed. Loading and transporting the material does not occur. Most shipments arrive via tank truck during normal business hours. Throughput can range from 6,000 gallons per day for large facilities, to 6,000 gallons per month for small facilities. Operations typically employ 10-45 workers, over one, two or three shifts per day. These facilities are typically located inland, in rural areas, where geographic location may associate them with small streams and ditches, not large rivers and lakes.

EPA defines the term "navigable waters" so broadly that nearly any body of water or continuous stream can be considered "navigable." Thus, many feed industry facilities fall within the scope of 40 CFR 112, not because of a potential threat to large, flowing bodies of water, but often due to a potential spill flowing from one channel or drainage ditch to another, and under extreme conditions, could eventually reach regulated waters.

The feed industry incorporates AF/VO into animal feed formations. Every ingredient going into the mixing of feed has either been approved by the federal Food & Drug Administration (FDA), and/or is generally recognized as safe ("GRAS") by the Association of American Feed Control Officials (AAFCO) and FDA. Nutritionists formulate animal rations based on what the animal needs for optimum nutrition.

The storage and mixing of these ingredients is regulated by FDA through Current Good Manufacturing Practices (CGMPs) [21 CFR 225-26]. A product can be deemed adulterated if the conditions of production are inferior to those prescribed by FDA. CGMPs require strict reconciliation of inventory and minimization of shrinkage -- an emphasis that automatically minimizes release to the environment.

The feed industry, SIC code 2048, is regulated by EPA's stormwater runoff regulations. Feed industry facilities already administer management and engineering controls for the reduction and prevention of pollutant loading in storm water. Pollution prevention plans detail spill prevention, clean up, housekeeping and maintenance programs to safeguard stormwater becoming loaded with any pollutants from the grounds of the facility.

Recommended SPCC Plan Guideline Modifications

EPA requests comments on ways to differentiate the protection requirements among the different classes of oils. AFIA, and its members' knowledge and experience from receiving, storing and handling AF/VO, supports the following recommendations for modifying 40 CFR 112. AFIA believes simple clarification in many areas is all that may be needed.

40 CFR 112.1, General applicability.

(d)(2)(ii)

On Dec. 2, 1997, EPA proposed to amend this paragraph exempting from regulation storage capacity, which is not buried, of 1,320 gallons or less provided no single container exceeds 660 gallons, to exempt total storage capacity up to 1,320 gallons. At the time, AFIA agreed with the proposal. However, due to the events leading to this rulemaking, AFIA believes different thresholds should be extended to feed industry facilities that receive, store and handle AF/VO.

It is difficult to determine how large an AF/VO threshold to establish, but clearly the threshold should be consistent with the lower risk associated with the spill of non-toxic, non-persistent and biodegradable agricultural products. In virtually all parts of the U.S., feed industry facilities must heat trace AF/VO storage tanks during all twelve months of the year to aid pumping and insure proper dispersion of the liquids when applied in the feed mixing process. AFIA experience suggests AF/VO would cool significantly during a spill event, particularly during winter months -- significantly reducing the distance and rate of flow as compared to petroleum-based products. By this comparison, AFIA believes AF/VO storage thresholds should be larger.

AFIA recommends EPA establish a threshold for regulation to an aggregate above-ground storage capacity greater than a truck-load quantity of 6,000 gallons, thereby eliminating the need for feed industry facilities receiving, storing and handling AF/VO less or equal to that capacity to prepare an SPCC Plan.

40 CFR 112.7, Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

(c)(1) Onshore facilities, (i) through (vii)

The regulation currently states, *"One of the following preventive systems or its equivalent should be used...*, and then lists a number of options, including sorbent materials. AFIA agrees with this list of preventive systems, based upon no order of preference. Feed industry facilities store an abundance of sorbent materials -- bulk and bag animal feed and feed ingredients -- which can easily and quickly be retrieved to absorb any quantity or type of spilled liquid. Capital expenditures for dikes, berms, retaining walls, curbing, culverting, gutters, weirs, booms or ponds may not be justified, and in many cases, be cost prohibitive, due to the infrequent, and in general, absence of reportable spill events in the feed industry.

AFIA brings this point to the attention of the agency, as it will be significant later in these comments.

(e)(1) Facility drainage (onshore), (iii) and (iv)
In these two paragraphs, the regulation states, *"Plant drainage systems from undiked areas should, if possible, flow into ponds, lagoons or catchment basins...,"* and *"...the final discharge of all in-plant ditches should be equipped with a diversion system...,"* respectively. This language runs counter to paragraphs ***(c)(1)(i) through (vii)*** as mentioned above, which prescribes sorbent materials as an acceptable preventive system. This inconsistency misleads, not only SPCC plan developers, but also state EPA officials by requiring more control than is necessary, in particular, commensurate with the type of feed industry facilities that receive, store and handle AF/VO.

AFIA recommends the agency either cite in paragraphs *(e)(1)(iii) and (iv)*, the list of acceptable preventive systems included in paragraphs *(c)(1)(i) through (vii)*, or state that sorbent materials is an acceptable preventive system for feed industry facilities receiving, storing and handling AF/VO.

(e)(2) Bulk storage tanks (onshore), (ii)
Similar to the last comment, language in this paragraph is confusing. It states, *"Dikes, containment curbs, and pits are commonly employed for this purpose, but they may not always be appropriate. An alternative system could consist of a complete drainage trench enclosure..."* This language runs counter to paragraphs ***(c)(1)(i) through (vii)***, which prescribes sorbent materials as an acceptable preventive system. This inconsistency misleads, not only SPCC plan developers, but also state EPA officials by requiring more control than is necessary, in particular, commensurate with the type of feed industry facilities that receive, store and handle AF/VO.

AFIA recommends the agency either cite in paragraph *(e)(2)(ii)*, the list of acceptable preventive systems included in paragraphs *(c)(1)(i) through (vii)*, or state that sorbent materials is an acceptable preventive system for feed industry facilities receiving, storing and handling AF/VO.

(e)(2) Bulk storage tanks (onshore), (iii)(D)
On Dec. 2, 1997, EPA proposed to amend this paragraph by allowing the recording of stormwater bypass events from diked areas to be recorded under a NPDES permit, thus eliminating duplication. AFIA, in part, disagrees. Reporting and recording of bypass events should not be required -- if not required under NPDES.

AFIA believes an AF/VO exception should be created for reporting and recording dike bypasses, such that reporting and recording only be required if required by NPDES stormwater permits. In all cases, discharge of contaminated stormwater is not permitted. Why then should the agency regulate stormwater bypass events if the stormwater is not contaminated? Why regulate uncontaminated stormwater from diked areas differently than rainwater that is naturally running off the property in other areas?

AFIA recommends EPA eliminate the regulation of uncontaminated stormwater bypasses under *(e)(2)(iii)(D)*, and regulate solely on the current requirements of stormwater permits. If stormwater permits do not require reporting and recording of dike bypass events, then EPA should not impose an added tier of regulation under SPCC plans.

(e)(2) Bulk storage tanks (onshore), (viii)
This paragraph states, *"Consideration should be given to providing one or more of the following devices:"*, and then lists suggested devices in paragraphs (A) through (E). Capital expenditures in this area may not be justified, and in many cases, cost prohibitive, due to the infrequent, and in general, absence of reportable spill events in the feed industry. Such devices may not be commensurate with the type of feed industry facilities that receive, store and handle AF/VO.

AFIA recommends another suggested device be listed. To prevent overfill during filling operations, a "written procedure" requiring a company employee, typically the receiving operator, to physically measure the available volume in the tank prior to commencing unloading operations, has proven to be a successful, effective, and adequate method. A written procedure for physical measuring prior to unloading should also be listed under paragraph *(e)(2)(viii)*.

(e)(4) Facility tank car and tank truck loading/unloading rack (onshore), (ii)
Similar to previous comments, language in this paragraph is confusing. It states, *"...a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment..."* This language runs counter to paragraphs ***(c)(1)(i) through (vii)***, which prescribes sorbent materials as an acceptable preventive system. This inconsistency misleads, not only SPCC plan developers, but also state EPA officials by requiring more control than is necessary, in particular, commensurate with the type of feed industry facilities that receive, store and handle AF/VO.

AFIA recommends the agency either cite in paragraph *(e)(4)(ii)*, the list of acceptable preventive systems included in paragraphs *(c)(1)(i) through (vii)*, or state that sorbent materials is an acceptable preventive system for feed industry facilities receiving, storing and handling AF/VO.

(e)(4) Facility tank car and tank truck loading/unloading rack (onshore), (iii)
This paragraph requires the use of *"or warning signs"* to prevent vehicular departure before complete disconnect of transfer lines. AFIA agrees safeguards are necessary, and warning signs are effective in situations involving tank car unloading. However, companies should not be required to expend capital resources to purchase and install warning signs that are not necessarily effective in situations involving tank truck unloading. Another, and just as effective, alternative method should be prescribed.

AFIA recommends the agency include in paragraph *(e)(4)(iii)*, another alternative allowing the development and implementation of *"written procedures"* requiring company personnel to inspect unloading operations prior to authorizing vehicle departure.

(e)(9) Security, (i)
This paragraph requires, *"...should be fully fenced, and entrance gates should be locked and or guarded..."* As AFIA described above, feed industry facilities are often located in rural areas. These facilities are generally not fenced, gated or guarded. Capital expenditures in this area may not be justified, and in many cases, cost prohibitive, due to the infrequent, and in general, absence of reportable spill events in the feed industry. This language, via interpretation by state EPA officials, requires more control than may be necessary, in particular, commensurate with the type of feed industry facilities that receive, store and handle AF/VO.

AFIA recommends the agency either delete paragraph *(e)(9)(i)*, or include an exemption for feed industry facilities receiving, storing and handling AF/VO.

(e)(9) Security, (iv)
This paragraph requires, *"...connections of oil pipelines should be securely capped or blank-flanged when not in service or standby service for an extended time."* As stated in AFIA's feed industry facility description above, some small operations infrequently receive shipments of AF/VO. State EPA officials may improperly interpret the time between receipts as "extended time," whereby requiring more control than is necessary, in particular, commensurate with the type of feed industry facilities that receive, store and handle AF/VO.

AFIA recommends the agency define the term, *"extended time"* to be defined as "out-of-service", meaning the pipeline is not in normal service nor ready for normal service, and is expected to remain unused for the foreseeable future.

(e)(9) Security, (v)
This paragraph requires, *"Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to: (A) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.) and ..."* As AFIA described above, feed industry facilities are often located in rural areas. These facilities may or may not have security lighting, especially due to infrequent traffic by non-operating personnel. Capital expenditures in this area may not be justified, and in many cases, cost prohibitive, due to the infrequent, and in general, absence of reportable spill events in the feed industry. This language, via interpretation by state EPA officials, may require more control than is necessary, in particular, commensurate with the type and location of feed industry facilities that receive, store and handle AF/VO.

AFIA recommends the agency either delete paragraph *(e)(9)(v)*, or include an exemption for feed industry facilities receiving, storing and handling AF/VO.

Conclusion

AFIA believes the above recommendations assist EPA in issuing regulations consistent with the Edible Oil Regulatory Reform Act by differentiating AF/VO from all other oils. Due to the nature and location of feed industry facilities receiving and storing AV/VO, and the corresponding reduced environmental risk, a larger regulatory threshold should be established. Throughout the regulation, *"sorbent materials"* must clearly and consistency be listed as an acceptable preventive system. The reporting and recording of diked bypass events should only be required if required by NPDES stormwater permits. Options or exclusions must be extended relative to safeguards preventing tank overfilling, use of warning signs, and facility fencing and lighting, due to, in general, absence of reportable spill events in the feed industry. And, the term, *"extended time,"* relating to capping or blank-flanging pipelines that are not in service, must be redefined to mean *"out-of-service for the foreseeable future."*

AFIA appreciates the opportunity to comment on *"Oil Pollution Prevention and Response; Non-Transportation-Related Facilities."* We are willing to meet with the agency to clarify any of AFIA's positions.

Sincerely,

Brian L. Bursiek
Director of Production
AFIA

Attachment

AFIA

AMERICAN FEED INDUSTRY ASSOCIATION

February 2, 1998

Superfund Docket #SPCC-7
Mail Code 5203G
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Docket Officer:

The American Feed Industry Assn. (AFIA) offers the following comments to the proposed rulemaking published in the Dec. 2, 1997, *Federal Register*, Vol. 62, No. 231; *"Oil Pollution Prevention and Response; Non-Transportation Related Onshore and Offshore Facilities"*.

AFIA is the national trade association for livestock, poultry and pet food manufacturers and ingredient suppliers. AFIA members represent more than 70% of the primary formula poultry and livestock feed sold annually in the U.S. AFIA's membership includes more than 700 companies and 3,000 individual establishments in all 50 states. Most of these firms are small businesses by federal definition.

Introduction

AFIA generally agrees with the proposal as written. The agency should raise the threshold requiring preparation of a SPCC Plan from 660 gallons to 1,320 gallons, and allow alternate SPCC Plan formats if all regulatory requirements are met and sequentially cross-referenced. AFIA agrees EPA should eliminate from the rule certain proposed post-spill reporting information, and extend the SPCC Plan review requirement from once every three years to once every five years.

AFIA's primary disagreement with the proposed rule centers on record keeping of stormwater bypass events from diked areas around bulk storage tanks. AFIA believes EPA should allow this activity to be regulated under NPDES permits, but reporting and recording of bypass should not be required if not required under NPDES.

Stormwater Bypass Events

EPA proposes to amend 112.7(e)(2)(iii)(D), which authorizes the drainage of rainwater from diked areas into a storm drain or an effluent discharge that empties into an open water course, lake, or pond, and bypasses the in-plant treatment system. The change would allow the recording of these stormwater bypass events to be recorded under a NPDES permit, thus eliminating duplication.

AFIA believes an exception should be created for reporting and recording dike bypasses of 112.7(e)(2)(iii)(D) relating to animal and vegetable oil storage, requiring such reporting and recording only if required by NPDES stormwater permits. In all cases, discharge of contaminated stormwater is not permitted. Why then should the agency regulate stormwater bypass events if the stormwater is not contaminated? Why regulate uncontaminated stormwater from diked areas differently than rainwater that is simply running off the property in other areas? EPA should eliminate the regulation of uncontaminated stormwater bypasses under 112.7(e)(2)(iii)(D), and regulate solely on the current requirements of storm water permits. If storm water permits do not require reporting and recording of dike bypass events, then EPA should not require an added tier of regulation under SPCC Plans.

The Edible Oil Regulatory Reform Act

Pursuant to Public Law 104-55, The Edible Oil Regulatory Reform Act, enacted Nov. 20, 1995, most federal agencies, including EPA, must, in the issuance or enforcement of any regulation or the establishment of any interpretation or guideline relating to the transportation, storage, discharge, release, emission, or disposal of a fat, oil, or grease, consider differentiating between and establishing separate classes for animal fat and oils and greases, fish and marine mammal oils, and oils of vegetable origin. Clearly, Congress intends for federal agencies to differentiate between petroleum oils and animal fats and vegetable oils, and to regulate in a manner consistent with the lower risk associated with the spill of non-toxic, non-persistent and biodegradable agricultural products. Regulatory relief is needed for facilities, like feed mills, receiving, storing, and shipping animal fats and vegetable oils.

It is important for EPA to recognize animal fats and vegetable oil spills can not reasonably be expected to cause substantial harm to the environment. Documented spill records indicate that animal fats and vegetable oils account for only 0.4 percent of the oil spill incidents in U.S. waters, and only 0.02 percent of those involved releases of over 1,000 gallons. EPA must agree the animal fats and vegetable oils industry not only has an excellent safety record, but is committed to prevention of oil spills and protecting the environment.

Animal fats and vegetable oils are not toxic or persistent in the environment as are petroleum oils. Rather, they are essential to good animal and wildlife nutrition, and are readily biodegradable. Regulatory oversight is already in place for the storage, handling and use of animal fats and vegetable oils. The feed industry incorporates animal fats and vegetable oils into animal feed formulations. Every ingredient going into the mixing of feed has either been approved by the Food & Drug Administration (FDA), and/or is generally recognized as safe ("GRAS"). Nutritionists formulate animal rations based on what the animal needs for optimum nutrition.

The storage and mixing of these ingredients is regulated by FDA through Current Good Manufacturing Practices (CGMPs)[21 CFR 225-26]. A product can be deemed adulterated if the conditions of production are inferior to those prescribed by FDA. CGMPs require strict reconciliation of inventory and minimization of shrinkage -- an emphasis that automatically minimizes release to the environment.

As mentioned earlier, the feed industry, SIC code 2048, is regulated by EPA's stormwater runoff regulation. Feed industry facilities already administer management and engineering controls for the reduction and prevention of pollutant loading in storm water. Pollution prevention plans detail spill

prevention, clean up, housekeeping and maintenance programs to safeguard stormwater becoming loaded with any pollutants from the grounds of the facility.

Conclusion

Due to current FDA and EPA oversight, the agency must find reason to create an exception for reporting and recording dike bypasses under 112.7(e)(2)(iii)(D) as relates to animal and vegetable oil storage -- requiring reporting and recording only if required by NPDES stormwater permits. Clearly, alternative and different response planning strategies are merited for these situations. Providing a separate category for animal fats and vegetable oils and recognizing their distinct properties is fully consistent with EPA's authority under the OPA, and with OPA's goal of ensuring an effective and appropriate response to discharge of oils.

AFIA appreciates the opportunity to comment on Oil Pollution Prevention and Response; Non-Transportation Related Onshore and Offshore Facilities. We are willing to meet with the agency to clarify any of AFIA's positions.

Sincerely,

Brian L. Bursiek
Director, Feed Production
AFIA

Statement of
The American Society of Civil Engineers
On the
Environmental Protection Agency's
Spill Prevention Control and Countermeasure Program
Before the
Committee on Environment and Public Works
U.S. Senate
December 14, 2005

Mr. Chairman and Members of the Committee:

The American Society of Civil Engineers (ASCE)* is pleased to offer its views to the Committee on the Environmental Protection Agency's Spill Prevention, Control, and Countermeasure (SPCC) Program regulation that was announced on December 1, 2005.

ISSUE PRESENTED BY THE SPCC AMENDMENTS

Whether the Environmental Protection Agency (EPA) should promulgate a notice of proposed rulemaking that would revise its Spill Prevention, Control, and Countermeasure (SPCC) plan requirements for aboveground storage tanks to reduce the regulatory burden for certain facilities. The rule as proposed would allow owners of facilities that store less than 10,000 gallons of oil (and meet other qualifying criteria) to self-certify their SPCC plans in place of a mandatory review and certification by a Professional Engineer required by the present SPCC regulations, 40 C.F.R. 112.1 *et seq.*[1]

ASCE STATEMENT

ASCE believes the policy change to allowing facility owners to certify that they are in compliance with the SPCC plan is potentially harmful. It would exempt more than one-half of the nation's estimated 618,000 facilities with aboveground storage tanks currently covered by the Agency's 32-year-old engineering certification requirement.

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* ASCE, founded in 1852, is the country's oldest national civil engineering organization. It represents more than 139,000 civil engineers in private practice, government, industry, and academia who are dedicated to the advancement of the science and profession of civil engineering. ASCE is a 501(c) (3) non-profit educational and professional society.

- The plan to allow owners, who have had more than 30 years to adjust to the PE certification program, to verify for themselves that their facility complies with the SPCC rules is particularly ill advised. Typically these facility owners are not technically competent enough to make the complex calculations necessary to certify compliance with the SPCC program requirements.

- If adopted, the rule would continue the recent pattern by the Agency of weakening environmental protections by removing from several regulations the need for a PE certification in the name of "burden reduction" on U.S. industry.

- A policy of allowing relatively small oil-storage facilities to self-certify their compliance would not protect human health and the environment from toxic spills that might occur at the facilities.

- The PE certification revisions would undermine the national spill prevention, control, and countermeasure program and create confusion within the industry through a patchwork of federal and state programs with inconsistent or conflicting standards.

In sum, the proposed SPCC amendments could substantially weaken the protection against a significant threat to human health and the environment, and we strongly encourage the Agency to withdraw the NPRM for the SPCC.

BACKGROUND

The EPA's Spill Prevention, Control and Countermeasures Program dates from January 1974.[2] Under the Clean Water Act, 33 U.S.C. 1251 *et seq.*, and the Oil Pollution Act of 1990, 33 U.S.C. 2701 *et seq.*, EPA is responsible for protecting the nation's waters from the adverse effects of oil spills.

The SPCC regulations implement section 311(j) of the Clean Water Act and are designed to prevent discharges of oil from facilities and to contain any discharges that do occur. Currently, the rules apply to "onshore, non-transportation-related facilities" that could reasonably be expected to discharge oil into navigable waters, when these facilities have (1) an aboveground oil storage capacity of more than 660 gallons in a single container; (2) a total aboveground oil storage capacity of more than 1,320 gallons in multiple containers; or (3) a total underground oil storage capacity of more than 42,000 gallons.

The original SPCC regulations were designed to

> prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management

> authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act).[3]

The regulations establish requirements for the preparation and implementation of Spill Prevention, Control, and Countermeasure (SPCC) plans. SPCC plans are designed to complement existing laws, regulations, rules, standards, policies, and procedures relating to safety standards, fire prevention, and pollution prevention rules.[4]

> The purpose of an SPCC Plan is to form a comprehensive Federal-State spill prevention program that minimizes the potential for discharges. The SPCC Plan must address all relevant spill prevention, control, and countermeasures necessary at the specific facility. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State, or local laws.[5]

A licensed Professional Engineer must review and certify the SPCC plan on a one-time basis for it to be effective.[6] This requirement has been in effect since the initial SPCC regulation took effect in January 1974.

In 2002, EPA issued comprehensive revisions to its SPCC regulations.[7] The revised regulations apply to owners or operators of non-transportation facilities that store or use oil such as electrical substations, facilities containing transformers and certain hydraulic or manufacturing facilities.

These non-storage systems do not necessarily have to be equipped with secondary containment so long as they have diversionary structures to prevent discharges of oil from reaching navigable waters. The geographic scope of the rule was extended from facilities that could discharge oil to navigable waters to facilities that could have oil discharges to shorelines and offshore waters.

In addition, the regulatory threshold for the SPCC rule was raised to facilities that have 1,320 gallons of aboveground storage capacity. The old rule also applied to facilities that had individual containers with capacities of at least 660 gallons. The revised rule contains a *de minimis* exemption so that only containers with a capacity at least 55 gallons or more are counted when calculating the aboveground storage capacity.

Facilities with underground storage of at least 42,000 gallons are also subject to the SPCC rules. Underground storage tanks regulated under a state or federal program under the Resource Conservation and Recovery Act (RCRA) or that have been permanently closed in accordance with the RCRA tank regulations are not counted when calculating the underground storage capacity of the facility to determine SPCC regulatory threshold, however.[8] A facility or part of a facility that is used exclusively for wastewater treatment is exempt from the SPCC regulation.[9]

Now the 2002 standards are being significantly revised. To qualify for the proposed certification exemption, the facility must have (1) an aggregate facility oil storage capacity of 10,000 gallons or less; and (2) had no discharges … during the 10 years prior

to self-certification or since becoming subject to the SPCC requirements if less than 10 years. Facilities that have been subject to SPCC for less than 10 years, including new facilities, would need to demonstrate no discharges only for the period of time they have been subject to the SPCC rule. Self-certified plans would not be allowed to include "environmentally equivalent" alternatives to required plan elements or to claim impracticability with respect to any secondary containment requirements.[10]

> EPA estimates that 618,000 facilities are currently regulated under the SPCC rule. Oil production facilities (28 percent), farms (25 percent) and electric utility plants (8 percent) account for most of the SPCC-regulated facilities. ... The Agency proposal ... will exempt from the 2002 regulations a total of 322,000 facilities storing between 1,320 gallons and 10,000 gallons of oil in containers of 55 gallons or more.[11]

After numerous delays, the 2002 regulations are scheduled to take effect on February 17, 2006, for facilities operating before August 16, 2002. Those facilities must implement their SPCC plans by August 18, 2006. Facilities that begin operating between August 2002 and August 2006 must implement their plans by August 2006, and facilities that begin operating after August 16, 2006, must prepare and carry out their SPCC plans before starting operations.[12]

ARGUMENT

I. The plan to allow owners to certify for themselves that their facility complies with the SPCC rules is particularly ill advised. Typically facility owners are not technically competent enough to make the complex calculations necessary to comply with the SPCC program requirements.

The proposal to permit facility owners to self-certify their compliance with the SPCC rules is contrary to good public policy. The inherent conflict of interest involved in an owner's certifying his conformity with the rules is obvious. More importantly, a facility owner is unlikely to possess the education, training. and technical qualifications necessary to determine whether the facility is in full compliance. The certification of a Professional Engineer (PE) is absolutely necessary to guarantee conformity with the highly complex regulatory requirements of the SPCC.

Professional Engineers are trained in the application of a variety of scientific disciplines of which knowledge is essential to the successful certification and safe operation of oil-storage facilities. Among the critical skills required to draft an SPCC certification are a knowledge of modeling to study geo-environmental problems involving pollutant migration; hydrodynamic pressures; seismic forces and design standards; the long-term migration of nonaqueous-phase liquids in soils; the use of secondary containment materials; groundwater flow; ecological risk assessments; and other vitally important areas of professional knowledge.

Engineers apply the theories and principles of science and mathematics to research and develop economical solutions to technical problems. Engineers design, plan, and supervise the construction of buildings, highways, and transit systems. They develop and implement improved ways to extract, process, and use raw materials, such as petroleum and natural gas. They develop new materials that both improve the performance of products and take advantage of advances in technology. They analyze the impact of the products they develop or the systems they design on the environment and people using them. Engineering knowledge is applied to improving many things, including the quality of health care, the safety of food products, and the efficient operation of financial systems.

Civil engineers design and supervise the construction of roads, buildings, airports, tunnels, dams, bridges, and water supply and sewage systems. Civil engineering, considered one of the oldest engineering disciplines, encompasses many specialties. The major specialties within civil engineering are structural, water resources, environmental, construction, transportation, and geotechnical engineering.

A bachelor's degree in engineering is required for almost all entry-level engineering jobs. College graduates with a degree in a physical science or mathematics occasionally may qualify for some engineering jobs, especially in specialties in high demand. Most engineering degrees are granted in electrical, electronics, mechanical, or civil engineering. Engineers trained in one branch may work in related branches, however.

Most engineering programs involve a concentration of study in an engineering specialty, along with courses in both mathematics and science. Most programs include a design course, sometimes accompanied by a computer or laboratory class or both. In addition to the standard engineering degree, many colleges offer two- or four-year degree programs in engineering technology. These programs, which usually include various hands-on laboratory classes that focus on current issues, prepare students for practical design and production work, rather than for jobs which require more theoretical and scientific knowledge.

Graduates of four-year technology programs may get jobs similar to those obtained by graduates with a bachelor's degree in engineering. Engineering technology graduates, however, are not qualified to register as professional engineers under the same terms as graduates with degrees in engineering. Some employers regard technology program graduates as having skills between those of a technician and an engineer.

About 330 colleges and universities offer bachelor's degree programs in engineering that are accredited by the Accreditation Board for Engineering and Technology (ABET), and about 250 colleges offer accredited bachelor's degree programs in engineering technology. ABET accreditation is based on an examination of an engineering program's student achievement, program improvement, faculty, curricular content, facilities, and institutional commitment.

Bachelor's degree programs in engineering typically are designed to last four years, but many students find that it takes between four and five years to complete their studies. In a typical four-year college curriculum, the first two years are spent studying mathematics, basic sciences, introductory engineering, humanities, and social sciences. In the last two years, most courses are in engineering, usually with a concentration in one branch.

In addition, a few engineering schools have arrangements whereby a student spends three years in a liberal arts college studying pre-engineering subjects and two years in an engineering school studying core subjects, and then receives a bachelor's degree from each school. Some colleges and universities offer five-year master's degree programs. Some five- or even six-year cooperative plans combine classroom study and practical work, permitting students to gain valuable experience and finance part of their education.

All 50 states and the District of Columbia require licensure for engineers who offer their services directly to the public. Engineers who are licensed are called Professional Engineers (PE). This licensure generally requires a degree from an ABET-accredited engineering program, four years of relevant work experience, and successful completion of a state examination.

The licensure directive is no mere formality. Forty-eight states make it a felony to practice engineering without a license or to offer to practice engineering without a license. Indeed, in 38 states, it is even a felony to use the term "engineer" to describe one's qualifications without a PE license.

Recent graduates can start the licensing process by taking the examination in two stages. The initial Fundamentals of Engineering (FE) examination can be taken upon graduation. Engineers who pass this examination commonly are called Engineers in Training (EIT) or Engineer Interns (EI). The EIT certification usually is valid for 10 years. After acquiring suitable work experience, EITs can take the second examination, the Principles and Practice of Engineering Exam. Several states have imposed mandatory continuing education requirements for relicensure. Most states recognize licensure from other states. Many civil, electrical, mechanical, and chemical engineers are licensed as PEs.

Absent the training and experience described above, facility owners should not be allowed to certify on their own that their facilities comply with the SPCC rules. Any effort to weaken the current requirements to permit someone other than a licensed professional engineer to execute essential engineering decisions could have the gravest possible consequences – including the possible failure of containment buildings, oil and petroleum tanks, and ancillary structures necessary to the environmentally safe handling of these materials.

II. If adopted, the rule would continue the recent pattern by the Agency of weakening environmental protections by removing from several regulations the need for a PE certification in the name of "burden reduction" on U.S. industry.

Since 2002, the Agency has attempted to downgrade the professional qualifications required to implement regulations under the Resource Conservation and Recovery Act (RCRA) and the Brownfields Revitalization and Environmental Restoration Act.

On January 17, 2002, EPA proposed to amend the current regulations under RCRA in order "to reduce the recordkeeping and reporting burden ... RCRA imposes on the states, the public, and the regulated community."[13]

In 15 specific instances, the Agency proposed to allow owners and operators of hazardous-waste treatment, storage and disposal facilities (TSDFs) to hire "certified hazardous materials managers" to execute a variety of intricate and complicated engineering designs and calculations and to exercise judicious reasoning. All of these tasks now properly require the services of a professional engineer.

In a more recent—and far more egregious example—the Agency adopted a final regulation under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) that would allow, in relevant part, high school graduates lacking a baccalaureate degree from an accredited college or university to conduct "all appropriate inquiries" at brownfields developments in order for innocent landowners to qualify for a defense from liability.[14]

Specifically, the final brownfields rule will allow persons without a baccalaureate degree to be defined as "environmental professionals" authorized to carry out preliminary site assessments under the all appropriate inquiry requirement of the Act. In its rationale, the Agency said a condition to require college graduates (with or without training as engineers or scientists) would be "too limiting" on Americans who want to perform these congressionally mandated environmental site assessments.

> We agree with those commenters who asserted that individuals with a significant number of years of experience in performing environmental site assessments, or all appropriate inquiries investigations, should qualify as environmental professionals for the purpose of conducting all appropriate inquiries, *even in cases where such individuals do not have a college degree.*[15]

Indeed, nothing in the final rule limits the term "environmental professionals" to high school graduates. Anyone with less than a baccalaureate degree would qualify in the right circumstances, *possibly even extending the definition to some technicians with less than a high school education.*

In short, the willful "dumbing down" of the professional requirements necessary to perform highly technical jobs at environmentally sensitive facilities is well under way at the Agency—and likely to continue. It is not clear where the process will lead, but it seems plain from the evidence that the only winners will be the facility owners who will be free to hire high school dropouts—or themselves—to determine (quite cheaply) how to comply with federal environmental standards.

Moreover, it is quite likely that the campaign to narrow the range of environmental protections through an attenuation of industry's requirements to assure compliance with the rules has at least as much to do with the Agency's budget-driven priorities as it does with the presumed concern over the regulatory burdens to industry. At a stakeholders' meeting in March 2004, an EPA official candidly acknowledged that the Agency lacks the budget and staff to regulate the large number of oil-storage facilities.

> The [Agency] Oil Program's resources are limited. EPA deals with limited resources in the way [it carries out] the program. Within the current framework, it is possible for the [A]gency to prioritize its implementation activities. EPA emphasizes that the Oil Program regulates a very large universe of facilities and that [it] must prioritize [its] efforts in order to be effective.[16]

A government agency's failure to obtain adequate funding and staff to manage a critical environmental program—even in the face of an indifferent White House and Congress—is not a principled reason to weaken the program by scaling back on the program's reach. Those who are charged with the security of the nation's water supply may not unilaterally diminish the scope of a key plan intended to maintain the necessary safety measures. EPA always must make the case for a stronger (not a weaker) SPCC program.

III. A policy of allowing relatively small oil-storage facilities to self-certify their compliance would not protect human health and the environment from toxic spills that might occur at the facilities.

The self-certification requirement will not reduce the likelihood of releases from small oil-storage facilities. Certainly, facilities storing less than 10,000 gallons of oil overall cannot guarantee that they will not release toxic discharges into U.S. waters. EPA itself acknowledges that oil spills from facilities containing less than 10,000 gallons are at least as serious—and perhaps more so—than releases from mega-facilities.

In 2002, the Agency reported: "Real-world examples of oil spills demonstrate that spills of petroleum oils and vegetable oils and animal fats do occur and produce deleterious environmental effects. In some cases, small spills of vegetable oils can produce more environmental harm than numerous large spills of petroleum oils."[17]

Earlier, EPA explained the dangers of even minute spills. "[A] small spill can have a serious impact. A single pint of oil released into the water can cover one acre of water surface area and can seriously damage an aquatic habitat. A spill of only one gallon of oil can contaminate a million gallons of water."[18]

IV. The PE certification revisions would undermine the national spill prevention, control, and countermeasure program and create confusion

within the industry through a patchwork of federal and state programs with inconsistent or conflicting standards.

Unlike other provisions of the Clean Water Act, states are not delegated by EPA to enforce federal SPCC standards; the full onus of the enforcement and administration of the federal program is upon the Agency in all 50 states. Nevertheless, 31 states have adopted extensive spill prevention, control, and countermeasure regulations similar to the federal program.

The states with SPCC programs established under their own laws are Alabama, Arizona, California, Colorado, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

The state programs are as stringent as the federal program; some states have even stricter rules. Oklahoma, for one, has an SPCC engineering certification requirement that is more rigorous than the Agency's own one-time documentation rule. "Owners or operators of aboveground storage tanks must have an approved Spill Prevention Control and Countermeasure Plan (SPCC Plan) that is updated *every five years* and signed by a registered professional engineer."[19]

CONCLUSION

The certification policy change in the notice of proposed rulemaking of December 12, 2005, is potentially harmful. It would exempt more than one-half of the nation's current aboveground storage tank facilities to be exempted from the current safety standards in important respects.

It would allow facility owners with little or no appropriate training and experience for all intents and purposes to serve as their own engineers, effectively tolerating the practice of engineering by unlicensed individuals *in violation of state law in every state* in the United States. These owners, well-meaning or otherwise, are almost certainly unable to make the complex engineering, chemical, and scientific calculations necessary to ensure the public health, safety, and welfare.

The certification revisions would undermine the national spill prevention, control, and countermeasure program and create confusion within the industry through a patchwork of federal and state programs with inconsistent or conflicting standards.

The proposed SPCC amendments could pose a significant threat to human health and the environment, and we strongly encourage the Agency to withdraw the December 12 NPRM for the SPCC.

NOTES

[1] Oil Pollution Prevention: Spill Prevention, Control, and Countermeasure Plan Requirements – Amendments, 70 Fed. Reg. 73,524 (Envtl Protection Agency Dec. 12, 2005) (notice of proposed rulemaking) [hereinafter *2005* NPRM}.

In addition, the rule would provide an alternative to the existing secondary containment requirement, without requiring a determination of impracticability, for facilities that have certain types of oil-filled equipment; it would provide an exemption for motive power containers; and it would relieve airport mobile refuelers from the specifically sized secondary containment requirements for bulk storage containers. Finally, the Agency is proposing to remove and reserve certain SPCC requirements for animal fats and vegetable oils and suggesting a separate extension of the compliance dates for farms.

[2] Oil Pollution Prevention: Non-Transportation Related Onshore and Offshore Facilities, 38 Fed. Reg. 34,164 (Envtl Protection Agency Dec. 11, 1973) (final rule).

[3] 40 C.F.R. § 112.1(a) (1) (2005).

[4] *Id.* at 112.1 (e).

[5] *Id.*

[6] *Id.* at 112.3(d).

[7] Oil Pollution Prevention and Response: Non-Transportation-Related Onshore and Offshore Facilities, 67 Fed. Reg. 47,042 (Envtl Protection Agency July 17, 2002) (final rule) [hereinafter *2002 Final Rule*].

[8] According to the Agency, about 680,000 *underground* storage tank systems (USTs) nationwide store petroleum or hazardous substances that can harm the environment and human health if the USTs release their stored contents. Among tanks *not* regulated as USTs are farm and residential tanks of 1,100 gallons or less capacity holding motor fuel used for noncommercial purposes and tanks of 110 gallons or less capacity. The underground storage tank regulatory program may be delegated to the states by EPA as long as the state standards are at least as stringent as the federal requirements for underground tanks. *See* 40 CFR § 281.10 (2005).

[9] It should be noted that the definition of oil under the 2002 revised rule is not limited to petroleum products. Facilities that store mineral oil, vegetable oil, synthetic oil, animal fats or grease, or seed oil may be subject to the SPCC rules if they meet the regulatory thresholds. A facility must maintain a copy of the SPCC Plan at the facility if it is attended at least four hours a day (versus the previous standard of "attended at least 8 hours a day"). *See* Lawrence P. Schnapf, *Due Diligence in Corporate Transactions*, 499 PLI/Real 175, *194 (2003).

[10] 2005 NPRM, *supra* note 1, at 73,528.

[11] *Id.*, *supra* note 1, at 73,544. The 322,000 facilities represent 52 percent of the 618,000 facilities that currently store more than 1,320 gallons in aboveground storage tanks.

[12] In a separate notice, EPA is planning to postpone the SPCC compliance date for the new, weaker standards for existing facilities and facilities that began operating after August 2002 from August 18, 2006, to October 31, 2007. Oil Pollution Prevention: Non-Transportation Related Onshore Facilities, 70 Fed. Reg. 73,518 (Envtl Protection Agency Dec. 12, 2005) (notice of proposed rulemaking).

[13] Resource Conservation and Recovery Act Burden Reduction Initiative, 67 Fed. Reg. 2518 (Envtl Protection Agency Jan. 17, 2002) (proposed rule). The final rule is undergoing extended review at the Office of Management and Budget. It may be published as early as January 2006.

[14] Standards and Practices for All Appropriate Inquiries, 70 Fed. Reg. 66,070 (Envtl Protection Agency Nov. 1, 2005) (final rule).

[15] *Id.* at 66,079 (emphasis added).

[16] Notes of the Spill Prevention, Control and Countermeasure Stakeholder Meeting, March 31, 2004, 2 *at* http://www.epa.gov/oilspill/pdfs/SPCCStakeholderMeetingSummary.pdf (last updated Nov. 7, 2005) (last visited Dec. 12, 2005).

[17] 2002 Final Rule, 67 Fed. Reg. at *47,055-47,056.

[18] Source Water Practices Protection Bulletin 2, EPA 916-F-01-022 (Envtl Protection Agency July 2001).

[19] OKLA. ADMIN. CODE § 165:15-3-22 (2005) (emphasis added).

PROPOSED REFORMS TO SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) REGULATIONS

TECHNICAL MEMORANDUM

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Work Assignment No. 04-5A

A. BACKGROUND

Under a December 12, 2005 proposed SPCC rule (70 Fed. Reg. 73524, December 12, 2005), EPA is allowing small facilities that meet the new "qualified facility" criteria to opt out of the requirement that their SPCC plans are certified by a professional engineer (PE). The EPA defines a "qualified facility" as a facility that has a total oil storage capacity of 10,000 gallons or less and a facility that has not had a spill in the last ten years according to the definition found in 112.1(b).[1] The EPA proposal is in contrast to a proposal initially advanced by a coalition of small business trade associations and the U.S. Small Business Administration (SBA)'s Office of Advocacy in 2004.[2]

Under the Office of Advocacy (Advocacy) approach, currently regulated SPCC facilities would be required to meet all substantive SPCC requirements (e.g., secondary containment), but the formal written SPCC plan requirement would be eliminated or revised for facilities with smaller oil storage capacities. The Advocacy approach divides the regulatory community into three categories (tiers) based on each facility's oil storage capacity. For facilities with capacities between 1,321 and 5,000 gallons (Tier I), EPA would no longer require an SPCC plan. All other facilities (Tier II representing facilities with 5,001 to 10,000 gallons capacity, and Tier III representing facilities with greater than 10,000 gallons capacity) would be required to prepare an SPCC plan. However, Tier II facilities would no longer be required to have their plans certified by a PE. Table 1 presents a comparison of EPA's proposal with the proposal advanced by Advocacy.

Table 1. Comparison of Advocacy and EPA SPCC Plan Requirement Proposals

Storage Capacity (gallons)	Advocacy	EPA
1,321 to 5,000	No SPCC plan	SPCC plan without PE certification
5,001 to 10,000	SPCC plan without PE certification	
Greater than 10,000	SPCC plan with PE certification	

B. ESTIMATION OF ANNUAL SPILL VOLUMES BY TIER CATEGORY

In April 1995, EPA conducted a national survey of oil storage facilities potentially subject to the SPCC regulations. The purpose of the survey was to answer five specific questions: (1) How many facilities are regulated by EPA's SPCC program; (2) What types of facilities does the SPCC program regulate; (3) What do these facilities look like;

[1] Or has never had a spill when a facility has been in operation for less than ten years.

[2] Letter from Douglas Greenhaus, National Automobile Dealers Association *et al.*, to David Evans, U.S. Environmental Protection Agency, "Re: Small Facility Alternative to Professional Engineer Certification," January 20, 2004; and Letter from Thomas M. Sullivan, and Kevin Bromberg, U.S. Small Business Administration, to Thomas P. Dunne, U.S. Environmental Protection Agency, "RE: Spill Prevention, Control and Countermeasure (SPCC) Rule; 67 Fed. Reg. 47042 (July 17, 2002); Recommendation for Adoption of Interim Final Rule," June 10, 2004.

(4) Which facilities pose the greatest oil spill risk; and (5) How effective is the SPCC program in reducing oil spill risk?

The EPA calculated average facility oil spill volumes by storage capacity range from the survey responses that were received (EPA, 1996). For example, the survey results indicated that the average facility with a storage capacity between 1,500 and 2,000 gallons discharged approximately 0.59 gallons of oil for the year surveyed.[3] However, documentation of the survey results does not provide the number of facilities surveyed in each storage capacity range. This omission precluded Pechan from calculating weighted average per facility spill volumes for the more aggregate storage capacity ranges that pertain to Tier I, Tier II, and Tier III facilities. Therefore, Pechan calculated the simple average of the per facility spill volumes for the storage capacity ranges of interest for each Tier. For example, Pechan computed the Tier I facility average spill volume (1.6 gallons) by averaging the following per facility spill volumes reported by EPA:

- 1,500 to 2,000 gal (0.59 gallons);
- 2,000 to 2,500 gal (0.85 gallons);
- 2,500 to 3,000 gal (0.09 gallons);
- 3,000 to 4,000 gal (6.03 gallons); and
- 4,000 to 5,000 gal (0.63 gallons).[4]

Table 2 reports the Tier level estimates of average per facility spill volumes calculated from actual spill data compiled from the EPA survey. Next, Pechan obtained estimates of the total number of SPCC regulated facilities by Tier from EPA's regulatory analysis for the proposed SPCC rule amendments (EPA, 2005). These facility counts are also displayed in Table 2. Finally, Pechan estimated the total volume of spills associated with each Tier by multiplying the average per facility spill volumes by the facility counts. The estimated total spill volume by Tier is also reported in Table 2.

Table 2. Number of Facilities and Total Spill Volume Estimates by Tier Category

	Tier I (1,321 to 5,000 gallons)	Tier II (5,001 to 10,000 gallons)	Tier III (Greater than 10,000 gallons)
Per Facility Spill Volume (gallons)	1.6	27.3	2,372
Number of Facilities[5]	235,656	86,018	296,559
Total Spill Volume (gallons)	383,334	2,350,298	112,485,560

[3] The EPA survey results are not well documented, but appear to include both facilities with spills and facilities without spills.

[4] Because available data indicate that there are considerably more facilities with smaller storage capacities than facilities with larger capacities, it is anticipated that the simple average calculation will overstate the Tier level spill volume estimates because greater spill volumes are generally associated with higher storage capacity facilities. In its own analysis of the survey, EPA noted that "facilities with larger storage capacity are likely to have a greater number of oil spills, larger volumes of oil spilled, and greater cleanup costs" (EPA, 1996).

[5] Computed from estimates reported in exhibit 3-1 of EPA, 2005.

Table 3 reports the percentage of facilities and percentage of total volume of oil spilled for facilities in each of the three Tiers identified in Advocacy's proposal. This table indicates the fact that although Tier I facilities are numerous, they account for only a very small percentage (0.3) of the total volume of oil spilled by SPCC regulated facilities. While accounting for nearly 14 percent of all SPCC regulated facilities, Tier II facilities account for only 2 percent of total oil spilled.[6]

Table 3. Comparison of Facility and Spill Volume Estimates by Storage Capacity

	Tier I (1,321 to 5,000 gallons)	Tier II (5,001 to 10,000 gallons)	Tier III (Greater than 10,000 gallons)
% of Facilities	38.1	13.9	48.0
% of Spill Volume	0.3	2.0	97.6

C. ESTIMATION OF SPCC PLAN COST SAVINGS FOR ADVOCACY AND EPA PROPOSALS

In order to evaluate the potential cost savings of the Advocacy qualified facility proposal relative to EPA's proposal, Pechan first compiled estimates representing the total cost for both a new SPCC plan and an amended SPCC plan, as well as estimates for only the PE certification portion of these total costs. Table 4 displays each of these costs estimates and identifies the source of each estimate.

Table 4. Cost Estimates for New and Amended SPCC Plans

	PE Certification	Total
New Plan	$2,000 (from EPA, 2005)	$3,000 (from JFA, 2004)[7]
Amended Plan	$750 (from EPA, 2005)	$1,125 (computed from EPA's PE certification cost and total plan to PE certification plan cost proportion for new plans)

[6] Note that the JFA, 2004 report estimated the percentage of total spill volume for facilities between 1,321 and 10,000 gallons as less than 0.2 percent. The values reported herein reflect estimates derived using recently released facility counts by storage capacity category (from EPA, 2005).

[7] JFA reports that small facility plan costs range between $2,500 and $3,500, although the source for these estimates is not documented. Additional support for the $3,000 estimate is provided by the fact that $3,100 was the median of the total plan cost estimates provided by commenters to EPA's Notices of Data Availability (69 Fed. Reg. 56182, 2004 and 69 Fed. Reg. 56184, 2004).

Because EPA has acknowledged the existence of noncompliance with current SPCC requirements,[8] and because an extensive survey conducted by the U.S. Department of Agriculture (USDA) indicated that approximately 60 percent of farmers were not aware of SPCC requirements,[9] Pechan developed cost savings estimates for the current noncompliant facilities. Pechan also prepared amended plan cost savings estimates for a ten year period for each proposal. These estimates were based on an assumption that 50 percent of all SPCC regulated facilities would require one plan amendment over a 10 year period.[10]

To estimate the number of facilities that are currently subject to SPCC requirements, but do not have an SPCC plan, Pechan divided the Tier I and Tier II facility counts into facilities in the farm sector (117,500 in Tier I and 17,204 in Tier II) and facilities not in the farm sector (117,500 in Tier I and 68,814 in Tier II) based on percentages calculated from facility counts in EPA's regulatory analysis (EPA, 2005).[11] Next, Pechan assumed that 60 percent of Tier I and II farm facilities do not have an SPCC plan based on the results of the USDA survey described above.[12] In lieu of information on the noncompliance percentage for nonfarm facilities, Pechan assumed noncompliance at half the rate estimated for the farm sector (i.e., 30 percent).

[8] The EPA agrees that noncompliance exists, but does not estimate the noncompliance rate: "EPA does recognize, however, that there is non-compliance with the SPCC requirements by some portion of the regulated community" (EPA, 2005 at pg. 8).
[9] Specifically, 61 percent of farmers surveyed by the USDA were unaware of SPCC requirements (USDA, 2005).
[10] This number may be higher if facilities need to make plan changes to reflect EPA's 2002 SPCC rule amendments.
[11] Pechan did not estimate the cost savings for new facilities; those savings would be a small fraction of total savings (less than $10 million); the total savings are dominated by the savings estimated for exisiting facilities.
[12] This is a conservative estimate as there is surely an additional percentage that is aware of SPCC requirements, but does not have an SPCC plan.

1. EPA Proposal

The EPA's qualified facility proposal removes the requirement that an SPCC plan be certified by a PE for facilities with storage capacities of 10,000 gallons or less (equivalent to Tier I and Tier II facilities under Advocacy's proposed scheme). To estimate the cost savings of EPA's proposal, Pechan multiplied the PE certification cost estimate for new plans ($2,000) by the estimated number of current facilities that do not have an SPCC plan, and multiplied the PE certification cost estimates for amended plans ($750) by the estimated number of existing plans that will be amended over a 10 year period.

2. SBA Proposal

For Tier II facilities, Advocacy's proposal is the same as EPA's proposal, however, under Advocacy's proposal, Tier I facilities would not be required to prepare a written SPCC plan. Because Tier II facilities have the same requirements under both proposals, the Tier II facility cost savings are the same under each proposal. To estimate Tier I facility cost savings under the Advocacy proposal, Pechan multiplied the total cost estimate for a new plan ($3,000) by the estimated number of current facilities that do not have an SPCC plan, and multiplied the total cost for an amended plan ($1,125) by the estimated number of existing plans that will be amended over a 10 year period.

3. Comparison of Advocacy and SBA Proposals

Table 5 compares the estimated cost savings for new plans and amended plans by Tier category under the EPA and Advocacy proposals. As indicated by the table, the Advocacy proposal represents a substantial cost savings of nearly $130 million relative to EPA's proposal.

Table 5. Comparison of Advocacy and EPA SPCC Plan Requirement Proposal Total Cost Savings

		New Plan Savings	Amended Plan Savings	Total Savings
EPA	Tier I	$211,500,000	$48,468,750	$259,968,750
	Tier II	$61,932,960	$20,644,320	$82,577,280
SBA	Tier I	$317,250,000	$72,703,125	$389,953,125
	Tier II	same as EPA	same as EPA	same as EPA
			Additional SBA Cost Savings	$129,984,375

Because the risk of reaching navigable waters is lower for small facilities, and because SPCC plans have not by themselves been demonstrated to reduce the oil spill risk to the environment, a cost-effective approach to reducing risk should address ways to reduce the cost of SPCC plan development for facilities with smaller storage capacities. Given

average facility spill volumes and the fact that EPA has been unable to conclude that spill prevention plans lead to spill reductions,[13] it is difficult to assert that the theoretical spill reduction benefits of SPCC plan development will outweigh the substantial cost of plan development for Tier I facilities.

To further demonstrate the value of the Advocacy proposal relative to EPA's proposal, Pechan calculated the maximum potential cost-effectiveness of the SPCC plan requirement for Tier I and Tier II facilities. The maximum potential cost-effectiveness reflects the total volume of spills that could be reduced if each SPCC plan was one hundred percent effective at eliminating oil discharges. Utilizing the average small facility plan cost of $3,000, and the total number of Tier I facilities subject to current SPCC plan requirements, Pechan estimates the total cost of new SPCC plans for all Tier I facilities at $705 million. When this cost is spread over a ten year period, and compared to projected total spill volumes over this period, the maximum potential cost-effectiveness for Tier I facilities is estimated at $184 per gallon. Using analogous assumptions to those used above, the cost-effectiveness of total potential Tier II facility spill reductions is estimated at $10.98 per gallon. This comparison demonstrates why Tier I facilities are a much less desired target for a SPCC plan requirement than Tier II and Tier III facilities.

Table 6. Comparison of Potential Cost-Effectiveness for New SPCC Plans

	Estimated Spill Volume Over 10 Year Period (gallons)	Total New Plan Cost	Potential New Plan Per Gallon Cost Effectiveness
Tier I	3,833,338	$705,000,000	$183.91
Tier II	23,502,985	$258,054,000	$10.98

Because the risk of reaching navigable waters is lower for small facilities, and by themselves, SPCC plans have not been demonstrated to reduce the oil spill risk to the environment, a cost-effective approach to reducing risk should address ways to reduce the cost of SPCC plan development for facilities with smaller storage capacities. Therefore, Advocacy's qualified facility proposal appears preferable to EPA's proposal.

[13] Based on an analysis of survey data collected from facilities subject to SPCC regulation, EPA was unable to conclude that a written spill prevention (or spill response) plan is effective in minimizing oil spill risk to the environment (EPA, 1996). However, EPA was able to conclude that other specific spill prevention/control measures (e.g. secondary containment) are effective in minimizing this risk.

Testimony of
Earthjustice, the Natural Resources Defense Council, and the Sierra Club
On the Clean Water Act's Oil Spill Prevention and Control Program
Before the Committee on Environment and Public Works
United States Senate

Submitted January 17, 2006

Thank you, Chairman Inhofe and Ranking Member Jeffords, for the opportunity to submit comments to the Committee on Environment and Public Works about the Clean Water Act and, more specifically, the Act's program for preventing and controlling oil spills into our nation's waters that was the subject of your Committee's hearing on December 14, 2005.

My name is Joan Mulhern, and I am Senior Legislative Counsel for Earthjustice, a national non-profit law firm founded in 1971. Earthjustice is the nation's largest non-profit law firm for the environment and represents, without charge, hundreds of public interest clients, large and small, in order to protect public health and natural resources and enforce the nation's most important environmental laws. This testimony is also submitted on behalf of the Natural Resources Defense Council (NRDC) and the Sierra Club. Both of these organizations, represented by Earthjustice, intervened on the side of the U.S. government in opposition to the oil industry' s challenge to the Spill Prevention Control and Countermeasures (SPCC) regulations finalized by the U.S. Environmental Protection Agency in 2002 to implement the related provisions of the Clean Water Act.[1]

Background

Oil spills are a significant threat to the health and safety of the nation's fresh water ecosystems, both large and small, as well as to coastal waters. EPA recently reported that an average of 24,000 oil spills occur in the U.S. each year – and more than half of them occur in inland waters.[2] These oil spills contaminate drinking water supplies, threaten public health, kill fish and wildlife, and destroy important aquatic resources.

There are many problems with EPA's current regulatory approach to preventing and controlling oil spills that will or could pollute rivers, lakes, streams, wetlands, ponds, and coastal waters. In particular, the agency's December 2, 2005 proposed modifications to the Clean Water Act's Spill Prevention Control and Countermeasures (SPCC) program seem entirely designed to weaken common sense protections against oils spills into our nation's waters, with little or no scientific or technical justification offered by the agency to support these changes. It seems that many entities that store large quantities of oil are lobbying EPA and Congress to weaken prevention

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[1] The cases are pending in the United States District Court for the District of Columbia, American Petroleum Institute v. EPA, D.D.C. Civil Action No. 02-2247 PLF; Marathon Oil Company v. EPA, D.D.C. Civil Action No. 02-2249. API initially challenged other aspects of the 2002 rule as well, *see* API 12/3/04 Mem. at 19-20, but EPA settled these claims and subsequently API and the other plaintiffs are currently only contesting the definition of "navigable waters" contained in the final regulation.

2 Testimony of Tim Fields, EPA Ass't Administrator, Office of Solid Waste & Emergency Response, Before the Subcommittee on Water Resources and Environment of the Committee on Transportation and Infrastructure, U.S. House of Representatives (Feb. 9, 2000).

requirements, even though it is certainly less expensive (as well as immeasurably preferable from a public health and environmental standpoint) to prevent oils spills rather than having to clean them up. Even small oil spills can contaminate large quantities of water.[3] As little as one gallon of spilled oil can pollute up to 1,000,000 gallons of fresh water to a level where it is unsafe for human consumption. This figure is the same whether the oil comes from a farm or factory, whether the polluting facility is large or small.

That said, the comments our organizations are submitting today focus chiefly on another important clean water issue that has been raised in the context of EPA's current SPCC regulations – the definition of "waters of the United States"

The oil industry is currently engaged in a campaign to weaken the broad scope of waters traditionally protected by the Clean Water Act. Essentially, they are arguing in court (and elsewhere) that the EPA lacks the legal authority to prevent any facility of any kind or size from spilling oil into anything other than traditionally "navigable" waters, or streams and wetlands that directly abut such waters.

This argument not only lacks any serious legal merit but, if adopted, it would have disastrous consequences not only for small streams and wetlands across the country but for larger downstream lakes, rivers, and coastal waters as well. The industry is effectively seeking to repeal much of the 1972 Clean Water Act and return the country to the days when the vast majority of our nation's waters were too polluted for drinking water supplies, fishing, swimming, and other uses. This is an objective we hope this Committee will soundly reject.

The Clean Water Act

Congress passed the Clean Water Act more than 33 years ago to "restore and maintain the chemical, physical and biological integrity of the nation's waters."[4] The law prohibits discharges of all pollution – including oil – from any point source into navigable waters, unless that source has a permit under the law.[5] In order to achieve the goal of eliminating water pollution, Congress adopted a new, broad definition of "navigable waters" into law. Under the Act, the term "navigable waters" was defined as "waters of the United States."[6]

The debate in both the Houses and Senate on final passage of the bill that would become the Clean Water Act confirmed Congress' intent that the law be given broad application. For example, Congressman John Dingell, who reported the conference committee bill to the House, explained the definition in his statement:

> The conference bill defines the term "navigable waters" broadly for water quality purposes. It means all "the waters of the United States" in a geographical sense. It does not mean "navigable waters of the United States" in the technical sense as we sometimes

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[3] *See* 67 Fed. Reg. 47055 (July 17, 2002) ("Small spills of petroleum...can cause significant environmental damage").
[4] CWA § 101(a) (33 U.S.C. § 1251(a)). In 1972, the law was known as the Federal Water Pollution Control Act Amendments, but through subsequent amendments became what is generally referred to as the Clean Water Act.
[5] CWA § 301(a) (33 U.S.C. § 1311(a)).
[6] CWA § 502(7).

> see in some laws. Thus, this new definition clearly encompasses all water bodies, including main streams and their tributaries, for water quality purposes. No longer are the old, narrow definitions of navigability, as determined by the Corps of Engineers, going to govern matters covered by this bill.[7]

Thus, with overwhelming support and bipartisan leadership, Congress adopted the law and thereby established comprehensive protections for the a broad scope of "waters of the United States," they viewed as necessary to achieve its stated objectives to rid the nation's waters of pollution.

At the time of the passage of the Act, Congress and the American people were concerned about many kinds of water pollution – and spilled oil was certainly chief among them. While several earlier federal clean water laws already prohibited the discharge of oil into water,[8] the oil slick on the Cuyahoga River that ignited in June 1969 captured public attention and galvanized support for the passage of a stronger federal clean water law in 1972.

Section 311

Section 311 of the Clean Water Act, entitled "Oil and Hazardous Substance Liability" deals as much with the goal of (and requirements for) preventing oil spills into the waters of the U.S. as it does with assessing liability when spills occur. The centerpiece of § 311 is the Congressional declaration that "it is the policy of the United States that there should be no discharges of oil or hazardous substances into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone."[9]

In order to implement this policy, Congress enacted a prohibition on discharges of oil or hazardous substances into waters of the U.S. "in such quantities as may be harmful as determined by the President."[10] The amount of spilled oil that may be harmful to the environment can be very small. It includes discharges that "violate applicable water quality standards; or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines."[11] According to the U.S. EPA:

> Oil spills occurring in freshwater bodies are less publicized than spills into the ocean even though freshwater oil spills are more frequent and often more destructive to the

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[7] *See* House consideration of the report of the Conference Committee, Oct. 4, 1972, compiled in Arnold and Porter's Legislative History of the Water Pollution Control Act Amendments of 1972, Serial No. 93-1, 93rd Cong. (1973), at 250-251. Unlike the final version of the law as described by Congressman Dingell, the definition of "navigable waters" in an earlier version of the bill had made express reference to navigability. 211 80 Stat. 1253.

[8] The Rivers and Harbors Act of 1899 prohibited the discharge of oil and other refuse matter from vessels. The Oil Pollution Act of 1924 prohibited "discharges of oil by any method...into or upon the coastal waters of the United States," unless permitted as not "deleterious" to health or seafood in regulations issued by the Secretary of War. Prior versions of the Federal Water Pollution Control Act dating back to 1966 also contained prohibitions on the discharge of oil into the navigable waters of the U.S.

[9] Section 311 of the 1972 amendments to the Clean Water Act was largely drawn from the Water Quality Improvement Act of 1970.

[10] CWA 311(b)(3).

[11] 40 C.F.R. § 110.3.

> environment. Freshwater bodies are highly sensitive to oil spills and are important to human health and the environment. They are often used for drinking water and frequently serve as nesting grounds and food sources for various freshwater organisms. All types of freshwater organisms are susceptible to the deadly effects of spilled oil, including mammals, aquatic birds, fish, insects, microorganisms, and vegetation. In addition, the effects of spilled oil on freshwater microorganisms, invertebrates, and algae tend to move up the food chain and affect other species.[12]

As part of §311, Congress mandated a series of oil spill planning, prevention and cleanup measures. Chief among these measures is the requirement that the President "issue regulations ...establishing procedures, methods, and equipment and other requirements for equipment to prevent discharges of oil and hazardous substances from vessels and from onshore facilities and offshore facilities, and to contain such discharges...."[13] This provision is the source of EPA's authority for requiring onshore facilities to develop, maintain and update Spill Prevention, Control and Countermeasure Plans.

2002 SPCC Regulations

SPCC plans are the regulatory centerpiece of the Clean Water Act's effort to prevent oil spills from storage facilities that could pollute the nation's waters. The initial regulations requiring certain facilities to develop Spill Prevention, Containment and Countermeasure plans to prevent any discharge of oil into or upon navigable waters of the United States or adjoining shorelines date from 1973.[14] Although proposed revisions and clarifications were published by EPA in 1980, 1991, 1993 and 1997,[15] the most recent update to the SPCC rules was not finalized until July 2002, after a twelve-year effort.[16]

In promulgating the July 2002 update to the regulations, EPA amended the definition of "waters of the United States" contained in the rule to conform to the definition used in all other regulatory sections of the Clean Water Act.

July 2002 SPCC Rule Definition of "Navigable Waters" (40 CFR §112.2)
Navigable waters means the waters of the United States, including the territorial seas. The term includes: (i) All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide; (ii) All interstate waters, including interstate wetlands; (iii) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such

[12] http://www.epa.gov/oilspill/freshwat.htm
[13] CWA § 311(j)(1).
[14] 38 FR 34164 (December 11, 1973).
[15] 56 FR 54612 (October 22, 1991), 58 FR 8824 (February 17, 1993), 62 FR 63812 (December 2, 1997).
[16] 67 FR 47042 (July 17, 2002). For a facility to be subject to the SPCC rule it must 1) be non-transportation-related; 2) must have an aggregate aboveground storage capacity greater than 1,320 gallons or a completely buried storage capacity greater than 42,000 gallons; and 3) there must be a reasonable expectation of a discharge into or upon waters of the United States or adjoining shorelines. *See* U.S. EPA, *Spill Prevention, Control and Countermeasure (SPCC) Regulation: A Facility Owner/Operator's Guide to Oil Pollution Prevention.*

waters:
(A) That are or could be used by interstate or foreign travelers for recreational or other purposes; or
(B) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or,
(C) That are or could be used for industrial purposes by industries in interstate commerce;
(iv) All impoundments of waters otherwise defined as waters of the United States under this section;
(v) Tributaries of waters identified in paragraphs (1)(i) through (iv) of this definition;
(vi) The territorial sea; and
(vii) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraph (1) of this definition.

The July 2002 rule simply clarifies the broad scope of the SPCC rule and conforms the definition of waters protected by this program to the definition EPA has applied under other sections of the Clean Water Act regulations since 1973. In fact, the revised definition is identical to the definition of "waters of the U.S." used throughout EPA's regulations.[17]

The American Petroleum Institute (API) and Marathon Oil challenged this definition, as well as other aspects of the 2002 rule, insisting that EPA is precluded by law from protecting all such waters from oil spills.[18] Instead, these industry groups argue, §311 should be restricted to protecting only those waters that are navigable in fact and wetlands that are directly adjacent to such navigable waters. The industry complaints seek to vacate the 2002 rule, returning the regulations to the pre-July 2002 definition of "navigable waters." In addition, they ask the court to construe the definition of navigable waters narrowly throughout the Clean Water Act so that the law would cover only traditionally navigable waters and directly abutting wetlands, thereby restricting the scope of waters even more than the definition used in the previous §311 regulations.[19] As noted above, the Sierra Club and the Natural Resources Defense Council successfully intervened in these cases on the side of the U.S. government to encourage the court to uphold the traditional and longstanding definition of "waters of the United States" used by EPA and other federal agencies.

Industry Arguments Ignore and Misconstrue Longstanding and Current Law

As noted above, under the Clean Water Act: "It is the policy of the US that there should be no discharges of oil ... into or upon the navigable waters of the U.S."[20] Therefore, industry must comply with regulatory measures to prevent "discharges of oil or hazardous substances into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone." The oil industry insists that these protections should encompass only so-called "traditional navigable waters" and wetlands adjacent to them – a formulation that threatens to exclude the majority of U.S. waters from the Act's protections.

[17] See, e.g. 40 CFR §230.3(s); 40 CFR § 232(q). .
[18] *See* infra note 1.
[19] EPA has argued that they have historically interpreted the previous definition of "navigable waters" under the §311 program rules consistently with the language used in other EPA regulatory programs and the changes in the definition in the 2002 was a purely "housekeeping" measure. EPA CITATION HERE. However, it is undisputed that the previous definition explicitly included many waters that API and the other plaintiffs now ask the court to rule as outside the scope of the Clean Water Act.
[20] CWA §311(b)(1).

In their lawsuit, API and Marathon make two main arguments, one as unavailing as the other. First, the API brief argues that in the wake of the Supreme Court's decision in the case *Solid Waste Agency of Northern Cook Country vs. The Army Corps of Engineers* ("SWANCC"),[21] the term "navigable waters" extends only to waters that are, have been, or could reasonably be made, navigable in fact (i.e. so-called "traditionally navigable waters") and wetlands adjacent to traditional navigable waters.[22] Second, the industry briefs argue that, on its face, the definition of "navigable waters" in the 2002 SPCC rule extends to areas that are neither traditional navigable waters, nor wetlands adjacent to traditional navigable waters, nor adjoining shorelines and is therefore inconsistent with the statute.[23] Accordingly, they conclude that the definition of "navigable waters" in the 2002 SPCC rule is in excess of the EPA's authority.

The 2001 *SWANCC* decision is not nearly as broad as the oil industry claims. *SWANCC* did not question EPA's (or the Army Corps') longstanding definition of "waters of the U.S." or the well-settled case law holding that Clean Water Act jurisdiction extends to tributaries of navigable waters as well as wetlands adjacent to such tributaries. The Court in *SWANCC* limited its holding to the facts before it: "We hold that 33 C.F.R. § 328.3(a)(3) (1999), as clarified and applied to petitioner's balefill site pursuant to the 'Migratory Bird Rule,' 51 Fed. Reg. 41217 (1986), exceeds the authority granted to [the Army Corps of Engineers] under §404(a) of the CWA."[24] *SWANCC* does not question in any way Clean Water Act jurisdiction if regulatory bases *other than* use by migratory birds are present.

Since the issuance of the *SWANCC* decision, the vast majority of courts have held that non-navigable tributaries that ultimately flow, albeit for long distances and through natural and man-made channels, and wetlands adjacent to such tributaries, are waters of the United States governed by the Clean Water Act.[25] Yet these are the very types of waters that the oil industry seeks to have removed from the Clean Water Act's scope.

Specifically, in the context of oil spill pollution, federal courts have long held that discharges into non-navigable tributaries, including intermittent or ephemeral tributaries, are subject to the jurisdiction of the Clean Water Act.[26] There is nothing in the holding of *SWANCC* to suggest that

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[21] 531 U.S. 159 (2001).

[22] API Compl. ¶ 19. The Marathon Complaint does not mention *SWANCC*.

[23] API Compl. ¶ 21; Marathon Compl. ¶¶ 15-18.

[24] 531 U.S. 159 (2001).

[25] *See, e.g. United States v. Deaton*, 332 F.3d 698 (4th Cir. 2003), *cert. denied*, 124 S.Ct. 1874 (2004); *United States v. Gerke Excavating*, 412 F.3d 804 (7th Cir. 2005); *Treacy v. Newdunn*, 344 F.3d 407 (4th Cir. 2003), cert. denied, 124 S.Ct. 1874 (2004); Headw*aters, Inc. v. Talent*, 243 F.3d 526, 533-34 (9th Cir. 2001); *California Sportfishing Protection Alliance v. Diablo Grande, Inc.*, 209 F. Supp.2d 1059, 1074-76 (2002); *United States v. Buday*, 138 F. Supp.2d 1282, 1295 (D. Mont. 2001); *Idaho Rural Council v. Bosma*, 143 F. Supp.2d 1169, 1178 (D. Idaho 2001); *Community Ass'n for Restoration of the Env't v. Henry Bosma Dairy*, 305 F.3d 953, 954-55 (9th Cir. 2002); *United States v. Interstate Gen'l Co.*, 152 F. Supp.2d 843, 847 (D.Md. 2001), *aff'd* 2002 WL 1421411 (4th Cir. July 2, 2002) (unpublished decision) [*on remand from United States v. Wilson*, 133 F.3d 251 (4th Cir. 1997)]; *Aiello v. Town of Brookhaven*, 136 F.Supp.2d 81, 119 (E.D.N.Y. 2001); *United States v. Lamplight Equestrian Center, Inc.*, 2002 WL 360652*5 (N.D.Ill. March 8, 2002); *Fisher v. Chestnut Mountain Resort, Inc.*, 2002 WL 433144 (N.D.Ill. March 19, 2002).

[26] *See, U.S. v. Ashland Oil and Transportation Co.*, 504 F.2d 1317, 1323 (1974) ("Congress' clear intention as revealed in the Act itself was to effect marked improvement in the quality of the total water resources of the United States, regardless of whether that water was at the point of pollution a part of a navigable stream"); *United States v. Texas Pipe Line Co.*, 611 F.2d 345, 347 (10th Cir.1979) ("It makes no difference that a stream was or was not at the

the Supreme Court intended, in ruling narrowly on an assertion of jurisdiction based solely upon use by migratory birds, to sweep away thirty years of jurisprudence addressing Congress' intent or authority to prohibit and prevent discharges of oil and other pollutants into waters of the United States, including those that are non-navigable, intermittent or ephemeral, man-made, or lacking a direct surface connection to downstream waters.

The Potential for Harm To the Clean Water Act and the Waters the Act Protects

Finally, it is important to underscore the fact that the implications of the industry's narrow concept of U.S. waters reach beyond oil spills. Because the industry's argument rests on the Act's general definition section, a judicial adoption of industry's position would strip small tributaries and other waters of the Act's core permit protections.

The definition of "navigable waters" as "waters of the United States," as provided in Section 502(7) of the Act and its accompanying regulations, does not govern only the §311 oil spill program; it is the overarching definition of the waters covered by the entire Act. Thus, §502(7) defines the scope of such key Clean Water Act provisions as the prohibition on discharge of pollutants without a permit, §301(a), as well as the Act's two primary permit programs – the §402 "national pollutant discharge elimination system" program and the §404 program addressing discharges of dredged or fill material. Each of these sections applies to "navigable waters" – precisely the term defined by §502(7). By expressly asking the courts and the EPA for a narrowing construction of this key definition, the oil industry's threatens grievous harm to all of the waters the law was designed to protect from pollution.

As clearly stated by the Justice Department in a recent brief filed in another case, *United States v. Interstate General Co.,* the "logical result" of treating certain waters as unprotected by the Clean Water Act:

> [C]ould be that oil, hazardous substances, or other pollutants could be discharged without a Clean Water Act permit into any stream, creek or river, so long as it was not traditionally navigable, and those pollutants could reach and foul traditional navigable waters without the United States being able to take action under the Clean Water Act to prevent it. Likewise, entities currently discharging into traditional navigable waters under NPDES permits could change their outfall points to non-navigable creeks in an effort to avoid treatment requirements under the Clean Water Act. Had the Supreme Court in *SWANCC* intended to work such a change in the Clean Water Act, it would doubtless have stated that purpose explicitly."[27]

The narrow interpretation of "navigable waters" and "waters of the United States" pushed by the oil industry – that the law should only cover traditionally navigable waters and waters directly adjacent to such waters would – allow polluters to dump whatever they like, without any federal regulation, into many wetlands, headwater streams, and other waters, even those waters that eventually flow into larger rivers, lakes, and coastal waters. Because many states tie their own state law protections of waters both to the regulatory structure and jurisdictional scope of the

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time of the spill discharging water continuously into a river navigable in the traditional sense."); *see also United States v. Eidson*, 108 F.3d 1336 (11th Cir. 1997).

[27] *United States v. Interstate General Co.*, Brief of United States, U.S. Department of Justice, October 2001 at 43.

federal Clean Water Act - including some states that entirely forego protections of wetlands under state law - such a drastic roll back of the Clean Water Act could leave many waters unprotected from pollution not only by federal law but by *any* law at all.

Conclusion

EPA has determined that a facility's compliance with even one of four SPCC provisions (tank leak detection systems; spill/overfill protection systems; pipe external protection; and secondary containment) has "had a significant effect on reducing the annual number of oil spills, the annual total volume of oil spilled, the annual total costs of cleaning up the spilled oil, and the degree of off-site migration."[28] Yet, while the SPCC program has proven effective in reducing their frequency, oil spills remain a major threat to all of the nation's waters, as described above in more detail and in many other reports, surveys, and databases.[29]

Given the serious and often irreparable harm caused by oils spills into waters, it defies common sense to weaken existing safeguards against such spills – especially the complete withdrawal of Clean Water Act authority over any of the nation's waters that could be harmed by oil pollution.

Earthjustice, the Sierra Club, and the Natural Resources Defense Council urge this Committee, in its oversight capacity, to direct EPA to use its full authority under the Clean Water Act to prevent oils spills into the nation's waters and to ensure that the agency does not take any measure that would increase the vulnerability of the nation's waters to uncontrolled oil spills.

Thank you for your consideration of these comments.

Contact Information:

Joan Mulhern, Senior Legislative Counsel, Earthjustice, 202-667-4500

Nancy Stoner, Clean Water Program Director, NRDC, 202-289-6868

Ed Hopkins, Director, Environmental Quality Programs, Sierra Club, 202-547-1141

[28] US EPA, Results of 1995 Survey of Oil Storage Facilities (July 1996), "Analysis of the Effectiveness of EPA's SPCC Program on Spill Risk" p. 4.
[29] *See, e.g.*. http://www.epa.gov/oilspill/spccref.htm; http://www.nrc.uscg.mil.insum .

Food Industry Environmental Council ● 2000 Corporate Ridge, Ste. 1000 ● McLean, VA 22102
TEL: 703/821-0770 ● FAX: 703/821-1350

Sent Via Electronic Mail

December 13, 2005

The Honorable James M. Inhofe, Chairman
Committee on Environment and Public Works
United States Senate
410 Dirksen Senate Office Building
Washington, D.C. 20510-6175

Dear Chairman Inhofe:

The Food Industry Environmental Council (FIEC) is a coalition of 50 national food trade associations and companies that together represent food facilities across the nation which contribute hundreds of billions of dollars in sales to the economy and employ approximately 1.5 million people.

On Wednesday, December 14, 2005, the Senate Environment and Public Works Committee will hold a hearing on Environmental Protection Agency's (EPA's) Spill Prevention, Control and Countermeasure (SPCC) program relative to the issues addressed in a proposed rule and guidance issued by the Agency on Friday, December 2, 2005. FIEC and its members welcome the EPA's proposed revision to the SPCC rule that would streamline requirements, including an option that would allow owners/operators of certain facilities that store less than 10,000 gallons of oil, among other criteria, to self-certify their SPCC Plans in lieu of review and certification by a Professional Engineer (PE). The Council also welcomes EPA's proposal to extend the compliance dates by which all facilities must prepare or amend and implement their SPCC Plans to October 31, 2007.

FIEC is concerned, however, with the Agency's lack of progress in differentiating animal fats/vegetable oils from other oils, such as petroleum oil, under the SPCC program.

Oil is defined so broadly in the Clean Water Act that EPA has historically issued regulated animal fats/vegetable oils to much the same degree as toxic oils. In 1993 a coalition of agriculture and food industry associations began seeking appropriate treatment of animal fats/vegetable oils by EPA and other Federal agencies that regulate "oil."

During the mid-1990s Congress passed three separate pieces of legislation to clarify Congressional intent that animal fats/vegetable oils should be treated differently from other oils, including petroleum oils. These included (1) the 1995 "Edible Oil Regulatory Reform Act" (Pub. L. No. 104-55), which requires differentiation of animal fats/vegetable oils from other oils; (2) a 1996 Department of Transportation (DOT) Appropriations Act (Pub. L. No. 104-205, Sec. 354), which limited the Coast Guard's use of funds to enforce regulations that failed to differentiate; and, (3) a 1996 Coast Guard Authorization Act (Pub. L. No. 104-324, Sec. 1130), which included a "Sense of Congress" that differences between animal fats/vegetable oils and other oils should be recognized in regulations and required the Secretary of DOT to submit annual reports to Congress on DOT's differentiation efforts.

The Edible Oil Regulatory Reform Act (the Act), which was signed into law by President Clinton on November 20, 1995, is applicable to all agencies, including EPA. It requires EPA and other Federal agencies to move forward as follows in differentiating animal fats/vegetable oils from other oils in Federal regulations applicable to "oil:" (1) to differentiate between animal fats/vegetable oils and other oils, including petroleum oil, in " ... issuing or enforcing any regulation or establishing any interpretation or guideline relating to the transportation, storage, discharge, release, emission, or disposal ..." of oil under any Federal law; and, in differentiating, to (2) " ... consider differences in the physical, chemical, biological, and other properties, and in the environmental effects ..." of these oils.

The Act obligates EPA to differentiate between animal fats/vegetable oils and other oils in its SPCC rulemaking and, after doing so, to consider differences in these oils. Unfortunately, after more than six years of SPCC rulemaking EPA has, notwithstanding numerous suggestions from our industry (see enclosed), removed only SPCC requirements from the Agency's July 17, 2002, final rule (67 Fed. Reg. 47042) that were inappropriate for animal fats/vegetable oils (e.g., requirements for ***onshore oil drilling and workover facilities***"; and requirements for "***offshore oil drilling, production, or workover facilities***"). The Agency has made no apparent progress in considering the differences between animal fats/vegetable oils and other oils.

What agriculture and the food industry are seeking is as follows:

- A "common sense" regulatory approach/guidance that appropriately distinguishes between animal fats/vegetable oils and other oils (e.g., petroleum oils) reflecting the significant differences in the substances themselves and the facilities handling these materials

- Visual inspection of storage tanks located outside and inside and which contain non-corrosive animal fats/vegetable oils being sufficient for integrity testing of these tanks

- "Secondary containment" not being required for mobile tanks containing animal fats/vegetable oils (e.g., railroad tank cars, tanker trucks)

- Exclusion of animal fat/vegetable oil facilities from the requirement to have a certified Professional Engineer prepare SPCC Facility Response Plans as required by current SPCC rules

- Maximum threshold of animal fat/vegetable oil storage below which food manufacturing facilities would not be required to file an SPCC plan and/or comply with other burdensome inappropriate SPCC provisions (e.g., full fencing, locking and guarding entrances)

- Guidance regarding the applicability of SPCC requirements to mixtures of materials containing animal fats/vegetable oils (e.g., dairy products, margarine-type spreads). (For example, liquid mixtures containing less than 50% oil or mixtures that are solid at room temperature should not be subject to SPCC requirements.)

If you have any questions please contact me at (703) 821-0770 or rgarfield@affi.com. FIEC members remain interested and available to assist you on this important issue.

Sincerely,

Robert L. Garfield
Chairman
Food Industry Environmental Council

Enclosure

Cc: The Honorable James M. Jeffords, Ranking Member
Committee on Environment and Public Works
United States Senate
456 Dirksen Senate Office Building
Washington, D.C. 20510-7175

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March 26, 2003

David S Evans
5203G
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Washington, DC 20460

Re: FIEC's Concerns on EPA's Final Spill Prevention, Control and Countermeasure Rule, 67 Fed. Reg. 47042 (July 17, 2002)

Dear Mr. Evans:

The Food Industry Environmental Council (FIEC) wishes to express its appreciation for the opportunity to meet with you at Jean-Mari Peltier's office on December 11, 2002, to review and discuss FIEC's concerns on EPA's final Spill Prevention, Control and Countermeasure Rule (SPCC) rule. EPA issued the rule on July 17, 2002, amending the Oil Pollution Prevention regulation promulgated under the authority of the Clean Water Act (67 Fed. Reg. 47042).

FIEC is a coalition of over 50 national food trade associations and companies that together represent more than 15,000 facilities across the country, employing approximately 1.5 million people. FIEC members represent a potentially huge number of non-transportation-related onshore facilities nationwide, thought to number in the 1000s, that process, handle and ship non-toxic animal fats and vegetable oils. Consequently, FIEC has a vital and continuing interest in EPA's approach to regulating these substances in the final SPCC rule.

On April 8, 1999 (64 Fed. Reg. 17227), EPA published an Advance Notice of Proposed Rulemaking (ANPRM) in which it requested comment concerning ways it might differentiate among the various classes of oils listed in the Edible Oil Regulatory Reform Act for purposes of the Spill Prevention, Control, and Countermeasure (SPCC) Rule, found at 40 CFR part 112. The Agency was interested in how it might differentiate in the regulatory requirements for these classes of oils based on the physical, chemical, biological, and other properties of these oils, and on their environmental effects if discharged into the environment.

Several FIEC members submitted comments to EPA on this ANPRM, on or before the Agency's July 7, 1999, comment deadline. A common theme of those comments, two of which are attached (see attachments 1 and 2), is that there are not only significant differences between non-toxic animal fats/vegetable oils and other oils, but also between animal fat/vegetable oil facilities and petroleum oil facilities. These organizations emphasized that the differences call for different SPCC requirements for these facilities and suggested that, in consideration of this, EPA should move forward and revise its SPCC rule to differentiate between non-toxic animal fats/vegetable oils, on the one hand, and all other oils, including toxic petroleum and non-petroleum oils, on the other hand.

On July 17, 2002, EPA issued the final SPCC rule. The rule includes new subparts outlining the requirements for various classes of oil; revises the applicability of the regulation; amends the requirements for completing SPCC Plans; and, makes other modifications. The sections under Subpart C set forth the new requirements for facilities storing or using the various classes of oils listed in the Edible Oil Regulatory Reform Act, including "animal fats and oils and greases, and fish and marine mammal oils; and for vegetable oils, including oils from seeds, nuts, fruits, and kernels".

Unfortunately, EPA has tailored neither the section *titles* in Subpart C, nor the requirements set forth under those sections, to make them more appropriate for facilities handling animal fats/vegetable oils. Instead, the Agency has simply and inappropriately repeated the terminology and requirements from Subpart B, the corresponding subpart for "petroleum oils or other non-petroleum oils, except animal fats and vegetable oils." The result is that all but one of the sections in Subpart C — Section 112.12 — fail to provide SPCC requirements or terminology that are even remotely appropriate for facilities handling these "oils." These section titles and some of the more inappropriate and problematic requirements are listed below:

- **§112.13 ("Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil production facilities").** A "production facility" as defined in §112.2 includes all structures and or equipment " ... used in the production, extraction, recovery, lifting, stabilization, separation or treating of oil, or associated storage or measurement, and located in a single geographical oil or gas field operated by a single operator." Animal fats/vegetable oils are not produced from oil or gas "fields," and the requirements in this section are wholly inappropriate for animal fat/vegetable oil facilities.

- **§112.14 ("Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil drilling and workover facilities")**. Animal fats/vegetable oils are not produced/handled in "oil drilling and workover facilities". Hence, the requirements set forth under this section, like those under §112.13, are wholly inappropriate for animal fat/vegetable oil facilities.

- **§112.15 ("Spill Prevention, Control, and Countermeasure Plan requirements for offshore oil drilling, production, or workover facilities")**. Animal fats/vegetable oils are not produced/handled in "offshore oil drilling, production, or workover facilities". Hence, the requirements set forth under this section, like those under §112.13 and §112.14, are wholly inappropriate for animal fat/vegetable oil facilities.

EPA explains in the final rule that the requirements for facilities storing or using animal fats/vegetable oils will remain the same as those storing or using petroleum oils until such time as EPA moves forward on the comments it received on the above discussed ANPRM and proposes rule changes. This is not a satisfactory plan because, as discussed above, most of the requirements are wholly inappropriate relative to animal fat/vegetable oils facilities. Until appropriate rule changes are promulgated, these facilities at best will be forced into complying with a number of confusing and inappropriate requirements, implicating a waste of limited industry and agency resources. At worst these facilities will find themselves in enforcement jeopardy until such time as the Agency develops appropriate requirements for them.

We are aware that the Agency has issued a direct final rule postponing by sixty days the February 2003 deadline for amending SPCC plans, and has proposed to postpone the deadline for one year. These measures will provide immediate, short-term relief for all regulated facilities, including those that handle animal fats/vegetable oils. We applaud these actions to the degree that they will remove the risk of enforcement actions against animal fat/vegetable oil facilities subject to inappropriate requirements such as those discussed above.

In the longer term, however, we believe that EPA needs to undertake further rulemaking towards developing more appropriate SPCC requirements for these facilities. In this regard, FIEC and its member associations/companies stand ready and willing to assist the Agency better understand the animal fat/vegetable

oil industry, including the significant differences that warrant differentiated regulatory treatment for animal fat/vegetable oil facilities.

We thank you again for the opportunity to discuss these important issues and look forward to working with you on the matter. Please contact Mr. David Ailor of the National Oilseed Processors Association at 202-452-8040 if you have any questions.

American Bakers Association
American Feed Industry Association
American Frozen Food Institute
American Meat Institute
California League of Food Processors
Chocolate Manufacturers Association
Corn Refiners Association
Institute Of Shortening and Edible Oils
International Dairy Foods Association
National Confectioners Association
National Cotton Council
National Fisheries Institute
National Fish Meal and Oil Association
National Food Processors Association
National Oilseed Processors Association
National Turkey Federation
Snack Food Association

Two Attachments

cc: Ms. Jean-Mari Peltier

These comments are being submitted on behalf of the Gas Processors Association

To: Chairman Sen. Jim Inhofe (OK)
Senate Environment and Public Works (EPW) Committee

The Gas Processors Association (GPA) supports EPA's proposed amendment to the SPCC Rule that provides for two streamlining options for qualifying facilities and oil filled equipment and the proposed exemption for motive power containers. GPA also supports the proposed amendment to extend the compliance dates for both SPCC Plan amendment and implementation to October 31, 2007 for all regulated facilities. This extension will allow EPA time to complete their rulemaking activities and allow the regulated community, with qualifying facilities or equipment that may be affected by the final rule, to understand and take advantage of any streamlined provisions that may be promulgated.

On December 2, 2005, EPA released the SPCC Guidance for Regional Inspectors which will assist regional inspectors in implementing the revised SPCC rule and reviewing SPCC Plans. In general the information in the SPCC Guidance for Regional Inspectors will greatly assist the oil and gas industry to understand and implement the SPCC regulations in view of EPA's interpretations and clarifications. This guidance is a key tool for the regulated community and the extended compliance date is needed to make certain the regulated community has an appropriate amount of time to understand these interpretations and clarifications and to amend and implement SPCC plans accordingly. However, GPA anticipates submitting comments to EPA on some of the specific guidance and examples in the document for production and non-production facilities.

Please contact Johnny Dreyer, Gas Processors Association, at 918-493-3872, if you have any questions.

Sincerely,

Gas Processors Association

National Society of Professional Engineers®

Testimony of the National Society of Professional Engineers on the U.S. Environmental Protection Agency Proposed Rule on Spill Prevention, Control, and Countermeasures

Environment and Public Works Committee
United States Senate
December 14, 2005

The National Society of Professional Engineers (NSPE) appreciates this opportunity to submit testimony on the amendments being proposed by the U.S. Environmental Protection Agency pertaining to the Spill Prevention, Control, and Countermeasures (SPCC) rule. NSPE is the only engineering society that represents individual licensed professional engineers across all disciplines. NSPE was founded in 1934 with the primary goal of strengthening the engineering profession by promoting engineering licensure and ethics. NSPE serves some 50,000 members and the public through 53 state and territorial societies and more than 500 chapters.

NSPE strongly opposes EPA's proposed changes to the SPCC regulation to exempt smaller facilities that store less than 10,000 gallons from the requirement imposed in 40 CFR 112.3(d) to have their SPCC Plan certified by a professional engineer (PE). The U.S. Small Business Administration's Office of Advocacy has also been a strong proponent of this approach.

EPA has required professional engineer certification of SPCC plans since their inception in 1973, and we see no valid rationale to change this long-standing requirement. At an EPA stakeholder meeting on the SPCC held on March 31, 2004, in Arlington, Virginia, EPA Oil Program Director David Evans stated, "EPA does not intend to eliminate spill prevention requirements for smaller facilities altogether. Small quantities of oil can have profound and long standing impacts on waters of United States and wetland environments, and small facilities often cannot afford the cost of responding to a spill."[1] If this statement by a key EPA official was valid then, what conditions have changed to justify this proposed exemption for small facilities now?

We would like to point out that there is no indication that professional engineers were included in the initial deliberations related to the development of this proposal. On July 7, 2004, NSPE submitted letters opposing the exemption of small facilities to both Thomas P. Dunne, assistant administrator for Solid Waste and Emergency Response at EPA, and Thomas M. Sullivan, chief counsel for Advocacy at the U.S. Small Business Administration. NSPE never received a written reply from either agency in response to its concerns. In November 2004, NSPE again expressed its opposition to this proposal in response to an EPA notice of data availability issued in the Federal Register on September 20, 2004.

NSPE strongly believes the public health, safety, and welfare would be adversely affected by such an action. The first canon in the Engineers Code of Ethics states that, "engineers, in the fulfillment of their professional duties, shall hold paramount the safety, health, and welfare of the public." First and foremost, NSPE believes the EPA proposal to exempt smaller facilities from inspection by a professional engineer violates an engineer's ethical responsibilities to safeguard the public health and safety.

Equally important, state laws clearly delineate what constitutes the practice of engineering within their jurisdiction. In fact, all 50 states have adopted similar laws that define the practice of engineering. The National Council of Examiners for Engineering and Surveying (NCEES), the

[1] http://www.epa.gov/oilspill/pdfs/SPCCStakeholderMeetingSummary.pdf.

umbrella organization for the state and territorial engineering licensure authorities, has recommended a *Model Law,* whose adoption has been endorsed by NSPE. It is intended to assist state legislators, engineering licensure authorities, and the engineering profession in drafting uniform licensure laws. The NCEES *Model Law* language is typical of the statutory language contained in most state engineering licensure laws. The definition of the practice of engineering from the *Model Law* follows:

> **SECTION 2. DEFINITIONS**
> (5) Practice of Engineering - The term "Practice of Engineering," within the intent of this Act, shall mean any service or creative work, the adequate performance of which requires engineering education, training, and experience in the application of special knowledge of the mathematical, physical, and engineering sciences to such services or creative work as consultation, investigation, expert technical testimony, evaluation, planning, design and design coordination of engineering works and systems, planning the use of land and water, teaching of advanced engineering subjects, performing engineering surveys and studies, and the review of construction for the purpose of monitoring compliance with drawings and specifications; any of which embraces such services or work, either public or private, in connection with any utilities, structures, buildings, machines, equipment, processes, work systems, projects, and industrial or consumer products or equipment of a mechanical, electrical, hydraulic, pneumatic, or thermal nature, insofar as they involve safeguarding life, health, or property, and including such other professional services as may be necessary to the planning, progress, and completion of any engineering services.[2]

Under the NCEES definition, the design, construction, installation, and maintenance of oil storage facilities and the preparation, review, and certification of an oil spill prevention plan would clearly constitute the practice of engineering under state laws. If the EPA were to adopt a rule to exempt facilities that store less than 10,000 gallons of oil from the PE certification requirement, the federal government, by administrative fiat, would be overriding the engineering licensing laws of the 50 states. Allowing small facilities to make a judgment concerning the integrity and safety of their own facilities would, in essence, allow a nonengineer to engage in the practice of engineering in violation of state engineering laws.

We are also concerned that smaller facilities would be less likely to have the expertise on staff to self-regulate to ensure that they are in compliance with the EPA SPCC regulations. Without the threat of regulation, we question whether many smaller facilities might be tempted to cut costs and allow their fuel storage facilities to deteriorate. Many small facilities, if they were not required to use the expertise of a PE, would not be aware of (and therefore would not implement)

[2] NCEES *Model Law*, 1997 Edition, Chapter I (Licensure of Engineers).

engineering controls, such as secondary containment, that would reduce their exposure in the event of a release. De-minimis releases of oil, in aggregate, can have profound long-range affects on our environment.

In addition, while the EPA proposal may provide cost savings in the short run, most small businesses do not have the financial capability to incur cleanup costs in the case of a spill. Also, without PE certification of their oil storage facilities, small businesses may find that they are incurring increased costs for insurance, limited availability of insurance coverage, and even potential unavailability of insurance. The exemption also increases their vulnerability to regulatory penalties and possible legal damages in case of a spill.

Finally, the exemption recommendation would have a profound, and detrimental, impact on small engineering firms. Using 2002 statistical data from the SBA Office of Advocacy's Web site, provided by the U.S. Census Bureau's Statistics of U.S. Businesses, we found that the North American Industry Classification System Code #54133, "Engineering Services," identifies 45,849 engineering firms in the U.S. Of these, 39,594, or 86%, have fewer than 20 employees.[3] Ironically, the recommendation made to EPA by the SBA that is justified by easing the burden on small businesses, would seriously affect the economic viability of the overwhelming majority engineering firms, which are themselves small businesses.

In conclusion, we are concerned that exempting smaller facilities would signal a serious retreat by EPA from its nearly 30-year commitment to prevent oil spills. We urge this committee to do everything possible to ensure the regulatory requirement for PE certification for small oil-storage facilities under the SPCC is retained.

Thank you for considering our comments on proposed revisions to the nation's oil pollution prevention regulation. NSPE looks forward to working with this committee and the Environmental Protection Agency to ensure that the most effective spill prevention, control, and countermeasures program is in place for safeguarding our nation's public health and natural resources.

[3] http://www.sba.gov/advo/stats/us_02_n6.pdf.

These comments are being submitted on behalf of the Gas Processors Association

To: Chairman Sen. Jim Inhofe (OK)
Senate Environment and Public Works (EPW) Committee

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On December 2, 2005, EPA released the SPCC Guidance for Regional Inspectors which will assist regional inspectors in implementing the revised SPCC rule and reviewing SPCC Plans. In general the information in the SPCC Guidance for Regional Inspectors will greatly assist the oil and gas industry to understand and implement the SPCC regulations in view of EPA's interpretations and clarifications. This guidance is a key tool for the regulated community and the extended compliance date is needed to make certain the regulated community has an appropriate amount of time to understand these interpretations and clarifications and to amend and implement SPCC plans accordingly. However, GPA anticipates submitting comments to EPA on some of the specific guidance and examples in the document for production and non-production facilities.

Please contact Johnny Dreyer, Gas Processors Association, at 918-493-3872, if you have any questions.

Sincerely,

Gas Processors Association

Statement of the Petroleum Marketers Association of America
to the Senate Committee on Environment and Public Works
for the December 14, 2005 Senate E.P.W. Oversight Hearing
on the E.P.A. Spill Prevention Control and Countermeasure Rule

Statement to be Submitted for 12/14/2005 the SPCC Oversight Hearing Record

The Petroleum Marketers Association of America (PMAA) represents 45 state and regional trade associations and over 8,000 petroleum marketers nationwide. These: marketers include heating fuel marketers, motor fuel marketers, the ``jobber'' class of trade (which is a vital part of the petroleum distribution chain) and bulk plant owners and operators. Additionally, there are some PMAA members who operate terminals. Thus, there is no question that PMAA is concerned about the U.S. Environmental Protection Agency's (E.P.A.'s) rule on Spill Prevention Control and Countermeasures (SPCC) and the need for further clarification of the rule's application, as well as how it will play out on the enforcement side in terms of enforcement consistency. Additionally, PMAA and our member groups are equally concerned about the impact on existing and future storage capacity for essential petroleum products.

PMAA has been active in working both with the E.P.A. and the U.S. Small Business Administration (S.B.A.), which is representing the broader small business community (many of whom are our members' customers). We applaud the efforts of the S.B.A. on behalf of those entities.

In addition, PMAA has worked with E.P.A. at length to address many of the issues that presented the most detrimental threats to our sector of the industry. However, PMAA is still concerned about the broader impact of the rule on existing (and future) U.S. storage capacity for both motor fuels and heating fuels. Additionally, there are some aspects of the existing rule that still pose some concerns to our industry.

PMAA's greatest concern with the existing E.P.A. SPCC rule relates to the regulation of ``loading racks''. Petroleum marketers own and operate over 6,000 bulk plants in the U.S. where important local inventories of diesel fuel, heating oil and gasoline are stored. These bulk plants are normally comprised of multiple shop fabricated tanks with combined total storage of less than 300,000 gallons. When cargo tank trucks are loading at a bulk plant, E.P.A. has often classified these loading areas as ``loading racks''. E.P.A. has promised to further clarify exactly what constitutes a ``loading rack'', however, that has yet to be done.

An additional concern of PMAA is the exorbitant and costly ``loading rack'' secondary containment requirements. E.P.A. often requires these small loading areas or loading racks to install thousands of gallons of secondary containment. It should be noted that spills at bulk plants are rare. However, when a spill does occur, the spill quantity rarely exceeds 40 gallons. PMAA believes secondary containment is needed for bulk plant truck loading, but it is clearly excessive to require thousands of gallons of containment when the reality is that spills are often a fraction of the E.P.A. required containment amount. Specifically, the E.P.A. rule requires that the loading rack be designed to secondarily contain the entire capacity of any compartment of a truck loading at the rack. Some cargo tank trucks have a capacity of over 5,000 gallons.

U.S Department of Transportation (D.O.T.) rules require that the truck driver be within 25 feet of the loading shut-off valve at all times when loading. Because of this, the only conceivable benefit of the SPCC loading rack containment rule is to protect against a catastrophic sidewall failure of the cargo tank truck. PMAA is unaware of any occurrence of such a ``catastrophic'' cargo tank side wall failure at a bulk plant loading rack. Stated more succinctly, E.P.A. is imposing a very costly mandate with virtually no corresponding benefit or warranted need. The industry is being required to spend large sums of money to protect against an event that, to our knowledge, has never occurred.

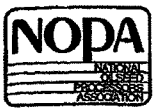
Equally important to our industry and consumers, alike, is the issue of petroleum storage capacity and the impact that such storage has on fuel availability and price stability. According to studies done by the U.S. Energy Information Administration (E.I.A.), the current fuel storage capacity in the U.S. is declining and expected to further decline due to the economic impact of rules such as the E.P.A. SPCC rule (and other environmental rules affecting the building of new plants and sustenance of existing plants). The U.S. cannot afford to further reduce storage capacity at a time when demand is at an all-time high. Hurricane Katrina demonstrated all too vividly the impact that natural disasters have and the need for adequate local inventories.

According to an E.I.A. report issued on December 6, 2005, ``while demand generally drove 2004 energy prices higher, in 2005 the price increases were more the result of supply concerns because of the hurricane losses, as well as the reduction in world oil spare capacity, which fell to its lowest level in three decades.'' In addition to the general concerns about declining storage capacity for motor fuels, the issue is equally threatening to heating fuel supplies and those consumers who rely heavily on their ability to get product when needed.

Currently, over 8.1 million people use home heating oil. The E.P.A. SPCC rule will certainly cause a reduction in existing and future heating fuel storage. Because much of the demand for home heating oil is in the Northeast, the ability to move product becomes a very real problem when the harbors and rivers use to transport heating fuel are frozen and unusable for moving product. During such times, the existing supplies of stored fuel are rapidly used up, with a limited ability to replenish those storage facilities due to the transport problems in the wintertime when demand is highest.

PMAA is very concerned that the impact on storage has not been adequately considered by the agency because some of the requirements would pose a direct threat to the continued operation of existing storage facilities and would greatly add to the cost of building any new storage facilities.

PMAA urges the Senate to pursue answers and remedies to these concerns, as the impact of a reduction in storage of all fuels will directly impact consumers and the continuity of those entities that rely on fuel for their everyday operations. PMAA also would like to commend Senator Inhofe for his continued important work on issues that have arisen as a result of the E.P.A. SPCC rule.



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July 7, 1999

Superfund Docket
Docket Number SPCC-10P
Mail Code 5203G
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Re: Advance Notice of Proposed Rulemaking on EPA's Spill Prevention, Control and Countermeasure Rule, 64 Fed. Reg. 17227 (April 8, 1999)

Dear Superfund Docket Clerk:

The National Oilseed Processors Association (NOPA) is a national trade association comprised of 14 regular and 23 associate member companies with plants that produce vegetable meals and oils from oilseeds. NOPA's 14 regular member firms process an estimated 1.4 billion bushels of oilseeds annually at 75 plants in 22 states, employing an estimated 4,500 workers.

NOPA members process, handle, and ship vegetable oils and, as a result, have a vital and continuing interest in EPA's regulation of these oils. NOPA applauds EPA's efforts to date to comply with the Edible Oil Regulatory Reform Act (Pub. L. No. 104-55, 33 U.S.C. § 2720) and differentiate between animal fats/vegetable oils and all other oils, including petroleum and other non-petroleum oils. We request that EPA consider these comments in moving forward on the above referenced Advance Notice of Proposed Rulemaking relative to the Agency's Spill Prevention, Control and Countermeasure (SPCC) Rule.

Vegetable oils are essential components of food products produced in the United States. The significant differences between vegetable oils and other oils, warrant regulation of these substances in a different manner. Identical requirements would represent a misapplication of limited industry resources.

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Executive Vice President

A June 28, 1993, report by ENVIRON Corporation, "Environmental Effects of Releases of Animal Fats and Vegetable Oils to Waterways" and an associated Aqua Survey, Inc. study on the aquatic toxicity of petroleum oil and of animal fats and vegetable oils found that, unlike petroleum oils, the presence of animal fats and vegetable oils in the environment does not cause significant or substantial harm. That study reached the following conclusions with respect to the effects of potential discharges of animal fats and vegetable oils:

- They are non-toxic to the environment.
- They are essential components to human and wildlife diets.
- They are readily biodegradable.
- They are not persistent in the environment.
- They have a high Biological Oxygen Demand (BOD), which could result in oxygen deprivation where there is a large spill in a confined body of water that has low flow and dilution.
- They can coat aquatic biota and foul wildlife (e.g., matting of fur or feathers, which may lead to hypothermia).

NOPA continues to seek data regarding the impact of vegetable oils on the environment that will offer new insights to the appropriate regulation of these materials. On the basis of scientific data available to date, however, the only potential environmental harm that may result from spills of these products is the result of potential physical effects of spills of liquids in large quantities. Those potential physical effects consist of (1) the fouling of aquatic biota and wildlife that are exposed to the liquid products in high concentrations; and, (2) the potential oxygen deprivation from the biodegradation of high concentrations of liquid substances in confined and slow-flowing bodies of water. Fouling is not an issue, however, in the case of substances that are solids or congeal in the temperature conditions of the natural environment.

In fact, that vegetable-based oils do not pose the same risk to the environment is illustrated by the fact that soybean-based solvents have been used to clean up petroleum oil spills. Soybean oil ester, through a process called CytoSol*, was used to clean-up fuel oil spilled during the MORRIS J. BERMAN spill in Puerto Rico. A NOAA marine biologist recognized the use of CytoSol* as a "logical application of two environmentally promising technologies." Illinois Soybean Farmer, p. 12 (March/April 1994).

Moreover, the likelihood that a vegetable oil spill of such magnitude will occur is extremely small. The industry's spill prevention efforts have resulted in an excellent environmental record for these products. For example, a review of the data recorded and compiled by the Coast Guard reveals that, from 1986 to 1992, animal fats and vegetable oils together accounted for only about 0.4 percent of the oil spill incidents in and around U.S. waters (both in terms of incidents and their volume). Less than half of those spills were in water. Further, these spills were generally very small. Only 13 of those spills were greater than 1,000 gallons. Put another way, only about 0.02 percent of all oil spill incidents in and around U.S. waters over that time period were spills of animal fats or vegetable oils greater than 1,000 gallons.

In addition to the differences noted above between vegetable oils and petroleum oils, the vegetable oil industry is significantly different from the petroleum industry in other ways warranting disparate regulatory treatment. For example, facilities that handle or store vegetable oils do not share the same characteristics as petroleum refineries and other facilities.

The significant differences between vegetable oils and other oils, warrant regulation of these substances in a different manner. EPA should move forward accordingly and revise its SPCC Rule to differentiate between non-toxic vegetable oils, on the one hand, and all other oils, including toxic petroleum and non-petroleum oils, on the other hand. In particular, EPA should revise its SPCC Rule as follows, consistent with the Edible Oil Regulatory Reform Act:

- include definitions of vegetable oils;
- create a category for vegetable oils separate and distinct from all other oils, including petroleum oil, based on a recognition of their distinct physical, chemical, biological, and other properties, and their environmental effects; and,

- create separate regulatory provisions for facilities handing vegetable oils. Relative to this specific comment, NOPA suggests that EPA move forward with revising of its SPCC Rule as follows:

  - Limit Integrity Testing. Due to the non-corrosive nature of vegetable oils, the integrity testing requirements of 40 CFR 112.7(e)(2)(vi) should be limited to external visual inspections of a vegetable oil tank and its foundation.

  - Increase Storage-Quantity Exemption. Due to the fact that vegetable oils are biodegradable, non-toxic, and not persistent, the few releases that have occurred have had minimal impact on the environment. In consideration of these factors and to lessen the regulatory burden on an industry that has proven itself with an excellent spill history, the storage-quantity exemption of 40 CFR 112.1(d)(2)(ii) should be increased to 10,000 gallons for vegetable oil facilities.

  - Set Minimum Storage-Quantity Determination. A recent EPA guidance document stated that when making the storage-quantity determination for the applicability of the exemption found in 40 CFR 112.1(d)(2)(ii), oil storage containers as small as one quart should be included. Including small container sizes when determining the applicability of the exemption for facilities that handle vegetable oils for listing in an SPCC Plan creates an unnecessary burden on small businesses and consumer establishments such as institutions, restaurants, and retail stores. To lessen the burden, the minimum container size should be set at 500 gallons.

  - Clarify 40 CFR 112.7(e)(4)(iii). 40 CFR 112.7(e)(4)(iii) reads as follows:

    "An interlocking light or physical barrier system, or warning signs, should be provided in loading/unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines."

The rule clearly states that only one system is necessary to prevent vehicular departure. However, some EPA Field Inspectors are misinterpreting this language and telling the regulated community that it must implement multiple systems (e.g., both a warning sign and physical barriers) to comply. NOPA suggests that EPA clarify 40 CFR 112.7(e)(4)(iii) so that there will be consistent interpretation and application that only one system is necessary. For example, the beginning of this provision could be revised to be clear about the requirements, as follows:

> "An interlocking light, physical barrier system, or warning signs, should be provided in loading/unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines."

- Eliminate 40 CFR 112.7(e)(2)(iii)(D) Requirement for Recordkeeping of Uncontaminated Stormwater Discharges. No purpose is served by requiring recordkeeping of uncontaminated storm water discharges from containment areas (40 CFR 112.7(e)(2)(iii)(D)), especially for vegetable oil containment areas. Stormwater is already regulated under the Agency's NPDES rules and is better served under those rules.

- Eliminate 40 CFR 112.4(a) Requirement for Submittal of SPCC Plan. 40 CFR 112.4(a) requires a facility to submit its SPCC plan and other information to the EPA if the facility has an oil release to navigable waters under the following circumstances:

  1. 1,000 gallons or more in a single event; or,

  2. Two events in a 12-month period in harmful quantities, as defined in 40 CFR 110 (the "sheen" rule).

  The first requirement for submittal (i.e., 1000 gallons or more in a single event) should suffice for Agency control and oversight. The second requirement should be eliminated due to the fact that vegetable oil is biodegradable, non-toxic, and not persistent in the environment. A sheen caused by a small amount of vegetable oil on water will not be harmful to human health or the environment and should not serve as a basis for reporting of a vegetable oil release.

- Add Item to 40 CFR 110.5 List of Discharges Deemed Not "Harmful". 40 CFR 110.5 states that the Administrator has determined that the following discharges of oil are not "harmful":

  1. Discharges of oil from a properly functioning vessel engine and any discharges of such oil accumulated in the bilges of a vessel discharged in compliance with MARPOL 73/78, Annex I;

  2. Other discharges of oil permitted under MARPOL 73/78, Annex I; and,

  3. Any discharge of oil explicitly permitted by the Administrator in connection with research, demonstration projects, or studies relating to the prevention, control, or abatement of oil pollution.

  NOPA suggests that one more item be added to this list — vegetable oil released to the navigable waters of the United States in quantities less than 1000 gallons. This addition is justified because vegetable oil is biodegradable, non-toxic, and not persistent in the environment. Historical releases of oil have had minimal impact on the environment. Accordingly, NOPA recommends the following new subsection (d):

  "(d) Any discharge of vegetable oil of less than 1,000 gallons."

NOPA supports EPA's efforts to recognize the differences between animal fats/vegetable oils and all other oils, including petroleum and other non-petroleum oils, as required by the Edible Oil Regulatory Reform Act. We thank you for the opportunity to comment on the Agency's ANPRM relative to the SPCC Rule and look forward to working with you in the future on the matter. Please call me if you have any questions.

Sincerely,

David C. Ailor

David C. Ailor, P.E.
Director of Regulatory Affairs

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Advocacy: the voice of small business in government

February 10, 2006

The Honorable Susan Parker Bodine
Assistant Administrator for the Office
of Solid Waste and Emergency Response
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Re: Spill Prevention, Control and Countermeasure (SPCC) Rule; 70 Fed. Reg..75324 (December 12, 2005); Proposed Amendments; Qualified Facility, Oil-Filled Equipment and Other Revisions; Docket ID No. EPA-HQ-OPA-2005-0001

Dear Ms. Bodine:

We are submitting these comments on the proposed amendments to the Spill Prevention, Control and Countermeasure (SPCC) rule (70 Fed. Reg. 73524, December 12, 2005). The Office of Advocacy supports this proposal to help alleviate substantial small business burdens, while providing improved environmental protection, and offers some specific suggestions for improvement. As you know, we have worked with EPA and the affected industries over the last several years, and look forward to providing relief for hundreds of thousands of small entities by fall 2006.

I. Advocacy Background

Congress established the Office of Advocacy (Advocacy) under Pub. L. 94-305 to represent the views of small business before federal agencies and Congress. Advocacy is an independent office within the Small Business Administration (SBA), so the views expressed by Advocacy do not necessarily reflect the views of the SBA or the Administration. Section 612 of the Regulatory Flexibility Act (RFA) requires Advocacy to monitor agency compliance with the RFA, as amended by the Small Business Regulatory Enforcement Fairness Act.[1] The RFA requires federal agencies to consider the impacts of their regulatory proposals on small entities, and determine whether there are effective alternatives that would reduce the regulatory burden on small entities.

[1] Pub. L. No. 96-354, 94 Stat. 1164 (1980) (codified at 5 U.S.C. §§ 601-612) amended by Subtitle II of the Contract with America Advancement Act, Pub. L No. 104-121, 110 Stat. 857 (1996). 5 U.S.C. § 612(a).

On August 13, 2002, President George W. Bush signed Executive Order 13272 that requires federal agencies to implement policies protecting small entities when writing new rules and regulations.[2] This Executive Order highlights the President's goal of giving "small business owners a voice in the complex and confusing federal regulatory process"[3] by directing agencies to work closely with the Office of Advocacy and properly consider the impact of their regulations on small entities. In addition, Executive Order 13272 authorizes Advocacy to provide comment on draft rules to the agency that has proposed the rule, as well as to the Office of Information and Regulatory Affairs (OIRA) of the Office of Management and Budget.[4] Executive Order 13272 also requires agencies to give every appropriate consideration to any comments provided by Advocacy. Under the Executive Order, the agency must include, in any explanation or discussion accompanying the final rule's publication in the *Federal Register*, the agency's response to any written comments submitted by Advocacy on the proposed rule, unless the agency certifies that the public interest is not served by doing so.[5]

II. SPCC Background

The SPCC rule is designed to prevent discharge of oil into navigable waters of the United States, and to contain those spills after they occur. Facilities subject to this rule must prepare and implement plans that prevent such discharges and respond to spills. The rule applies to all non-transportation related facilities with aboveground storage capacity greater than 1,320 gallons. This includes hundreds of thousands of small businesses, farmers, manufacturers and electrical facilities.[6] We have worked with EPA and the regulated community to identify small business concerns and appropriate regulatory approaches. During this period, EPA has extended the compliance date for the July 2002 amendments in order to allow facilities to come into compliance and to permit EPA to develop and improve the regulations. Advocacy issued its recommendations in June 2004 for a streamlined approach for small facilities with storage of up to 10,000 gallons and oil-filled equipment. This was followed by the two Notices of Data Availability (NODA) on these topics in September 2004.[7] Commenters responded almost unanimously and positively to the small facility and oil-filled equipment approaches, which were intended to address these small business problems, without diminution of the environmental benefits. EPA followed this with the December 2005 proposals that are the subject of these comments.

As related in the June 2004 letter, our concerns center on the professional engineering certification requirements, plan requirements, integrity testing of the bulk containers, oil-filled equipment, and asphalt. This comment letter also addresses three new issues: farms, airports, and oil and gas production facilities.

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[2] Exec. Order. No. 13272 § 1, 67 Fed. Reg. 53,461 (2002).
[3] White House Home Page, *President Bush's Small Business Agenda*, (announced March 19, 2002) (last viewed February 8, 2006) <http://www.whitehouse.gov/infocus/smallbusiness/regulatory.html>.
[4] E.O. 13272, at § 2(c).
[5] *Id.* at § 3(c).
[6] *Spill Prevention Control and Countermeasure (SPCC) Issues, Alternatives and Recommendations (Draft Version 4)*, (September 2003) by Jack Faucett Associates for the Office of Advocacy under contract SBAHQ-00-D-006 at 8.
[7] 69 Fed. Reg. 56182, 56184, September 20, 2004.

III. EPA Should Adopt the Three-Tier Small Facility Approach from the September 2004 Notice of Data Availability

Under the proposed SPCC rule, EPA is allowing small facilities that meet the new "qualified facility" criteria to opt out of the requirement that their SPCC plans be certified by a professional engineer (PE). EPA defines a "qualified facility" as a facility that has a total oil storage capacity of 10,000 gallons or less and a facility that has not had a spill in the last ten years according to the definition found in 40 CFR §112.1(b).[8] The EPA proposal is a commendable step forward in balancing environmental protections with regulatory burdens on industry. However, the Office of Advocacy recommends that EPA amend the proposed SPCC requirements for small facilities to provide additional regulatory relief, as initially advanced by a coalition of small business trade associations and the Office of Advocacy in 2004.[9] As described in our recommendations below, substantial additional relief can be achieved while, at the same time, decreasing oil spill risks through increased regulatory compliance.

Under the Advocacy approach, currently regulated SPCC facilities would be required to meet all substantive SPCC requirements (e.g., secondary containment), but the formal written SPCC plan requirement would be eliminated or revised for facilities with smaller oil storage capacities. The Advocacy approach divides the regulatory community into three categories or tiers based on each facility's oil storage capacity. For facilities with capacities between 1,321 and 5,000 gallons (Tier I), EPA would no longer require an SPCC plan. All other facilities (Tier II representing facilities with 5,001 to 10,000 gallons capacity, and Tier III representing facilities with greater than 10,000 gallons capacity) would be required to prepare an SPCC plan. However, Tier II facilities would no longer be required to have their plans certified by a professional engineer (PE). Advocacy's three-tier proposal was the subject of EPA's September 2004 Notice of Data Availability.[10] Although some commenters wanted to revise the Tier thresholds to encompass additional facilities, the three-tier approach received almost universal approval from commenters on the Notice of Data Availability (NODA). In the December 2005 proposed rule streamlining SPCC requirements, however, EPA proposed the two-tier approach that is discussed below.

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[8] Or, has never had a spill when a facility has been in operation for less than ten years.

[9] Letter from Douglas Greenhaus, National Automobile Dealers Association *et al.*, to David Evans, U.S. Environmental Protection Agency, "Re: Small Facility Alternative to Professional Engineer Certification," January 20, 2004; and Letter from Thomas M. Sullivan, and Kevin Bromberg, U.S. Small Business Administration, to Thomas P. Dunne, U.S. Environmental Protection Agency, "RE: Spill Prevention, Control and Countermeasure (SPCC) Rule; 67 Fed. Reg. 47042 (July 17, 2002); Recommendation for Adoption of Interim Final Rule," June 10, 2004.

[10] 69 Fed. Reg. 56182, September 20, 2004.

1. EPA Should Replace the Two-Tier Approach with the Three-Tier Approach and Improve Environmental Protection

EPA's proposal, like Advocacy's proposal, would also require that all currently regulated SPCC facilities continue to be subject to all substantive SPCC requirements. However, this proposal sets up two tiers for purposes of determining SPCC plan requirements. Unlike Advocacy's proposal, EPA's proposal would not exempt any facilities from the SPCC plan requirement. Instead, facilities with storage capacities of 10,000 gallons or less would no longer be required to have their plans certified by a PE. Under both EPA's and Advocacy's proposals, the requirement for PE-certification of SPCC plans would continue for all facilities with storage capacities greater than 10,000 gallons.

In its final rule, EPA should replace the proposed two-tiered regulatory approach with a three-tiered approach. This recommendation more effectively addresses the relative risks associated with smaller storage capacity facilities. Our recommendation is to adopt Advocacy's June 2004 approach, which sets-up a tiered structure based on a facility's total regulated storage capacity as follows:

- Tier I: 1,321 to 5,000 gallon facilities - No written spill prevention plan required, but must implement compliance with all applicable substantive provisions of the rule.
- Tier II: 5,001 to 10,000 gallon facilities - Written plans required, but no PE-certification requirement. Collaborative EPA/industry "best practices" model plans tailored to sectors having a significant number of similar small facilities.
- Tier III: 10,001 gallon and above facilities - Written PE-certified plans.

Advocacy urges the Agency to exempt one tier of small facilities from the SPCC plan requirement, and to allow larger small facilities the option of using a standardized SPCC plan, designed for their industry. The three-tier scheme produces substantial cost savings, and could improve environmental effectiveness. Furthermore, there are several additional reasons favoring the three-tier approach addressed below.[11]

Table 1. Comparison of Advocacy and EPA SPCC Plan Requirement Proposals

<table>
<tr><th>Storage Capacity (gallons)</th><th>Advocacy</th><th>EPA</th></tr>
<tr><td>1,321 to 5,000</td><td>No SPCC plan</td><td rowspan="2">SPCC plan without PE certification</td></tr>
<tr><td>5,001 to 10,000</td><td>SPCC plan without PE certification</td></tr>
<tr><td>Greater than 10,000</td><td colspan="2">SPCC plan with PE certification</td></tr>
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[11] In addition, we should note that Advocacy recently received an unusually high number of telephone calls from the small business community about their strong support for Advocacy's scheme over the EPA proposal. This highlights the importance to the small business community of making this modification.

As identified in Table 1 above, the difference between the two approaches is that no plan is required for small facilities under 5,001 gallons in the Advocacy plan. Although the Advocacy proposal received almost universal approval from NODA commenters,[12] EPA rejected this approach in the preamble with a very brief statement that commenters did not explain how compliance could be ensured without a plan: "the Agency believes that without the owner/operator developing a Plan or documentation on how the facility will comply with the SPCC requirements, it will be challenging for the facility to both meet the substantive requirements..., as well as provide documentation to the regulators that the facility is in compliance" (70 Fed. Reg. 73524, 73533, December 12, 2005). However, EPA's rationale for rejecting Advocacy's proposal is unconvincing. Facilities that comply with EPA's underground storage tank and hazardous waste rules do so without formal plans. Further, the addition of a compliance checklist suggested recently by some small business groups, could adequately address EPA's concerns.

Based on an analysis of the Advocacy approach performed by E. H. Pechan & Associates (Pechan), estimated total cost savings from Tier I facilities is $390 million and estimated total cost savings from Tier II facilities is $83 million (Pechan, 2006). This approach would save $473 million over the current requirements (Pechan, 2006). Further, the Advocacy approach saves an additional $130 million over the EPA proposal, not an insignificant expenditure. These estimates reflect assumptions that 60 percent of Tier I and II farm facilities do not comply with current SPCC plan requirement and that 30 percent of such nonfarm facilities are noncompliant.[13] The farm noncompliance rate reflects the fact that 61 percent of 858 farmers surveyed by the U.S. Department of Agriculture were not aware of SPCC requirements (USDA, 2005). As such, this is a conservative estimate as there is surely an additional percentage that is aware of SPCC requirements, but does not have an SPCC plan. In lieu of information on the noncompliance percentage for nonfarm facilities, Pechan assumed noncompliance at half the rate estimated for the farm sector. At the same time, Advocacy agrees with EPA that "to the extent that the rule increases the compliance rate by lowering compliance costs, the proposal will have a positive impact on environmental quality" (EPA, 2005 at 6).

a. Analysis of the Oil Spill Data Supports the Adoption of the Three-Tier Scheme

In its own analysis of a 1995 survey of oil storage facilities, EPA noted that "facilities with larger storage capacity are likely to have a greater number of oil spills, larger volumes of oil spilled, and greater cleanup costs" (EPA, 1996). Facilities with smaller storage capacity tend to have smaller tanks or pieces of equipment in relatively simple configurations compared to large oil storage facilities with a network of tanks, equipment, and transmission pipes.[14] Smaller spills are also more likely to be absorbed in place and removed than larger spills. Because the risk of reaching navigable waters is lower for small facilities, and because SPCC plans alone have not

[12] In Pechan's review of the NODA comments, it found widespread support from the regulated community, and no opposition from environmental or public interest groups. The only opposition Pechan found was from trade groups representing professional engineers and individual professional engineers.

[13] EPA agrees that noncompliance exists, but does not estimate the noncompliance rate: "EPA does recognize, however, that there is non-compliance with the SPCC requirements by some portion of the regulated community" (EPA, 2005 at 8).

[14] An example of this type of facility is a quick oil change service facility.

been demonstrated to reduce the oil spill risk to the environment, a cost-effective approach to reducing risk should address ways to reduce the cost of SPCC plan development for facilities with smaller storage capacities.

Based on an analysis of EPA survey data (Pechan, 2006), facilities with between 1,321 and 5,000 gallons of storage capacity represent 0.3 percent of the total volume of oil spilled (see Table 2). As indicated by the EPA data, the average per facility spill volume for these facilities is approximately 1.6 gallons. EPA's SPCC regulatory analysis estimates that there are more than 235,000 Tier I facilities (EPA, 2005). Given the average facility spill volume and the fact that EPA has been unable to conclude that spill prevention plans lead to spill reductions,[15] it is difficult to assert that the theoretical spill reduction benefits of SPCC plan development will outweigh the substantial cost of plan development for such a large number of very small facilities. Assuming an average small facility plan cost of $3,000,[16] the total cost of the SPCC plan requirement is estimated at $705 million. Spreading this cost over a ten year period, and comparing projected total spill volumes over this period, the cost-effectiveness of total potential spill reductions for Tier I facilities is estimated at $184 per gallon.

Facilities with storage capacities of between 5,001 and 10,000 gallons account for approximately 2 percent of all oil spilled (Pechan, 2006).[17] An analysis of the available EPA data indicates that the average facility with between 5,001 and 10,000 gallons of storage capacity spills 27.3 gallons of oil (EPA, 1996).[18] EPA's SPCC regulatory analysis indicates that there are 86,018 Tier II facilities (EPA, 2005). Because Tier II facilities represent a significantly higher per facility spill volume and a significantly lower facility count, the theoretical cost-effectiveness of an SPCC plan would be considerably higher for these facilities than Tier I facilities. Using analogous assumptions to those used above, the cost-effectiveness of total potential Tier II facility spill reductions is estimated at $10.98 per gallon. Erring on the side of environmental protection, Advocacy recommends that EPA require that Tier II facilities prepare SPCC plans. However, the theoretical cost-effectiveness for these facilities will be considerably lower than for facilities with storage capacities above 10,000 gallons, which have average per facility spill volumes of

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[15] Based on an analysis of survey data collected from facilities subject to SPCC regulation, EPA was unable to conclude that the a written spill prevention (or spill response) plan is effective in minimizing oil spill risk to the environment (EPA, 1996). However, EPA was able to conclude that other specific spill prevention/control measures (e.g. secondary containment) are effective in minimizing this risk.

[16] JFA reports that small facility plan costs range between $2,500 to $3,500; although the source for these estimates is not documented. Additional support for the $3,000 estimate is provided by the fact that $3,100 was the median of the total plan cost estimates provided by commenters to EPA's Notices of Data Availability (69 Fed. Reg. 56182, September 20, 2004 and 69 Fed. Reg. 56184, September 20, 2004). See (Pechan, 2006) at 3.

[17] Note that the JFA, 2004 report estimated the percentage of total spill volume for facilities between 1,321 and 10,000 gallons as less than 0.2 percent. The values reported herein reflect estimates derived from actual per facility spill volume by storage capacity reported in EPA, 1996 and facility counts by storage capacity category from EPA, 2005.

[18] Because the EPA-reported data could not be used to calculate weighted average per facility spill volumes, Pechan calculated the average of the per facility spill volumes for each storage capacity range: 1,500-2,000 gal (0.59 gal); 2,000-2,500 gal (0.85 gal); 2,500-3,000 gal (0.09); 3,000-4,000 gal (6.03 gal); and 4,000-5,000 gal (0.63 gal). The EPA survey results are not well documented, but appear to include both facilities with spills and facilities without spills.

2,372 gallons, and fewer facilities than Tier II.[19] Therefore, Advocacy recommends that SPCC plans for facilities with between 5,001 and 10,000 gallons of capacity not require PE certification. The removal of the SPCC plan PE certification requirement for these facilities is estimated by EPA to result in average savings of $2,000 for new plans and $750 for plan amendments (EPA, 2005).

Table 2. Comparison of Facility and Spill Volume Estimates by Storage Capacity

	1,321 to 5,000 gallons	5,001 to 10,000 gallons	Greater than 10,000 gallons
% of Facilities	38.1	13.9	48.0
% of Spill Volume	0.3	2.0	97.6

b. Tier II Facilities Do Not Need A Professional Engineer to Design and Implement a Plan

Tier II facilities are unlikely to need the services of a PE to prepare an effective SPCC plan because they typically have simple storage tank layouts with tanks that are not interconnected, which both reduces the likelihood of a significant spill and simplifies spill prevention planning. A model "best practices" plan can be developed through collaborative efforts between EPA and the potentially impacted/regulated industries, including industry trade associations that employ PEs.[20] This approach has proved successful under EPA's small quantity generator hazardous waste, underground storage tank, and Clean Air Act section 112(r) accidental release regulatory programs. For example, new car dealers currently implement small quantity generator requirements, which include similar tank maintenance and inspection requirements, without a PE. While we do not expect new car dealers to be able to draw up their own SPCC plans, dealerships will not need a PE to implement model plans that have been drawn up by PEs for their use. In other words, merely because a car dealership cannot design secondary containment around its outside diesel tank, doesn't mean that it is unable to follow directions as to how to build and maintain concrete barriers around its tanks.

c. The Three-Tier Plan Provides an Incentive to Reduce Unnecessary Storage and Expands the Availability of Professional Engineers for Larger Facilities

The inclusion of storage capacity-based exemptions from all or certain SPCC plan requirements is likely to cause facilities to reduce or eliminate unnecessary oil storage. In these cases, the facility benefits in terms of reduced compliance costs, while the public benefits from reduced environmental risks from oil spills. Eliminating or reducing the SPCC plan requirements for small storage capacity facilities will also result in the beneficial side effect of improving the

[19] Note that EPA reported data could not be used to calculate weighted average per facility spill volumes. Therefore, the average represents the simple average of the per facility spill volumes for each of 20 individual storage capacity ranges.

[20] Tim Laughlin, a professional engineer and Technical Director for the North Carolina Petroleum Marketers Association, has prepared a SPCC model plan. Also, members of the Environmental Committee of the American Bakers Association have designed a model plan for bakers.

quality and lowering the costs of plans for larger facilities as reduced demand for PEs will result in greater availability of qualified PEs.

d. The Checklist Approach Will Assure Compliance with Applicable Regulations

The heart of EPA's rejection of the three-tier approach is the Agency's fear that firms would not know how to comply with the regulations without a plan. Besides the fact that this is performed by millions of small firms already for a variety of other EPA rules, EPA could choose to require that facilities maintain a single page checklist developed by the Agency to ensure compliance with the relevant requirements. We recommend that Tier I facilities be required to provide a one-time self-certification via a checklist that the facility: (1) has conducted required periodic visual inspections of their storage tanks; (2) has complied with EPA's secondary containment requirements; and (3) has prepared an appropriate contingency plan to address the facility's planned response to a spill event. This checklist will provide EPA with documentation that the facility is in compliance with SPCC requirements and fully addresses EPA's expressed concern with the three-tier scheme.[21]

e. Alternatively, EPA Could Adopt the Proposed Two-Tier Scheme

As a less preferred alternative, Advocacy recommends that EPA adopt its proposed two-tier scheme. This does have most of the advantages discussed above for the three-tier scheme, and adds the requirement of a plan for Tier I facilities. Therefore, it adds some cost and complexity for the Tier I facilities compared to the three-tier alternative, but it unquestionably is a substantial improvement over the current scheme, and would be welcomed by many small business facilities. EPA needs to seriously consider whether a checklist scheme would adequately substitute for its plan requirement. Further, if EPA retains its two-tier proposal, the agency should consider eliminating the site visit and facility diagram requirement from the very smallest (i.e., Tier I–under 5,001 gallons) facilities, as a means of reducing the cost and complexity of the two-tier EPA scheme.

2. <u>EPA Should Eliminate the Spill History Requirement or Limit Requirement to Three Years</u>

EPA adopted the ten-year spill history requirement from the Utility Solid Waste Activities Group (USWAG)'s proposal for addressing oil-filled equipment. As USWAG explains in its comments to be filed on this proposal, this approach is truly not applicable to small facilities. Advocacy has received substantial adverse feedback from the small business associations on this requirement, which was not part of Advocacy's original small facility scheme. At a minimum, EPA should reduce the current ten-year spill history requirement for small facilities to 3 years. EPA should consider a shorter time-frame because unlike oil-filled equipment, which is often owned/operated by large firms (e.g. utilities), compiling and documenting a small facility's spill history for such a lengthy time-frame can represent a substantial burden. Furthermore, recordkeeping for SPCC purposes is required only for a three-year period. Under the Office of

[21] In addition, the self-certification would also be applicable to the current requirement to certify compliance with the 2002 amendments and any plan amendments for qualified facilities with a plan. We also believe that the five year review should not be applicable to qualified facilities because such facilities do not often make changes, and the required amendments would keep such plans up-to-date in any event.

Management and Budget (OMB)'s paperwork policy, recordkeeping requirements in excess of three years may be mandated only in exceptional circumstances. This provision does not warrant this level of burden.

Therefore, Advocacy recommends that EPA revise the no-spill criterion to cover only the preceding three-year period. This shorter time-frame is appropriate because: (1) OMB policy generally only requires recordkeeping for this period; (2) the lengthier period would penalize small facilities that have successfully implemented recent spill prevention measures in response to earlier spill incidents; and (3) evidence indicates that small facility spills are of much lesser volumes. EPA should set less stringent standards that recognize the lower environmental risk of smaller facilities. Further, as the current SPCC rule provides, Regional Administrators have the flexibility to impose additional requirements on any facility, as needed.

In addition, because the purpose of the SPCC is to reduce the environmental harm from oil discharges that reach navigable waters, EPA should clarify that the spill history requirement pertains only to spills that actually reached navigable waters.

3. Revise Integrity Testing Requirement

EPA is proposing to allow owners and operators of qualified facilities to rely on industry standards to determine the type and frequency of integrity testing required for a particular size storage container and configuration. The Agency proposes to allow qualified facilities to make this determination in accordance with industry standards without the need to develop a PE-approved environmentally equivalent deviation, as is currently required under §112.7(a)(2). In the proposed SPCC regulation, EPA cites the Steel Tank Institute's SP001 as an example of a relevant industry standard.

The current SP001 standard allows periodic visual inspections for shop-fabricated aboveground storage tanks with a total capacity of 5,000 gallons, and for which there is spill control and a continuous release detection method (i.e., Category 1 tanks). Advocacy recommends that EPA permit qualified facilities to conduct periodic visual inspections for shop-fabricated aboveground storage tanks that have an oil storage capacity up to 10,000 gallons. This recommendation is appropriate because of the small risk of an oil spill reaching navigable waters due to the SP001 standard requiring that the relevant tanks have a continuous release detection method and secondary containment. Advocacy also believes that this revision will enhance the understanding of SPCC regulatory requirements, and, therefore, increase regulatory compliance by making the visual inspection applicability determination based on the same storage capacity threshold as used in defining a "qualified facility."

With these proposed revisions, EPA will effectively address the reality of the low compliance rate among small facilities by creating a practical approach that enhances environmental protection by increasing small facility SPCC regulation compliance.

IV. Advocacy Supports Proposal to Allow Facilities to Employ Contingency Planning In Lieu of Secondary Containment for Oil-Filled Equipment

EPA proposes to amend the SPCC regulations to provide a definition of oil-filled operational equipment and an optional alternative to the general secondary containment requirements for oil-filled operational equipment that meets certain qualifying criteria (hereafter referred to as "qualified oil-filled operational equipment"). In lieu of providing secondary containment, the proposal would allow facilities with qualified oil-filled operational equipment to have the alternative of preparing an oil spill contingency plan and a written commitment of manpower, equipment and materials to expeditiously control and remove any oil discharged that may be harmful, without having to make an individual impracticability determination as required in section 112.7(d). The facility would also be required to establish and document an inspection or monitoring program for the qualified oil-filled operational equipment to detect equipment failure and/or a discharge.

EPA's proposed rule offers the following definition for oil-filled operational equipment as:

> "...equipment which includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device. Oil-filled operational equipment is not considered a bulk storage container, and does not include oil-filled manufacturing equipment (flow-through process)" (70 Fed. Reg. 73524, 73550, December 12, 2005).

Under EPA's proposal, to be considered as qualified oil-filled operational equipment, a facility must consider the equipment's reportable discharge history. The qualified oil-filled operational equipment criteria specifically requires that the facility had no discharges as described in section 112.1(b) from any oil-filled operational equipment in the ten years prior to the SPCC Plan certification date, or, if the facility has been in operation for less than ten years, since becoming subject to 40 CFR part 112 (70 Fed. Reg. 73524, 73533, December 12, 2005).

The EPA economic analysis finds that using the alternative to the current regulation's secondary containment requirements results in annual per-facility cost savings of $9,000 to $61,000 for new facilities, depending on a facility's size and other characteristics (EPA, 2005). EPA estimates that this provision would reduce compliance costs by as much as $56.7 million and $45.9 million per year, discounted at 3 percent and 7 percent, respectively. These estimates reflect the difference between the cost of secondary containment and the cost of preparing a contingency plan and a written commitment of manpower, equipment and materials for the projected annual number of new electric utility sector facilities with qualifying equipment.[22]

EPA's proposal is based in large part on the USWAG scheme that was the subject of EPA's oil-filled equipment NODA,[23] which included the requirement that the oil-filled equipment not be subject to any spills within the last ten years or within the time period the facility has been

[22] EPA acknowledges that this number understates the true count because it excludes the number of new facilities outside the electric utility sector.
[23] 69 Fed. Reg. 56184, September 20, 2004.

subject to the SPCC rule. EPA's proposed approach is justified because of the lower risk posed by qualifying oil-filled equipment.

There are a number of characteristics that make oil discharges from oil-filled electrical equipment a lower risk for environmental harm than discharges from bulk storage tanks. These features include:

- Equipment is constructed using heavier and more corrosion resistant steel and is built to resist greater pressure differentials than tanks;
- Thorough equipment pre-installation testing and frequent inspection during use (e.g., utilities typically conduct monthly inspections and periodic testing of equipment);
- Dielectric fluid is generally mineral oil, which is far less toxic than more conventional petroleum products;
- Oil is much less frequently added/removed than with tank storage;[24]
- Equipment is self-monitoring – a loss of dielectric fluid leads to equipment failure and an interruption in transmission of electrical power. The equipment at electrical substations is also typically equipped with remotely monitored low level and high temperature alarms; and
- Substation electrical equipment is typically surrounded by a gravel bed. In addition to fire safety benefits of this design, the gravel beds provide a significant restriction to movement of any oil that may be released, further reducing the probability of a Section 112(b) discharge (USWAG, 2003).

The strongest evidence that electrical equipment poses a low risk to navigable waters is the historical evidence indicating extremely infrequent discharges to water. The 1991 estimate of the number of discharges to navigable waters from the two million pieces of electrical equipment at nearly 50,000 substations was 10 to 15 per year, and most of these discharges involved very small quantities of oil.[25] By contrast, when EPA's 1988 SPCC Task Force reported on oil discharges into navigable waters from fixed tank facilities, it reported that there were 3,000 reported discharges in 1987, some of which involved tens or hundreds of thousands of gallons.[26]

EPA's new proposal takes these properties of oil-filled operating equipment into account and allows "qualified oil-filled operational equipment" to implement alternatives to the SPCC's secondary containment requirements. EPA defines qualified oil-filled operational equipment as equipment that has "no §112.1(b) discharges from any oil-filled operational equipment in the 10 years prior to the SPCC Plan certification date, or since becoming subject to 40 CFR part 112 if

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[24] EPA's 1995 survey indicates that transfers are a major source of oil discharges (EPA, 1996).

[25] See USWAG 1991 SPCC comments at pages 32, 42-43 (translating these statistics into fewer than 0.003% of equipment larger than 2 to 3 gallons at substations).

[26] See EPA, Oil Spill Prevention, Control, and Countermeasure Task Force Report, Docket No. SPCC-1P-7-1, May 13, 1988, at pages 4-6 to 4-8

the facility has been in operation for less than ten years." 70 Fed. Reg. 73524, 73533, December 12, 2005. Facilities that meet these criteria will be able to avoid secondary containment requirements if they: (1) prepare an oil spill contingency plan consistent with Part 109 and a written commitment to expeditiously control and remove any quantity of oil discharged that may be harmful; and (2) develop and document an appropriate inspection and monitoring program. Advocacy fully supports EPA's proposed revisions because of the relatively insignificant risks associated with oil-filled operating equipment.

V. EPA Should Exempt Motive Power Containers from SPCC

EPA has proposed to exempt motive power containers from regulation. For the purposes of identifying SPCC applicability, EPA's proposed SPCC rule amendments define motive power containers as "onboard bulk storage containers used solely to power the movement of a motor vehicle, or ancillary onboard oil-filled operational equipment used solely to facilitate its operation" (70 Fed. Reg. 73524, 73538, December 12, 2005). Motive power, therefore, generally refers to oil stored in tractors, forklifts, mobile cranes, and other mobile equipment for use by that equipment.[27] We support this proposed revision.[28]

In the preamble to the proposed SPCC rule, EPA notes that motive power storage (if 55 gallons or more storage capacity) could previously have been considered subject to SPCC jurisdiction (70 Fed. Reg. 73524, 73538, December 12, 2005). The agency further notes that it "never intended to cover motive power containers on buses, sport utility vehicles, small construction vehicles, aircraft and farm equipment, or facilities or locations such as heavy equipment dealers, commercial truck dealers, or certain parking lots ...solely because of the presence of motive power containers. Nor does EPA intend to require facilities otherwise subject to the SPCC rule to include motive power containers in their Plans." *Id.* However, EPA is now proposing to exempt all motive power containers from SPCC requirements, and to exclude the storage capacity of motive power equipment from a facility's total storage calculation for purposes of determining SPCC applicability.[29] The Agency has properly determined that it is not practicable to require containment around vehicles that regularly move about a site. In addition, we would expect that the great majority of such containers are regulated by other agencies, such as the Department of Transportation (for vehicles), and local fire code requirements. Duplicative regulation is unnecessary. Advocacy welcomes the Agency's move to exempt motive power containers from SPCC requirements. With respect to long term changes, we believe EPA should also examine exemptions for an expanded version of motive power, specifically, fixed equipment that has moving arms, such as cranes at construction sites. It may not be very practicable to establish secondary containment for large fixed cranes, for example.

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[27] However, EPA has stated that it does not include oil drilling or workover equipment, including rigs because of the large amounts of oil and high flow rates of oil associated with this equipment (70 Fed. Reg. 73524, 73539, December 12, 2005).

[28] We support General Electric's discussion to clarify the scope of the motive power definition to better capture EPA's intent. GE Comments on December 2005 Proposal at 6-7, submitted February 7, 2006.

[29] The proposal clarifies that "oil transfer activities occurring within an SPCC covered facility would continue to be regulated...Regulating a transfer between unregulated motive powers containers and a regulated tank is required by section 112.1(b), which requires that the SPCC rule apply to owners or operators of facilities that transfer oil or oil products" (70 Fed. Reg. 73524, 73538, December 12, 2005).

VI. EPA Should Expand the Proposed Relief for Airport Mobile Refuelers

For the purposes of SPCC applicability, EPA defines an airport mobile refueler as "a vehicle with an onboard bulk storage container designed for, or used to, store and transport fuel for transfer into or from an aircraft or ground service equipment" (70 Fed. Reg. 73524, 73540, December 12, 2005). Under the proposed SPCC rule, EPA would replace the existing *sized* secondary containment requirements for such refuelers with *general* secondary containment requirements.[30] These requirements apply to refuelers at all times.

The airport community has raised security, safety, and logistical concerns with applying SPCC secondary containment requirements to airport mobile refuelers. It is likely that parked refuelers will be clustered together in secondary containment areas when not in use, raising security concerns. There also would be an increased mobile refueler traffic as refuelers travel to secondary containment areas, raising logistical concerns. Further, the additional movement would lead to a rise in accidents, and thereby more, rather than less, oil spills.

It is important to note that there are current Federal Aviation Administration (FAA) regulations that effectively reduce the risk of oil spills from airport mobile refuelers.[31] In addition, EPA's own Storm Water Pollution Prevention Plan program is designed to ensure that pollutants, such as oil and grease, are not transported off-site by storm water. Furthermore, a recent study indicates that larger airports tend to rely on aircraft refueling using hydrants, rather than mobile refuelers (Abt, 2004). Given this latter fact, and because other regulations effectively reduce oil spill risk, it is difficult to imagine that SPCC secondary containment requirements are also needed to reduce oil spill risks when aircraft are not actively being refueled by airport mobile refuelers.

Although the EPA proposal for unsized containment may be helpful, considerable concern still remains about the security, safety and logistical concerns. The Abt report prepared for the agency noted that sized containment was not a common practice, and it is unclear how an unsized requirement would ease compliance. EPA's suggestion that active measures could be used instead of permanent curbing, we suspect, would be ineffective when the personnel are not present near the mobile refueler, as when the tanker is inactive.[32] Advocacy recommends that EPA revise the SPCC's secondary containment requirements so that they apply only when an airport mobile refueler is actively transferring fuel. Even the Agency admits that the fuel transfer is the primary time when oil releases have occurred, and the Agency has provided no data to confirm that spills need to be addressed outside this activity. This revision will address the valid safety, security, and logistical concerns of the airport community and be more commensurate with the level of risk of airport mobile refueler oil spills reaching navigable waters.

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[30] Whereas *sized* secondary containment requires containment for the entire capacity of the largest single container plus sufficient freeboard to contain precipitation, *general* secondary containment must only be designed so that any discharge from a primary containment system will not escape the containment system before cleanup occurs.

[31] For example, the FAA requires that certain airports certify compliance with a standard that requires fueling ramp drainage systems that prohibit surface oil pooling on adjacent ground surfaces when such pooling would create a fire hazard (70 Fed. Reg. 73524, 73540, December 12, 2005).

[32] An active measure requires an action by the facility to prevent a spill from reaching navigable waters, and a passive measure involves a permanent structure designed to prevent spills from reaching such waters

VII. EPA Should Extend the Compliance Date for Farms and Complete Farm Study

We support an extension of time for compliance for all farms. The March 2005 USDA study shows that there is a substantial lack of knowledge about the SPCC requirements at farms and a substantial cost burden imposed by the rule. It is not clear that hundreds of thousands of farms with small unconnected tanks that are miles apart should be treated the same as all other SPCC facilities. Thus, EPA's plan to specifically identify the frequency and causes of oil spills at farms, and the environmental impact of such dischargers is warranted. We look forward to fashioning regulations that fit the oil spill problems identified in actual data from farms, rather than addressing farms just as any other SPCC facility.

VIII. EPA Should Adopt Special Relief for Oil and Gas Production Facilities in Future Rulemaking

EPA's proposed SPCC rule does not adequately address the unique characteristics of the oil and gas (O&G) production industry. In particular, EPA's proposal does not provide sufficient relief to thousands of low risk small O&G facilities, applies overly burdensome secondary containment requirements to O&G flowlines and gathering lines, and improperly excludes produced water from the rule's wastewater exemption. The following discusses SPCC revisions for the O&G industry that EPA should consider in a future rule.[33]

1. Develop Industry-Specific Qualified Facility Thresholds for O&G Producers

While EPA's proposed qualified facility SPCC amendments provide SPCC plan relief to hundreds of thousands of small facilities, they do not provide relief for a significant number of O&G producers. In particular, the qualified facility 10,000 gallon threshold criterion excludes hundreds of thousands of small O&G producing facilities that collectively represent a minimal risk for discharge.[34] Furthermore, most such facilities are in remote locations that are not near navigable waters.

Independent O&G production facilities are generally operated by small entities, which are similar to family farms. Many O&G producing facilities include surplus storage capacity because tanks were sized for early peak oil or condensate production. As production fields mature over time, production rates decrease and produced water volumes increase. The surplus capacity is left in place because tank removal is costly, and the salvage value is low. As a rule of thumb, independent wells are provided with three or four 300-barrel (12,600 gallon) or 400-barrel (16,600 gallon) tanks that can store oil and produced water on an interchangeable basis if production is less than anticipated.

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[33] We understand that EPA is already planning to further address SPCC requirements for this industry after obtaining the results of a forthcoming energy impact study of the 2002 SPCC rule.

[34] According to 2003 National Response Center spill release data, 96.7 percent of crude oil spilled came from sources that generated spills exceeding 1,000 barrels—the average marginal well would require over 450 days to produce this amount of oil.

The O&G industry views the 2002 amendments as a substantial change from previous SPCC requirements. Small production facilities, and particularly the marginal well operations, operate at very small profit margins, like other small facilities subject to the 10,000 gallon threshold. The industry asserts that additional costs imposed by the 2002 rule will result in early plugging of wells. Given that domestic oil and natural gas production is currently being challenged to meet critical domestic demand, EPA should more fully consider devising qualifying facility criteria specific to this sector. The Independent Petroleum Association of America (IPAA) suggests that all O&G facilities associated with marginal wells, as well as facilities with non-marginal wells of up to 50,000 gallons storage capacity be provided qualifying facility status.[35] EPA should seek to reduce the SPCC plan requirement burden on these facilities given their low risk to navigable waters and precarious financial condition. The IPAA specifies a three-tier approach to applying SPCC plan requirements in its comments on EPA's 2004 NODA.[36]

2. Address Impracticality of Secondary Containment Around Flow/Gathering Lines

In addition to better defining the qualifying facility approach with respect to small O&G facilities, EPA should also address the potential high cost and impracticality of secondary containment around flowlines and gathering lines. Although there are no apparent data that support the need for secondary containment, it is clear that this requirement will create a significant disturbance to surrounding lands. According to information provided by IPAA, flow/gathering lines are often located on agricultural lands. Requiring secondary containment for all flow/gathering lines will certainly disrupt agricultural productivity and compromise agricultural equipment safety. One recommendation that EPA should consider is allowing similar alternatives to secondary containment as those that EPA has proposed for oil-filled operational equipment (i.e., establish an inspection or monitoring program to detect equipment failure and/or a discharge; and prepare an oil spill contingency plan, and a written commitment of manpower, equipment and materials to expeditiously control and remove any that may be harmful).

3. Allow Wastewater Exemption for Produced Water Tanks

Another concern that is unique to the O&G sector is that the current rule does not allow the use of the SPCC rule's wastewater exemption for produced water.[37] Because produced water storage tanks contain *de minimis* quantities of oil that do not represent a significant risk for environmental harm to navigable waters, the IPAA recommends that EPA specify that O&G equipment used to treat produced water is subject to the rule's current wastewater exemption. The SPCC rule currently singles out O&G water separation facilities for an increased level of regulation relative to other sectors using similar or nearly identical technologies and treatment goals. The rule subjects hundreds of thousands of produced water vessels to burdensome secondary containment requirements that are unnecessary given the incidental amounts of oil

[35] The O&G industry suggests defining marginal wells as "wells that produce 15 barrels per day or less of crude oil or condensate and/or that produce 90,000 cubic feet per day or less of natural gas and/or that produce 25 barrels per day or less of crude, condensate, or equivalent natural gas and are 95 percent water."

[36] Russell, Barry, Independent Petroleum Association of America, letter to EPA Docket Center, "Re: Docket ID No. OPA-2004-007, Comments Regarding Facility Size Thresholds," November 18, 2004.

[37] Produced water describes water obtained as part of the oil and gas extraction process, and can include formation water, injection water, and any chemicals added downstream or during the oil/water separation process.

they contain and the very small environmental risks they represent. EPA should revise the current rule so that produced water receives the same SPCC exemptions that are afforded to wastewater in other industry sectors.

IX. EPA Should Address Asphalt in Future Guidance or Future Rulemaking

An additional major issue that warrants relief is the exclusion of asphalt cement and hot-mix asphalt from all SPCC-related requirements.[38] This was addressed earlier in some detail in our June 2004 letter. It has long been recognized that the storage of liquid asphalt cement and hot-mix asphalt is not a significant threat to U.S. waters. Advocacy had recommended that asphalt cement and hot-mix asphalt not be subject to any SPCC requirements in that letter. More specifically, we recommended that EPA (1) eliminate asphalt cement and hot-mix asphalt from the calculation of the 1,320 gallon site-based threshold, and (2) eliminate all requirements relating to the asphalt cement and hot-mix asphalt containers and silos.

Another approach would be for EPA to draft guidance that would advise facilities to rely on active measures to stop any spill from reaching navigable waters, instead of the more expensive measures such as secondary containment. Revising the guidance would help alleviate the problem for facilities handling asphalt.

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[38] This has been discussed extensively in correspondence with the agency. See Comments on EPA's Notice of Data Availability, Associated General Contractors of America, November 19, 2004; Letter from National Asphalt Paving Association and Associated General Contractors of America to Peter Truitt, EPA, April 14, 2004; Abt Associates Memorandum to Peter Truitt, EPA, February 26, 2004; Gary Fore, National Asphalt Paving Association, Memorandum to Peter Truitt, February 26, 2004; Letter from Norbert Dee, National Petrochemical and Refiners Association to Dave Evans, EPA, June 3, 2004.

VIII. Conclusion

We are very pleased to have been able to work closely with EPA in developing these recommendations, and congratulate the agency on its excellent proposal. We have heard directly from the small business community that improving the SPCC program is a very high priority. EPA has the opportunity to reduce the costs of the SPCC rule by hundreds of millions of dollars, increase compliance with the SPCC rule requirements and focus efforts on measures that will prevent more oil spills reaching navigable waters. We look forward to working with the agency on promulgating this rule in late 2006 and completing other future regulatory improvements. Thank you for your consideration and please do not hesitate to contact me or Kevin Bromberg of my staff at 202-205-6964 or kevin.bromberg@sba.gov.

Sincerely,

Thomas M. Sullivan
Chief Counsel for Advocacy

Kevin Bromberg
Assistant Chief Counsel

Enclosures: "Proposed Reforms to the SPCC Professional Engineer Certification Requirement: Designing a More Cost Effective Approach for Small Facilities" (June 2004) by Jack Faucett Associates for the Office of Advocacy under contract SBAHQ-00-D-006, available at http://www.sba.gov/advo/

Pechan, 2006: E.H. Pechan & Associates, Inc. "Proposed Reforms to Spill Prevention Control and Countermeasures (SPCC) Regulations, Technical Memorandum," prepared for U.S. Small Business Administration, Office of Advocacy, Durham, NC. February 2006.

cc w/o enclosure:
Donald Arbuckle, Acting Administrator, Office of Information and Regulatory Affairs, OMB

REGULATORY ANALYSIS FOR THE PROPOSED REVISIONS TO THE OIL POLLUTION PREVENTION REGULATION (40 CFR PART 112)

U. S. Environmental Protection Agency
Office of Solid Waste and Emergency Response
Office of Emergency Management

November 2005

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1.0 Introduction

The Environmental Protection Agency (EPA or the Agency) is today proposing to amend the Spill Prevention, Control, and Countermeasure (SPCC) Plan requirements to reduce the regulatory burden for certain facilities by: providing an option that would allow owner/operators of facilities that store less than 10,000 gallons of oil and meet other qualifying criteria to self-certify their SPCC Plans, in lieu of review and certification by a Professional Engineer; providing an alternative to the secondary containment requirement, without requiring a determination of impracticability, for facilities that have certain types of oil-filled operational equipment equipment; defining and providing an exemption for motive power containers; and exempting airport mobile refuelers from the specifically sized secondary containment requirements for bulk storage containers. In addition, the Agency also proposes to remove and reserve certain SPCC requirements for animal fats and vegetable oils; and proposes a separate extension of the compliance dates for farms. The purpose of the rulemaking is to provide streamlined alternative methods for compliance with oil spill prevention requirements for these entities and to improve net social welfare by reducing the social costs of regulation without significant increase in risk of environmental damage.

The purpose of this analysis is to estimate the reduction in regulatory compliance costs and to qualify the benefits of the proposed rule. EPA requests comments from the public on the costs and benefits of the proposed regulatory changes and alternative options discussed in this proposed rulemaking and the method used to assess them.

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether a regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The order defines "significant regulatory action" as one that is likely to result in a rule that may:

> (1) have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
> (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
> (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
> (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Under the terms of Executive Order 12866, this action has been judged as a "significant regulatory action" because it will have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities. The action was submitted to OMB for review and the Agency prepared this regulatory analysis in support of the proposed requirements.

The remainder of Section 1 provides background information on the Oil Pollution Prevention regulation, identifies the statutory authority for the regulation, summarizes the proposed regulatory changes, and describes the organization of this report.

1.1 Regulatory Background

The Oil Pollution Prevention regulation, at 40 CFR part 112, outlines requirements for prevention of, preparedness for, and response to oil spills. The changes and adjustments considered in this proposed rulemaking would affect the prevention aspect of this regulation, also known as the Spill Prevention, Control, and Countermeasure (SPCC) regulation. The SPCC regulation was originally promulgated on December 11, 1973, at 38 FR 34164, under the authority of section 311(j)(1)(C) of the Clean Water Act (CWA or the Act). The current SPCC regulation establishes procedures, methods, equipment, and other requirements to prevent the discharge of oil from non-transportation-related onshore and offshore facilities with aboveground oil storage capacity greater than 1,320 gallons, or with buried underground oil storage capacity greater than 42,000 gallons. Regulated facilities are also limited to those that, because of their location, could reasonably be expected to discharge oil into the navigable waters of the United States or adjoining shorelines.

The SPCC rule has been amended a number of times since its initial promulgation. On October 22, 1991, the Agency proposed revisions to the SPCC rule.[1] The proposed revisions involved changes in the applicability of the regulation and the required procedures for the completion of SPCC Plans, as well as the addition of a facility notification provision. The proposed rule also reflected changes in the jurisdiction of section 311 of the CWA made by amendments to the Act in 1977 and 1978. On February 17, 1993, the Agency proposed other clarifications and technical changes to the SPCC rule.[2] This second set of proposed changes involved a requirement for Plan submission if an owner or operator invokes a waiver to certain technical requirements of the SPCC rule; provisions for Regional Administrators to require amendments to an SPCC Plan and to require a Plan from an otherwise exempt facility when necessary to achieve the goals of the CWA; and training and methods of evaluating containers for protection against brittle fracture. On December 2, 1997, the Agency proposed further changes to the SPCC rule.[3] The proposed changes were intended to reduce the information collection burden of the rule without creating an adverse impact on public health or the environment. In 2002, EPA published final revisions to the SPCC rule which incorporated many of the proposed amendments in the 1991, 1993, and 1997 proposals. The 2002 final rule also included other changes such as exempting certain completely buried underground tanks and wastewater treatment facilities, and establishing a single 1,320-gallon aboveground storage capacity threshold (eliminated the provision that requires a facility having an aboveground tank greater than 660 gallons to prepare an SPCC Plan). Since then, EPA twice extended the compliance deadlines by eighteen months to provide additional time for the regulated

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[1] 56 FR 54612.

[2] 58 FR 8824

[3] 62 FR 63812.

community to prepare and implement SPCC Plans, and to alleviate the need for individual extension requests.

1.2 Statutory Authority

Section 311(j)(1)(C) of the CWA authorizes the President to issue regulations establishing procedures, methods, equipment, and other requirements to prevent discharges of oil from vessels and facilities and to contain such discharges.[4] By section 2(b)(1) of Executive Order 12777, the President delegated the authority to regulate non-transportation-related onshore facilities under section 311(j)(1)(C) of the Act to EPA.[5] By this same Executive Order the President delegated authority over transportation-related onshore facilities, deepwater ports, and vessels to the U.S. Department of Transportation (DOT), and authority over other offshore facilities, including associated pipelines, to the U.S. Department of the Interior (DOI). A subsequent Memorandum of Understanding (MOU), published July 1, 1994 (59 FR 34102), among EPA, DOT, and DOI, reallocated the responsibility for non-transportation-related offshore facilities that are landward of the coast line to EPA. An earlier MOU between the Secretary of Transportation and the EPA Administrator, dated November 24, 1971 (36 FR 24080), established the definitions of non-transportation-related facilities and transportation-related facilities.

1.3 Proposed Changes to the Rule

EPA proposes the following amendments the SPCC Plan requirements, found at 40 CFR part 112, to reduce the regulatory burden:

Qualified Facilities. EPA proposes to provide streamlined requirements for facilities that meet a set of specified qualifying criteria. Owners and operators of qualified facilities would have the option to self-certify that their SPCC Plan complies with 40 CFR part 112, in lieu of having a Professional Engineer (PE) review and certify their Plan. EPA proposes that an SPCC-regulated facility must meet the following criteria to qualify for this reduced burden option: (1) total facility oil storage capacity of 10,000 gallons or less; and (2) no reportable discharge of oil during the ten years prior to self-certification or since becoming subject to SPCC requirements if the facility has been in operation for less than ten years. Owners and operators of qualified facilities choosing this option may not deviate from any requirement of the SPCC rule under §112.7(a)(2) and may not make impracticability determinations as described under §112.7(d), although flexibility for the security requirements and container integrity testing would be available.

Facilities with Qualified Oil-filled Operational Equipment. EPA proposes to provide owners and operators of facilities with certain types of oil-filled operational equipment the option of preparing an oil spill contingency plan and a written commitment of manpower, equipment, and materials in lieu of providing secondary containment for qualified oil-filled operational equipment, without making an individual impracticability determination as

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[4] 33 U.S.C. 1321(j)(1)(C).

[5] 56 FR 54757 (October 22, 1991), superseding Executive Order 11735, 38 FR 21243.

required in §112.7(d). EPA is proposing to eliminate the current requirement for an individual impracticability determination for oil-filled operational equipment at a facility that has had no discharges as described in §112.1(b) from any oil-filled operational equipment during the ten years prior to the Plan certification date or, since becoming subject to the SPCC requirements if the facility has been in operation for less than ten years.

Facilities with Certain Types of Motive Power Containers. EPA proposes to provide an exemption for certain vehicle bulk fuel tanks and any ancillary on-board oil-filled operational equipment. EPA is proposing to amend the SPCC rule applicability criteria to exempt certain "motive power containers," which means any onboard bulk storage containers used solely to power the movement of a motor vehicle (i.e., fuel tanks), or ancillary onboard oil-filled operational equipment used solely to facilitate its operation (i.e., hydraulic and lubrication operational oil-filled containers). This exemption would not apply to oil drilling or workover equipment, or to transfers of fuel or other oil into motive power containers at an otherwise regulated facility, or to a bulk storage container mounted on a vehicle and used for any purpose other than powering the vehicle itself (e.g., a tanker truck or refueler).

Airport Facilities with Mobile Refuelers. EPA proposes to exempt airport mobile refuelers from the specifically sized bulk storage secondary containment requirements of §112.8(c)(2) and (11). Airport mobile refuelers are vehicles with an onboard bulk storage container designed or used to store and transport fuel for transfer into or from aircraft or ground service equipment. The general secondary containment requirements of §112.7(c) would still apply to the onboard bulk storage containers on airport mobile refuelers and to the transfers associated with this equipment.

Facilities that Handle, Store, or Transport Animal Fats and Vegetable Oils (AFVO). EPA proposes to remove and reserve certain provisions related to AFVO facilities because these provisions do not apply. These provisions were included in the July 2002 revisions to the SPCC rule because the Agency had not proposed separate SPCC requirements for animal fats and vegetable oils for public notice and comment. As a result, the current requirements for petroleum oils were also applied to animal fats and vegetable oils.

Farms. Additionally, EPA proposes to extend the compliance dates for farms with oil storage capacity under 10,000 gallons while the Agency considers whether this sector warrants differentiated requirements under the SPCC rule. The EPA proposes to define a farm in §112.2 as "a tract of land devoted to the production of crops or raising of animals, including fish, which produced and sold, or normally would have produced and sold, $1,000 or more of agricultural products during a year."

1.4 Organization of this Report

The regulatory analysis quantifies changes in regulatory compliance costs for affected facility owners and operators. In addition, EPA examined the potential impacts of the regulatory options on small businesses and oil discharge risk. The remainder of this report is organized as follows:

Section 2 presents the methodology used by EPA to estimate changes in unit compliance costs for the proposed actions;

Section 3 describes the universe of affected facilities;

Section 4 discusses the estimated changes in unit compliance costs of the proposed actions;

Section 5 analyzes the impacts of the proposed regulatory changes on qualified facilities;

Section 6 analyzes the impacts of the proposed regulatory changes on facilities with qualified oil-filled operational equipment;

Section 7 analyzes the impacts of the proposed regulatory changes on facilities with motive power containers;

Section 8 analyzes the impacts of the proposed regulatory changes on airport facilities with mobile refuelers;

Section 9 describes the projected impacts of the proposed actions on human health, welfare, and the environment;

Section 10 presents a summary of the impacts of this proposed rulemaking on small businesses;

Section 11 discusses key limitations of the analysis;

Section 12 presents conclusions of the analysis; and

Appendix I presents an alternative economic impact analysis.

2.0 Methodology

This section presents the methodology used to estimate the economic effects of the proposed rulemaking. Section 2.1 outlines the major steps of the analysis, and Section 2.2 describes the regulatory and economic baseline for the analysis.

2.1 General Approach

In this analysis, EPA estimated the reduction in regulatory unit compliance costs to owners and operators of facilities affected by each of the four major components of the proposed rule:

Qualified facilities with smaller storage capacities;

Facilities with certain types of oil-filled operational equipment;

Facilities with motive power containers.

Facilities with airport mobile refuelers.

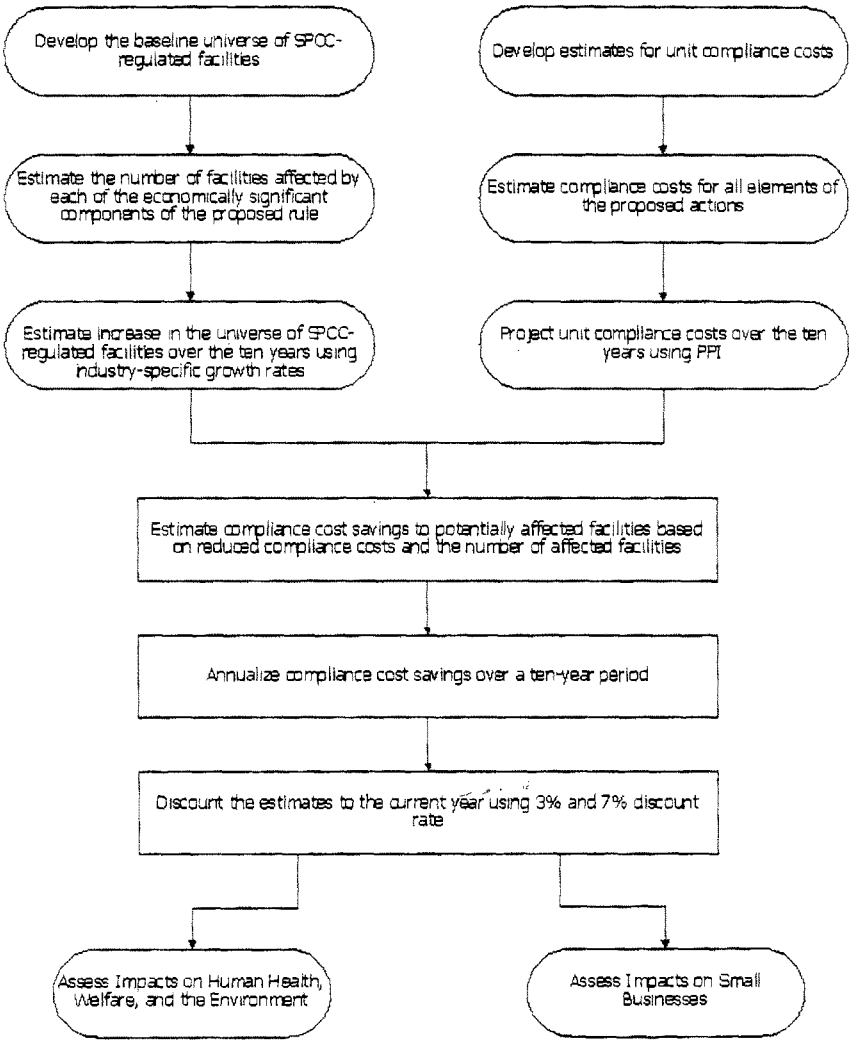
Additionally, EPA estimated the total reduction in regulatory compliance costs across all facilities affected by each of the three major components. The benefits of the major components of the proposed rule were assessed qualitatively and are limited to reductions in social costs accruing from lower compliance costs.

The Agency also assessed the impacts of alternative regulatory options it considered for qualified facilities and facilities with qualified oil-filled operational equipment. The Agency did not analyze cost savings associated with non-substantive changes to requirements for facilities that handle, store, or transport fats and vegetable oils or the proposed extension of the compliance dates for farms.

The Agency considered the potential impacts of the proposed rule and alternative options on the risk of oil discharges, which could lead to harmful environmental, human health, and welfare consequences. Because of the lack of data on regulated entities and their likely response to the regulatory options, the magnitude of such risks is highly uncertain but likely to be low because of the safeguards built into the proposal. In addition, to the extent that the rule increases the compliance rate by lowering compliance costs, the proposal will have a positive impact on environmental quality. Therefore, EPA examined only the general nature of the proposed rule and alternative options to assess their possible effects on risk. EPA does not expect this rule to cause any significant increase in risks. Conclusions about these environmental costs are explained in Section 8.

Exhibit 2-1 provides an overview of the main steps used to estimate the compliance cost impacts of the proposed rule.

Exhibit 2-1
Main Steps for Estimating the Economic Effects of the Proposed Rule Changes



2.2 Baseline for the Analysis

The impacts of the proposed regulation depend on the assumed baseline of industry behavior in the absence of a new rulemaking. For the regulatory analysis, EPA developed a baseline to assess the change in compliance costs associated with each of the proposed actions, mutually exclusive of each other. Changes in regulatory behavior caused by the proposed actions are measured relative to this baseline.

EPA is aware of industry concerns regarding potential non-compliance among certain facility sizes or sectors, although no reliable empirical evidence exists to assess the extent and magnitude of such non-compliance. EPA explicitly considered whether to incorporate non-compliance in the 2002 Economic Analysis of the SPCC rule:

> "It is possible that some facilities have misinterpreted the existing regulation and are not currently in full compliance with existing requirements, but there is no practical way to measure the level of non-compliance. Moreover, ...the costs of coming into compliance with the clarified requirements are not properly attributed to this final regulation."

EPA used as its baseline the SPCC rule requirements under 40 CFR part 112, as amended in 2002 (67 FR 47042). The proposed rule does not affect facilities that are not already required to meet the standards of the SPCC rule. For the benefit-cost analysis, therefore, EPA is treating these costs as liabilities the regulated entities currently have whether or not they have actually made the capital expenditures to comply. In this analytical construct, these firms are simply delaying the expenditures for the costs they already carry. Therefore, EPA used as its baseline the requirements under 40 CFR part 112 ("SPCC rule"), as amended in 2002 (67 FR 47042). EPA does recognize, however, that there is non-compliance with the SPCC requirements by some portion of the regulated community.

The benefit-cost analysis presented here accounts for the reductions in social costs resulting from this rule. EPA recognizes, however, that actual changes in expenditures depend on the degree of compliance with SPCC requirements by the facilities that would be affected by this proposal. Existing facilities that are out of compliance with the current rule would potentially face lower expenditures to comply with the proposed rule. To better understand the impacts on these facilities, EPA prepared an alternative economic impact analysis for this rulemaking (see Appendix I).

3.0 Description of SPCC-Regulated Universe

This section describes the universe of facilities subject to current and proposed SPCC regulations. Estimating the number of regulated entities is not straightforward. The SPCC rule does not include a notification requirement and, with certain exceptions, owners and operators do not submit their SPCC Plans to EPA. The Agency has invested considerable resources into estimating the number of entities affected by the SPCC rule.

3.1 Previously Developed Estimates

In 1991, EPA published the "Spill Prevention, Control, and Countermeasures Facilities Study," which summarized information on small, medium, and large facilities in 16 industry sectors that store oil aboveground and underground. For each of these sectors, EPA collected and evaluated data from ten states on medium and large facilities. Information on small facilities came from New York. In the end, the 1991 study estimated the number of facilities based on extrapolation of data from four state databases (Illinois, California, Maryland, and New York) to the nation.

In 1995, EPA conducted a survey of approximately 30,000 facilities in the industries covered by the 1991 study. The 1995 survey yielded detailed information about the oil storage characteristics of the surveyed facilities, and was designed to allow statistical extrapolation to a broader universe. EPA compared the results of the 1995 survey to the 1991 facility study and to a 1989 American Petroleum Institute report and calculated a 1996 Adjusted National Estimate, which has been the basis of EPA's approximation of the number of facilities regulated by the SPCC Program.[6]

3.2 Estimation Methodology

Since 2004, EPA has evaluated recent data on SPCC-regulated facilities and updated its estimates. Since data were not available for all states, the basic estimation procedure involved extrapolating from eight state databases using information from the U.S. Census Bureau. The estimates of the SPCC universe were developed for 31 industry sectors (see Exhibit 3-1).

3.2.1 Basic Estimation Methodology

For many industry sectors affected by the SPCC rule, the basic estimation methodology used to update the regulated universe estimates is similar to that used in the 1991 facilities study. EPA used eight primary state databases (Florida, Kansas, Maryland, Minnesota, New York, Oklahoma, Virginia, and Wisconsin) to determine the number of SPCC-regulated facilities in the state for each industry sector for the following capacity tiers:[7]

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[6] Analysis of the Number of Facilities Regulated by EPA's SPCC Program http://www.epa.gov/oilspill/pdfs/pap_tpop.pdf.

[7] Data from Illinois were not used in the current estimates because the latest version of the Illinois database did not include capacity information for two-thirds of the records, which is critical to estimating the universe of SPCC-regulated facilities. The California database was not used because it had missing capacity information for one-fifth of the records, and the Aboveground Storage Tanks (ASTs) and Underground Storage Tanks (USTs) were not differentiated.

Category I total oil storage capacity from 1,320 gallons to 10,000 gallons,

Category II total oil storage capacity from 10,001 gallons to 42,000 gallons,

Category III total oil storage capacity of 42,001 gallons to 1,000,000 gallons, and

Category IV total oil storage capacity of greater than 1,000,000 gallons.

To assign industry sectors, the information in state databases was matched with the Dun & Bradstreet (D&B) Market Spectrum database.[8] To extrapolate the estimates to the entire country, these values were multiplied by a facility ratio. EPA computed this ratio for all the capacity tiers except Category I facilities by dividing the total number of facilities in United States in the industry sector by the total number of facilities in the eight states. Specifically, the Agency calculated the total number of SPCC-regulated facilities in the eight states and multiplied that number by the facility ratios (i.e., the total number of U.S. facilities in each industry sector divided by the total number of facilities in these states).[9] Because the Maryland database did not include information on Category I facilities, the ratio for Category I facilities was calculated using the remaining seven state databases.

In the 1991 facilities study, the estimate for the smallest facilities was calculated separately for most industry sectors using the New York Major Facilities database, because this database had a good representation of such facilities. The 1991 study could not use this database for estimating the overall universe because there were no industry sectors provided in the database. For EPA's current estimates, EPA was able to obtain industry sector information from the D&B database, and used the New York database to estimate the number of SPCC-regulated facilities across all capacity tiers.

3.2.2 Industry-Specific Estimation Methodology

A different estimation approach was used for industry sectors for which the Agency had federal or proprietary data. Specifically, EPA used sources other than state databases to estimate the number of potentially SPCC-regulated facilities in the following industries: petroleum bulk stations and terminals, fuel oil dealers, pipelines, petroleum refinery and related

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[8] The following facilities and tanks were not considered in the estimation: facilities with less than 1,320 gallons of storage, tanks with less than 55 gallons of storage, completely buried underground tanks, tanks subject to EPA UST requirements, inactive tanks, and tanks that did not store oil substances. Not all the facilities in the state databases were matched with D&B because of resource constraints. EPA assumed that the matched facilities were representative of the SPCC regulated facilities and applied the percentage industry distribution of the matched facilities to all regulated facilities in the databases.

[9] When information was available from multiple states for an industry sector, the 1991 facilities study extrapolated from each of the states separately and used the mid-point as the "best estimate." EPA's current approach is equivalent to using the average ratio for all states for which EPA had data, rather than the average of the absolute numbers of facilities in a specific industry sector as was done in the 1991 study. The Agency believes that chosen approach would give a more reliable "best estimate" because the extrapoletion would be based on a larger number of facilities combining data from more than one state. This approach also assumes that if there are no observations for an industry sector in the database, then there are no regulated facilities in that industry sector in the state (rather than assuming that the state database does not cover that industry sector).

industries, oil and gas production, farms, electric utilities, and manufacturing facilities handling or storing animal fats and vegetable oils.

EPA used data from the 2002 Economic Census to estimate the number of regulated facilities for the petroleum bulk stations and terminals, fuel oil dealers, pipelines, and petroleum refinery and related industries. As in previous analyses, EPA assumed that all facilities in these industries are regulated under the SPCC rule.

To estimate the number of oil production facilities, EPA used oil-well data obtained from PetroDataSource, Inc. This source maintains data on commercial wells based on federal and state data including tax records and geological surveys. All active oil wells located inland and offshore were included in the estimation. To calculate the total number of oil production facilities, the Agency assumed four wells per facility.[10]

In addition to the oil production facilities, gas production facilities were included in the estimate for the SPCC universe. Some gas wells have tanks for storing condensate oil that is generated as a result of the gas production process. In this analysis, the Agency assumed that all gas wells that store condensate oil exceed 1,320 gallons of storage capacity. EPA found that among the states with the largest percentage of gas wells, Texas, Oklahoma, and Louisiana have condensate oil storage at gas wells. The estimates for the number of SPCC-regulated gas production facilities were calculated based on these assumptions for the percentage of wells that store condensate oil and the number of gas wells per facility (using the total number of gas wells from the PetroDataSource database).

EPA estimated the number of farms by using Census of Agriculture data on production expenses related to petroleum-related purchases from 2002 and 1997 and on diesel storage data from 1982. In the 2002 Census of Agriculture, the expenditure data were available only in aggregate for all fuels. To arrive at the expenditure on diesel (gasoline) in 2002, the total expenditure on fuels in 2002 were multiplied against the ratio of diesel (gasoline) expenditure to total expenditure from the 1997 data. This methodology assumes that the percentage of diesel (gasoline) expenditure has remained the same from 1997 to 2002. Finally, the total quantity of diesel (gasoline) purchased in 2002 was calculated by dividing the expenditure on diesel (gasoline) by diesel (gasoline) prices. Using 1982 data on fuel storage and expenditures on farms, the ratio of diesel (gasoline) storage with respect to the annual quantity of diesel (gasoline) purchased was calculated. On average approximately one-fifth of the annual quantity of diesel purchased and about one fourth of the annual quantity of gasoline purchased was found to be stored on farms. Since there were no data available on the type of storage aboveground or underground it was assumed that the entire storage was aboveground. The expenditure ranges were converted to capacity ranges and assigned to a percentage of farms that are regulated within the capacity ranges.

EPA calculated the number of SPCC-regulated electric utility plants as a combination of the number of substations and the number of power plants in the United States. The Agency

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[10] The assumption is based on expert opinions from Richard Franklin, a Federal On-Scene Coordinator for EPA Region 6 (02/14/2005),and Mark England, Texas Railroad Commission (05/20/2005), personal communications.

assumed that all electricity generation facilities and substations contain enough oil to be subject to SPCC requirements. The number of electric utility plants was estimated based on data reported by the Energy Information Administration (EIA). The number of substations was estimated based on the number of substations listed by each major utility reporting to the Federal Energy Regulatory Commission (FERC).[11] A national estimate was extrapolated from these data using the ratio of the megawatt hours sold by utilities to the estimated total retail megawatt hours of electricity sold nationwide according to the EIA.

Facilities handling or storing non-petroleum oil are also subject to SPCC regulations. Non-petroleum oil includes animal fats and oils and greases, or fish and marine mammal oils; and, oils of vegetable origin, including oils from seeds, nuts, fruits, and kernels. To estimate the number of facilities that produce and store animal fat and vegetable oil (AFVO), EPA divided industries in three categories: (1) industries that use AFVO as a primary input, (2) industries that use AFVO in moderate amounts, and (3) industries that use AFVO as a minor component of their input.

EPA assumed that all the facilities in the AFVO production industry are subject to SPCC regulations (Category I). The contacted facilities claimed that AFVO is their primary product and they store enough oil to be subject to SPCC. Based on conversations with interviewed facilities, EPA assumed that 20 percent to 90 percent of facilities in the industries involved in vegetable oil processing and refining, animal carcass rendering, and food products (Category II) store enough oil to be subject to the SPCC rule. Industries such as pesticide, paint and coating, printing ink, and soap and other detergent manufacturing (Category III) use vegetable oil as an alternative to their conventional inputs. To account for facilities that use AFVO as a small component of their input, the Agency assumed that 1 percent to 10 percent of facilities in these industries store enough oil to be subject to SPCC.

3.3 Estimated Number of SPCC-Regulated Facilities

In total, EPA estimates that approximately 618,000 facilities are currently regulated under the SPCC rule. Oil production facilities (28 percent), farms (25 percent) and electric utility plants (8 percent) account for most of the SPCC-regulated facilities. The number of SPCC-regulated facilities in each of the industry groups and corresponding NAICS sectors are presented in Exhibit 3-1.

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[11] Major regulated utilities must file FERC Form No. 1, on which utilities report information on their substations and electrical equipment. "Major" is defined as having (1) one million megawatt hours or more, (2) 100 megawatt hours of annual sales for resale; (3) 500 megawatt hours of annual power exchange delivered; or (4) 500 megawatt hours of annual wheeling for others (deliveries plus losses).

Exhibit 3-1

Number of SPCC-Regulated Facilities by Industry Group and Corresponding NAICS Codes

#	Industry Sector	NAICS	Under 5,000 gal	Category I	Category II	Category III	Category IV	Total	Percentage
1	Oil Production	211111	2,749	21,995	118,531	31,160	305	171,992	27.8%
2	Farms	111, 112	127,870	144,608	7,056	569	114	152,347	24.6%
3	Electric Utility Plants	2211	9,702	19,403	19,528	12,879	309	52,120	8.43%
4	Gas Production	211111	657	5,254	28,313	7,443	73	41,083	6.65%
5	Petroleum Refining and Related Industries	324	85	85	212	1,271	424	1,992	0.32%
6	Chemical Mfg	325	636	1,063	941	575	26	2,604	0.42%
7	Food Mfg	311, 312	814	1,676	1,312	510	23	3,520	0 57%
8	Manufacturing facilities using and storing AFVO[1]	311, 325	2,161	2,609	3,433	1,581	0	7,623	1 23%
9	Metal Mfg	331, 332	364	1,635	712	398	0	2,744	0.44%
10	Other Mfg[2]	31-33	5,514	9,020	5,252	1,599	107	15,978	2.58%
11	Real Estate Rental and Leasing	531-533	18,573	23,205	2,937	212	0	26,354	4.26%
12	Retail Trade	441-446, 448, 451-454	11,168	14,271	2,675	819	50	17,814	2 88%
13	Contract Construction	23	7,782	10,752	3,708	703	19	15,182	2.46%
14	Wholesale Trade	42	6,771	9,580	2,971	2,130	98	14,779	2 39%
15	Other Commercial	492,541, 551, 561-562	9,000	10,272	2,826	762	0	13,860	2 24%
16	Transportation	481-488	3,883	7,761	4,353	638	641	13,393	2.17%
17	Arts Entertainment & Recreation	711-713	8,895	11,197	1,215	94	0	12,505	2.02%
18	Other Services (Except Public Administration)	811-813	4,943	6,240	653	162	0	7,055	1.14%
19	Education	611	611	1,006	867	5,047	0	6,920	1 12%

#	Industry Sector	NAICS	Under 5,000 gal	Category I	Category II	Category III	Category IV	Total	Percentage
20	Petroleum Bulk Stations and Terminals	4247	329	564	846	4,369	799	6,577	1.06%
21	Hospitals & Other Health Care	621-624	3,899	5,151	1,188	194	27	6,560	1.06%
22	Accommodation and Food Services	721, 722	3,474	4,419	381	33	0	4,834	0.78%
23	Fuel Oil Dealers	45431	212	318	1,698	2,335	212	4,563	0.74%
24	Gasoline Stations	4471	898	1,950	1,225	791	40	4,005[3]	0.65%
25	Information Finance and Insurance	51, 52	2,530	3,352	514	31	0	3,897	0.63%
26	Mining	212, 213	603	1,297	1,508	321	40	3,167	0.51%
27	Religious Organizations	813110	1,060	1,407	0	0	0	1,407	0.23%
28	Warehousing and Storage	493	341	725	333	306	28	1,392	0.23%
29	Military Installations	928110	39	156	156	284	114	711	0.12%
30	Pipelines	4861, 4869	704	704	0	0	0	704	0.11%
31	Government	92	-	-	552	0	0	552	0.09%
	Total		**235,656**	**321,674**	**215,896**	**77,215**	**3,448**	**618,233**	
	Size Distribution		**38.1%**	**52.0%**	**34.9%**	**12.5%**	**0.6%**	**100%**	

[1] Other Manufacturing includes all manufacturing facilities other than Chemical Manufacturing, Metal Manufacturing, Petroleum Refining and Related Industries, and Food Manufacturing facilities.

[2] Facilities in this sectors are regulated by SPCC because they may store AFVO However, it is likely that some of these facilities are regulated because of their holding of petroleum and related oils. Since there was no way to distinguish these facilities, this amounts to some double counting

[3] The estimated number of gasoline stations is lower than that used for the 2002 rule because most gas stations have underground storage tanks that are exempt from SPCC requirements.

3.4 Projecting SPCC Universe Using Industry Growth Rates

To project the number of existing and new facilities regulated under the SPCC rule over the next ten years (2005 through 2014), EPA used recent estimates of industry-specific growth rates. The Agency calculated industry-specific growth rates using the change in the number of establishments reported in the 1997 and 2002 Economic Censuses for each industry. The data on the number of establishments were obtained and organized by NAICS industry codes. To calculate industry-specific growth rates, EPA linked NAICS sectors to the corresponding industry groups used in the analysis. Exhibit 3-2 provides a list of estimated growth rates for all industry groups included in the analysis.

Exhibit 3-2
Estimated Growth Rates

Industry Group	NAICS	Growth Rate
Oil Production	211111	-1.81%
Farms	111, 112	-0.10%
Electric Utility Plants	2211	4.05%
Gas Production	211111	-1.81%
Transportation	481-488	2.41%
Other Manufacturing[1]	31-33	-0.76%
Contract Construction	23	1.59%
Petroleum Bulk Stations and Terminals	4247	-6.76%
Gasoline Service Stations	4471	-0.87%
Fuel Oil Dealers	45431	-2.43%
Food, Beverage, and Tobacco Manufacturing	311, 312	1.22%
Chemical Manufacturing	325	-0.48%
Metal Manufacturing	331, 332	-0.07%
Hospitals and Other Health Care	621-624	1.72%
Petroleum Refining and Related Industries	324	0.78%
Real Estate Rental and Leasing	531-533	2.32%
Mining	212-213	0.73%
Military Installations[2]	928110	-0.05%
Pipelines	4861, 48691	-2.80%
Retail Trade	441-446, 448, 451-454	0.03%
Wholesale Trade	42	-0.91%
Other Commercial	492, 541, 551, 561-562	4.40%
Arts, Entertainment, and Recreation	711-713	2.17%
Other Services (Except Public Administration)	811-813	0.68%
Education	611	3.80%
Religious Organizations[2]	813110	-0.05%
Accommodation and Food Services	721-722	0.74%
Information, Finance, and Insurance	51, 52	2.55%
Warehousing and Storage	493	14.2%
Government[2]	92	-0.05%
Manufacturing Industries Producing, Using, and Storing AFVO[3]	311, 325	0.80%

[1] Rate of growth is based on data for all manufacturing sectors due to a large number of various manufacturing sectors included in this category.

[2] Rate of growth is based on all entities due to the lack of data for specific industries in Census.

[3] Rate of growth is based on data for two NAICS sectors that were identified as key industries expected to produce, use, and store AFVO.

In this analysis, the Agency assumed that these rates would be constant over the ten-year analytical period, which may or may not adequately represent the trends for individual sectors. The oil production and farm sectors, in particular, are assumed to continue to decline, based on the changes observed between 1997 and 2002. Industries such as electric utilities (NAICS code 2211) and the transportation sector (NAICS codes 481-488) show positive growth rates. The estimated growth rates suggest an overall increase in the growth of the SPCC universe over the next ten years. Industry groups with a positive growth rate comprise the new facilities that will be subject to SPCC regulations as they start their business.

3.5 Facility Characteristics

For the purpose of this analysis, EPA estimated the number of regulated facilities for four size groups based on oil storage capacity at a facility. EPA classified facilities into capacity tiers to (1) account for differences in the potential compliance costs experienced by facilities of different sizes, and (2) determine the number of facilities affected by each of the proposed changes in the rule based on facility's storage capacity. Exhibit 3-3 summarizes the estimated number of regulated facilities, by size category.

Exhibit 3-3
Number of SPCC-Regulated Facilities by Size

Category	Aggregate Capacity	Number of Facilities
I	1,320 to 10,000 gallons	321,874
II	10,001 to 42,000 gallons	215,896
III	42,001 to 1 million gallons	77,215
IV	greater than 1 million gallons	3,448
Total		**618,233**

All the facilities included in the analysis are further divided in two categories: production facilities (facilities whose operations and oil storage activities primarily involve oil production) and storage facilities (all other industry groups). EPA estimated that approximately 172,000 production facilities and 446,000 storage facilities are subject to SPCC requirements. The Agency developed separate estimates for the unit cost of compliance for production and storage facilities in Categories II through IV.

4.0 Estimated Changes in Unit Compliance Costs

EPA estimated changes in the unit compliance costs for the proposed regulatory actions by comparing the full cost of compliance with the existing regulation to the reduced cost of compliance with less stringent requirements proposed. The Agency identified individual elements of compliance activities affected by the changes in the rule and estimated the cost savings from these changes. Depending on the proposed action, facilities would save part of their compliance cost (in cases where less stringent requirements are applicable) or the entire cost of compliance (in cases when facilities are no longer regulated). This section describes compliance activities affected by the proposed actions and presents unit cost estimates and underlying assumptions for these activities.

The cost of compliance consists of the costs of reporting and recordkeeping activities required by the SPCC regulation and capital and operational costs. Major elements contributing to the cost of compliance are described in this section.

4.1 Recordkeeping and Reporting Activities Costs

Recordkeeping and reporting activities required by the SPCC regulation include new Plan preparation, Plan modification, and Plan maintenance.

4.1.1 Recordkeeping and Reporting Activities

EPA developed unit costs estimates for the following recordkeeping and reporting compliance activities:

Prepare an SPCC Plan (New Facilities)

The owner or operator of a new facility must prepare and implement an SPCC Plan in accordance with the guidelines set forth in 40 CFR part 112 before beginning facility operations. The actual preparation of the Plan involves several separate tasks such as field investigations, a regulatory review, review of existing procedures, Plan preparation, and certification by a PE.

Review the SPCC Plan (Existing Facilities)

An owner or operator of an SPCC-regulated facility is required to review and evaluate his/her Plan at least once every five years. The review of the Plan includes site work, regulatory review, review of existing procedures, preparation of the review report, and PE certification (if needed). An owner or operator is required to amend his/her SPCC Plan within six months of the review to include more effective prevention and control technology if: (1) such technology will significantly reduce the likelihood of a discharge as described in §112.1(b) from the facility; and (2) such technology has been field-proven at the time of the review. If amended, and if the amendments result from technical changes to the facility that affect the risk of a discharge, the Plan must also be certified by a PE prior to implementation. Review cost estimates are applied to an existing facility only, since a new facility would not be required to conduct its review until five years after starting operation.

Submit Plan in the Event of Certain Discharges of Oil

In the event of certain discharges of oil into navigable waters, a facility owner or operator must submit information described in §112.4(a) to the Regional Administrator within 60 days. A discharge of oil occurring within any 12-month period that triggers the §112.4 reporting requirements is:

(1) A single discharge as described in §112.1(b) of more than 1,000 U.S. gallons into navigable waters; or
(2) Two or more discharges as described in §112.1(b), each of which is over 42 gallons.

Section 112.4(c) also requires that the facility submit a copy of this information to the State agency in charge of water pollution control activities for the area in which the facility is located. The Regional Administrator may require the owner or operator of the facility to amend the SPCC Plan to prevent and contain discharges from the facility. Such amendments, if uncontested by the facility, must become part of the Plan thirty days after the Regional Administrator responds to the facility concerning the proposed amendments. The amended Plan must then be certified by a PE prior to implementation. As required by §112.4(e), amendments to the Plan must be implemented as soon as possible, but no later than six months after the amendment becomes part of the Plan. Section 112.4(f) allows a facility to appeal a decision made by the Regional Administrator requiring a Plan amendment.

Revise the SPCC Plan

The facility owner or operator must amend his Plan in accordance with §112.5 whenever there is a change in the facility's design, construction, operation, or maintenance that materially affects the facility's potential for a discharge as described in §112.1(b). Such facility changes may include, but are not limited to: the addition of a new or rebuilt tank; a change in the service of a tank; any physical changes or improvements to the facility; or, the construction of a new well and associated piping. The amended Plan must be certified by a PE prior to implementation. Such amendments to the SPCC Plan must be prepared within six months and implemented as soon as possible, but not later than six months following preparation of the amendment.

Maintain the SPCC Plan and Keep Records

Section 112.3(e) requires the owner or operator to maintain a copy of the SPCC Plan at the facility, if the facility is normally attended for at least four hours per day, or if not, at the nearest field office. The Plan must be available to the Regional Administrator for review during normal working hours (40 CFR 112.3(e)(2)). In addition, a facility is required to maintain (and update) Plan-specific records as outlined under §112.7(e). Recordkeeping includes written procedures and a record of inspections and tests, signed by the appropriate supervisor or inspector, maintained with the SPCC Plan for a period of three years. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this requirement.

4.1.2 PE Certification Cost

The proposed requirements for qualified facilities allows owners and operators of facilities to self-certify their SPCC Plans in lieu of certification by a PE. Therefore, both existing and new facilities may take advantage of the proposed action and save the cost of PE certification. The approach used to develop a cost estimate for PE certification and underlying assumptions are described in this section.

Some facilities are expected to incur costs associated with retaining a PE to certify their SPCC Plans, along with any subsequent technical amendments that are made to the Plan. In certifying the Plan, the PE attests to have examined the facility and that the Plan has been prepared in accordance with good engineering practices that satisfy the SPCC requirements found in 40 CFR part 112. Furthermore, whenever a facility amends its SPCC Plan, any technical amendment must be certified by a PE.

Not all facilities are expected to contract with a PE to have their Plan certified. Some facilities have in-house PEs that can perform this task. EPA assumed that none of the Category I or II facilities have an in-house PE who can certify the facility's Plan and that these facilities need to retain an outside PE. For the other facilities, EPA assumed that only 50 percent of the Category III facilities and 25 percent of the Category IV facilities need to retain an outside PE to certify their SPCC Plans. The percentages are based on the assumption that the larger the facility, the more likely it will have an in-house PE.

The Agency assumed that the cost to a facility to retain an outside PE to certify the SPCC Plan varies by the size of the facility. EPA uses this assumption because a larger facility will likely have a more complex SPCC Plan, and more complex Plan amendments, than a smaller facility.

EPA revised the cost estimate developed for the 2002 final rule for obtaining PE certification of a new SPCC Plan and technical changes to an existing Plan.[12] Exhibit 4-1 summarizes the expected cost for each typical facility to retain a PE and to have a PE certify a new Plan, as well as any subsequent amendments. In-house PE certification costs, where applicable, are included in the burden estimate for recordkeeping and reporting compliance activities.

Exhibit 4-1
Cost to Facilities to Retain an Outside PE for Plan Certification

Type of Facility	New Plan	Amendments
Category I and II	$2,000	$750
Category III	$2,550	$1,030
Category IV	$3,110	$1,310

[12] The revised estimates are based on findings from discussions with several engineering firms.

4.1.3 Wage Rates

EPA estimated that the proposed requirements for facilities with motive power containers and the alternative option for facilities with qualified oil-filled operational equipment would affect a facility's total cost of compliance. Some facilities with qualified oil-filled operational equipment would no longer be regulated by SPCC and save the full cost of compliance. Facilities with motive power containers would take advantage of the proposed action and save a fraction of the full compliance cost. EPA used hourly wage rates for specific labor categories to calculate the per-facility cost associated with the rule's paperwork requirements, which is part of the full compliance cost. The approach used to develop a labor cost estimate is described in this section.

To obtain the cost for each compliance activity performed by a facility, unit time estimates for management, technical, and clerical personnel were multiplied by the hourly wage rate for each labor category and were then added to capital and operation and maintenance (O&M) costs. The labor wage rates for private industry were derived from the Mach 2005 U.S. Department of Labor's Employment Cost Indexes and Levels.[13] The 2005 wage rates include wages and salaries, benefit costs, including paid leave, supplemental pay, insurance, retirement and savings, legally required benefits, severance pay, and supplemental unemployment benefits. These wage rates reflect private industry averages, which were estimated by the Bureau of Labor Statistics (BLS) based on a survey of 35,600 occupations within 8,200 establishments in the private sector. These wage rates reflect industry averages, which may underestimate the actual wages received by some SPCC regulated facility personnel but overestimate the actual wage rate received by other facility personnel. EPA further adjusted these rates to reflect associated overhead costs.[14] The estimated wage rates used in the analysis are:

Management:	$56.40/hour;
Technical:	$47.40/hour; and
Clerical:	$25.00/hour.

4.1.4 Plan Amendment and Discharge Reporting

EPA estimated that the proposed requirements for facilities with motive power containers and/or qualified oil-filled operational equipment affect a facility's total cost of compliance. EPA used several assumptions when estimating the per-facility cost associated with the rule's paperwork requirements, which is part of the full compliance cost. The underlying assumptions used to develop a full compliance cost estimate are described in this section.

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[13] United States Department of Labor, Bureau of Labor Statistics, Employer Costs for Employee Compensation, June 2005.

[14] Overhead costs were computed separately from BLS data and were assumed to be an additional 17 percent of the total wage rate, which is composed of direct wages and salaries and employee benefits, as reported by BLS Adjustments to wage rates for overhead costs are based on the results of several Information Collection Requests that adjusted BLS wage rates by an additional 17 percent based on the results of a survey of chemical industries and trade associations. (See, for example, Information Collection Request for the Toxic Chemical Release Report for the Proposed Lead Rule, EPA ICR #1363.08)

Plan preparation costs affect new facilities that become subject to the SPCC rule. New facilities include those facilities that will initiate operations during the ten-year period considered in the analysis. These facilities are required to prepare and implement their SPCC Plans within one year of initiating facility operations. Therefore, new facilities are assumed to incur the total cost of preparing a Plan in Year 1.

EPA assumed that the formal five-year review of SPCC Plans would affect one-fifth of all existing facilities annually. The total cost incurred by existing facilities for this review is greater if, following the review, the facility must amend its Plan. Based on best professional judgement, EPA estimated that three percent of all existing facilities under the baseline scenario would be required to amend their Plan as a result of five-year reviews.

Some fraction of SPCC-regulated facilities (new and existing) will be required to amend their Plans as a result of discharging oil or modifying their facility. Based on spill data obtained from the Emergency Response Notification System database, EPA estimated that approximately 0.15 percent of all facilities would incur costs each year due to reporting requirements related to an oil discharge. In addition, based on conversations with EPA regional personnel involved with the SPCC program, approximately ten percent of all facilities are estimated to incur recordkeeping and reporting costs annually as a result of facility modifications, independent of those related to the five-year review.

4.2 Capital and Operational Activities Costs

Capital and operational costs include the cost of installing and maintaining secondary containment structures, conducting integrity testing of containers, valves, and piping, conducting spill prevention briefings, providing a drainage system for tank loading/unloading areas, and other activities.

4.2.1 Capital and Operational Activities

EPA developed unit costs estimates for the following capital and operational compliance activities:

Integrity Testing

Sections 112.8(c)(6) and 112.12(c)(6) require the integrity testing of bulk storage containers on a regular schedule and whenever material repairs are done. Section 112.7(d) requires that if the installation of secondary containment is not practicable, the owner or operator must, among other measures, conduct periodic integrity tests for bulk storage containers and periodic integrity and leak testing of associated valves and piping.

Secondary Containment (New Facilities)

Various sections of the rule require secondary containment to prevent discharges of oil to navigable waters and adjoining shorelines. For example, §112.8112.8(c)(2) and 112.12(c)(2) require secondary containment for the entire capacity of the largest single bulk storage container and sufficient freeboard to contain precipitation. Section 112.7(h) requires containment of at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility at a loading or unloading rack. Section 112.7(c) requires appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in §112.1(b). Other secondary containment provisions apply to other circumstances such as those for mobile or portable containers (§112.8(c)(11) and 112.12(c)(11)) or bulk storage containers at production facilities (§112.9(c)(2)).

Other Capital and Operational Activities

EPA estimated costs associated with several other SPCC compliance activities. These costs consist of one-time initial costs to purchase and install equipment as well as costs of ongoing maintenance, upkeep, and training. Compliance activities include:

- *Discharge prevention briefing.* Section 112.7(f)(3) requires owners/operators to schedule and conduct discharge prevention briefings for facility personnel to assure adequate understanding of the SPCC Plan.

- *Drainage system for tank truck loading/unloading areas.* Section 112.7(h)(1) requires a quick drainage system for tank truck loading/unloading areas where rack area drainage does not flow into a catchment basin or treatment facility designed to handle discharges.

- *Valves for drainage from diked areas.* Sections 112.8(b)(2) and 112.12(b)(2) require appropriate drainage from diked areas using valves of manual, open-and-closed design.

- *Drainege systems from undiked areas.* Sections 112.8(b)(3) and 112.12(b)(3) require drainage systems from undiked areas with a potential for a discharge to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility.

- *Requirements for pump transfer.* Sections 112.8(b)(5) and 112.12(b)(5) require that where drainage waters are treated in more than one treatment unit and such treatment is continuous and pump transfer is needed, then two "lift" pumps are provided and at least one of the pumps is permanently installed.

4.2.2 Capital Costs Estimates

EPA developed cost estimates for providing secondary containment at facilities with qualified oil-filled operational equipment and for performing integrity testing at facilities storing less than 10,000 gallons of oil. For other capital activities, the Agency used the cost estimates developed as part of the previous economic analysis.

EPA estimates the one-time cost of implementing secondary containment requirements at new electrical substations at approximately $11,000-$60,000 per facility depending on the facility size. EPA estimates the cost of providing secondary containment at new substations at approximately $1,500 per stand-alone piece of equipment with oil capacity under 1,320 gallons. The unit costs of providing secondary containment were estimated based on an interview with a specialized engineering firm that provides secondary containment to electrical substations and subsequent comments provided by electric utilities. The cost of constructing a secondary containment structure is a one-time capital expenditure assumed to be incurred in the first year. There is some burden associated with maintenance of secondary containment such as debris removal, etc. EPA did not include a cost estimate for this type of activities, as the Agency assumes that the cost for these activities 1) is embedded in the overall facility maintenance costs, and 2) is not significant.

EPA estimates the annualized cost of conducting integrity testing at approximately $120 for Category I facilities, $350 for Category II facilities, $2,640 for Category III facilities, and $15,700 for Category IV facilities. The unit cost of integrity testing was estimated based on interviews with several tank inspectors and engineering firms.[15] The unit cost was estimated at $700, $1,000, $3,000, and $10,000 per tank for Category I, Category II, Category III, and Category IV facilities. The cost of performing integrity testing could vary significantly depending on the container type, capacity, type of oil, and other site-specific factors. For this analysis, EPA assumes that tanks are subject to inspection and integrity testing according to industry standards (e.g., API-653) once every 10 years. In practice, however, the interval between successive inspections depends on the tank and service conditions (in particular on the shell thickness and expected corrosion rate) and can exceed 10 years. The maximum interval between inspections under the API-653 standard is 20 years. Therefore, in some cases, facilities may perform integrity testing less often than every ten years. The SPCC regulation allows the use of environmentally equivalent measures in lieu of inspection and integrity testing by an outside tank inspector, consistent with good engineering practice. Such measures may have lower operational costs. For example, for shop-built containers with a shell capacity of 30,000 gallons or under, combining appropriate visual inspection with elevation of the container such that all sides are visible and corrosion is minimized, may be considered environmentally equivalent. As a result, EPA's analysis may overestimate the cost of integrity testing incurred by an average facility. EPA calculated the total cost of integrity testing per facility by multiplying the cost for a single tank by the number of tanks per facility.[16]

Exhibit 4-2 below summarizes the annualized capital costs that facilities are assumed to incur to comply with SPCC regulations.

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[15] The estimate was based on the interviews with (1) Gary Boley (InterSpec, LLC, an inspection and engineering services firm) in February 2004 and (2) engineering firms that specialize in SPCC-related activities at facilities that store oil, conducted by Abt Associates Inc in July 2005

[16] The number of tanks per facility was estimated using state oil tank databases at 2, 4, 9, and 16 tanks for Category I, II, III, and IV facilities, respectively.

Exhibit 4-2
Estimated Annualized Capital Costs Estimates by Facility Size

Capital Cost Item	Categories I and II	Category III	Category IV
Existing Facilities			
Integrity Testing	$170	$2,640	$15,700
Other Capital	$210	$600-$670	$1,630-$1,880
Total	$380	$3,240-$3,310	$17,300-$17,600
New Facilities			
Integrity Testing	$170	$2,640	$15,700
Secondary Containment Per Facility with Oil-Filled Operational Equipment	$11,000-$60,000		
Secondary Containment Per Piece of Qualified Oil-Filled Operational Equipment	$1,500		
Other Capital Costs	$3,390	$40,200-$43,400	$166,000-$179,000
Total [1]	$14,560	$53,800-$57,000	$193,000-$206,000

[1] The numbers do not add up to the total due to rounding. The total estimate is calculated based on the per-facility cost of secondary containment and not the per-unit cost of secondary containment for oil-filled operational equipment.

4.3 State Overlap

Each state has its own regulations regarding the storage, handling, and containment of oil. In some cases, the effort required by these state regulations may be the same as what is required by SPCC. Therefore, without taking into account similar requirements imposed by state regulations, the cost of compliance and cost savings associated with the regulatory changes could be overestimated. The 2002 Economic Analysis of the SPCC rule accounted for overlap between the state requirements and the final rule. As part of the economic analysis for the current SPCC proposed rulemaking, EPA studied the overlap of state regulations to determine whether to adjust the estimate to account more accurately for recent changes in state requirements and/or refine the previously generated estimates. As a result of this review, the Agency concluded that there was non-compelling evidence to adjust the overlap estimate between the SPCC proposed rule and state regulations.

4.4 Projecting Compliance Costs

EPA used the Producer's Price Index (PPI) for 1995-2004 to inflate current costs of compliance and project the cost savings from proposed changes to the SPCC regulation over the next ten years. Two indices were used to adjust cost savings: the PPI for all finished goods and the PPI for materials and components for construction. For cost savings comprised of the cost of providing secondary containment or performing integrity testing, EPA used the PPI for materials and components for construction. In other cases, for example when the cost savings represented the entire cost of compliance or a mix of paperwork and capital costs, EPA used the PPI for all finished goods. The Agency assumed that the PPI would be constant over the ten-year analytical period.

4.5 Discounting Changes in Compliance Costs

Estimates for the changes in compliance costs represent ten-year average values discounted at three and seven percent.[17] EPA defined the ten-year period of analysis as 2005 through 2014. EPA used the following formula to calculate the present value of costs savings as of the beginning of 2005.[18]

$$\text{Present Value} = \text{Cost}_t \,/\, (1+r)^t$$

where:

Cost_t	=	Costs in year t
r	=	Social discount rate (3% and 7%)
t	=	Year in which cost is incurred (1-10)

[17] These discount rate values reflect guidance from the Office of Management and Budget regulatory analysis guidance document, Circular A-4 (OMB, 2003)

[18] Calculation of the present value assumes that the cost is incurred at the beginning of the year.

5.0 Qualified Facilities

The following three sections outline proposed changes in the rulemaking, describe the universe of affected facilities, and provide an estimate of cost savings from these changes. Each section is devoted to a single component of the proposed rule: qualified facilities, facilities with qualified oil-filled operational equipment, and facilities with motive power containers. The cost saving estimates presented for each component are based on the estimated number of affected facilities described in Section 3 and unit cost estimates for affected compliance activities described in Section 4 of this report.

EPA proposes to amend the Oil Pollution Prevention regulation (40 CFR part 112) to provide an option to allow the owner or operator of a facility that meets the qualifying criteria (hereafter referred to as a "qualified" facility) to self-certify his/her SPCC Plan in lieu of certification by a PE. EPA proposes to amend §112.3 to describe the SPCC eligibility criteria that a regulated facility must meet in order to be considered a qualified facility. A qualified facility would be a facility subject to the SPCC rule that (1) has an aggregate facility oil storage capacity of 10,000 gallons or less; and (2) had no discharges as described in §112.1(b) during the ten years prior to self-certification or since becoming subject to SPCC requirements if less than ten years. Facilities that have been subject to SPCC for less than ten years, including new facilities, would need to demonstrate no discharges as described in §112.1(b) only for the period of time they have been subject to the SPCC regulation. Self-certified Plans would not be able to include "environmentally equivalent" deviations to required Plan elements as provided in §112.7(a)(2) or impracticability determinations with respect to any secondary containment requirements as provided in §112.7(d). However, flexibility is provided in the proposal for the security (§112.7(g)) and integrity testing (§112.8(c)(6) and 112.12(c)(6)) provisions of the rule. Facilities with complicated operations and lower capacities may find that the current rule offers a more cost-effective method of achieving compliance than the proposed option. Therefore, a qualified facility could choose to follow the current SPCC requirements (including the PE certification) to take advantage of the flexibility offered by PE-certified impracticality determinations and environmentally equivalent measures.

5.1 Universe of Affected Facilities

EPA estimates that approximately 321,674 facilities with storage capacities below 10,000 gallons would be subject to SPCC in the first year. Over the next ten years, approximately 334,513 facilities with storage capacities below 10,000 gallons would be subject to SPCC on average. As with all of the regulatory options considered in developing the proposed rule, facilities would have the choice of complying with the existing SPCC rule (as amended in 2002) or taking advantage of the proposed change. EPA assumes that facilities would likely choose an alternative requirement if (a) they met the criteria, and (b) it was less costly or otherwise offered greater benefits than the existing requirement. EPA does not know how many facilities would meet the criteria and choose to avail themselves of the "qualified facility" options. Therefore, EPA examined the impact of the "qualified facility" options under three scenarios: 25 percent, 50 percent, and 75 percent of Category I facilities would likely meet "qualified facility" status and obtain regulatory relief. EPA estimated that 83,628 facilities would choose to take advantage of this option under the 25-percent scenario; 167,257 facilities under the 50-percent

scenario, and 250,885 facilities under the 75-percent scenario. Exhibit 5-1 presents the estimated number of existing and new SPCC-regulated facilities that are expected to meet "qualified facility" criteria.

Exhibit 5-1
Number of Existing and New "Qualified" Facilities
(10-Year Average)

Facility Type	Number of Facilities	25% Scenario	50% Scenario	75% Scenario
Existing	332,047	83,012	166,023	249,035
New	2,466	617	1,233	1,850
Total	**334,513**	**83,628**	**167,257**	**250,885**

The number of affected facilities under the proposed action for qualified facilities includes farms. The total number of farms affected by the extension is estimated to be approximately 144,608. Although EPA is proposing to extend the compliance dates for farms until it determines specific requirements for this industry, the Agency does not expect these requirements to be more stringent than the proposed requirements for qualified facilities. Therefore, EPA expects farms to accrue the cost savings as much as qualified facilities from other industries.

5.2 Compliance Cost Savings

EPA estimates that if 50 percent of the facilities complied with the alternative proposed today for qualified facilities that this option could reduce compliance costs by $22.5 million and $18.4 million per year, discounted at 3 percent and 7 percent, respectively. EPA assumed that the proposed flexibility for integrity testing would reduce the unit cost of testing by 50 percent. As a result of the proposed action, an existing qualified facility would save the cost of PE certification when amending the Plan. A new qualified facility would save the cost of PE certification when preparing a new SPCC Plan. Both existing and new facilities are expected to have lower costs of performing integrity testing based on the proposed changes. The estimated per-facility cost savings associated with the proposed action is $132 for existing facilities and $2,000 for new facilities. The cost savings for new facilities is higher than those for existing facilities because of greater expenses associated with preparing a new SPCC Plan.

If 25 percent of facilities with under 10,000 gallons of storage capacity qualified for this option, compliance costs would decrease by $11.2 million and $9.19 million per year, discounted at 3 percent and 7 percent, respectively. If 75 percent of facilities under 10,000 gallons qualified for this option, compliance costs would decrease by $33.7 million and $27.6 million per year, discounted at 3 percent and 7 percent, respectively. In addition, EPA anticipates that qualified facilities will be able to accrue cost savings due to flexibility being provided in site security requirements. These additional cost savings have not been quantified.

Exhibit 5-2 presents the per-facility annual cost of compliance for qualified facilities by activity. For the typical existing qualified facility, the estimated annual cost of compliance for all activities required by SPCC is approximately $550. For the typical new qualified facility, the

estimated total annual costs for all activities required by the SPCC regulation is approximately $11,100. Estimated annual costs for new facilities are higher than those for existing facilities because of the greater expense associated with preparing the Plan and the initial operational and capital costs. Since only facilities with total storage capacity below 10,000 gallons are expected to be affected by the proposed regulatory option, the per-facility estimate represents the compliance cost for the typical Category I facility.

Exhibit 5-2
Annual Burden and Cost Estimate for Required Paperwork-Related and Capital Activities
Qualified Facilities

Activity	Annual Burden Hours			Total Hours Burden	Capital/ Startup Costs	O&M Costs	Annual Cost
	Management ($56.40/hr)	Technical ($47.40/hr)	Clerical ($25.00/hr)				
Prepare and Review the SPCC Plan	0.3	0 8	0 1	1 2	$0	$18	$75
Submit Plan in the Event of Certain Discharges of Oil	0.0	0 0	0 0	0 0	$0	$0	$0
Revise the SPCC Plan	0.0	0 5	0.1	0 6	$0	$75	$99
Maintain the SPCC Plan and Keep Records	0.0	1.8	0 5	2 3	$1	$0	$99
Total Paperwork-Related	**0.3**	**3.1**	**0.7**	**4.1**	**$1**	**$94**	**$274**
Integrity Testing	-	-	-	-	$132	-	$132
Secondary Containment	-	-	-	-	$30	-	$30
Other Capital	-	-	-	-	$252	-	$252
Total Capital	-	-	-	-	**$414**	-	**$414**
TOTAL[1]	**0.3**	**3.1**	**0.7**	**4.1**	**$415**	**$94**	**$688**

[1] The numbers do not add up to the total due to rounding

5.3 Alternative Regulatory Options

As an alternative option, EPA considered a notification requirement for qualified facilities that have been operating for less than ten years, along with eliminating the requirement for PE certification and providing integrity testing and security flexibility for all qualified facilities. EPA estimates that this alternative option could reduce compliance costs by $22.3 million and $18.4 million per year, discounted at 3 percent and 7 percent, respectively. To arrive at these figures, EPA assumed that 50 percent of facilities under 10,000 gallons would qualify for this option. EPA also assumed that the proposed flexibility for integrity testing would reduce the unit cost of testing by 50 percent. EPA assumed that the total burden of notification for a facility would be three hours: one hour of managerial time, one hour of technical time, and one hour of clerical time. If 25 percent of facilities under 10,000 gallons qualified for this option, compliance costs would decrease by $11.2 million and $9.1 million per year, discounted at 3 percent and 7 percent, respectively. If 75 percent of facilities under 10,000 gallons qualified for this option, compliance costs would reduce by $33.5 million and $27.4 million per year, discounted at 3 percent and 7 percent, respectively. EPA decided not to pursue this option because it does not differ substantively from the proposed action; an additional notification burden was not considered necessary.

As another alternative option, EPA considered establishing three facility-size tiers according to SBA's recommendations, based on facility's total oil storage capacity.[19] EPA estimates that this alternative option could reduce compliance costs by $42.9 million and $35.0 million per year, discounted at 3 percent and 7 percent, respectively. To arrive at these estimates, EPA assumed that all SPCC-regulated facilities with oil storage capacity between 1,320 and 5,000 gallons would take advantage of the option, eliminating the cost of preparing and maintaining a written SPCC Plan. Additionally, EPA assumed that all SPCC-regulated facilities with oil storage capacity between 5,001 and 10,000 gallons would take advantage of the option and eliminate the cost of PE certification.

EPA does not support this approach because it poses significant implementation problems. In particular, the Agency believes that without the owner/operator developing a Plan or documentation on how the facility will comply or expects to comply with the SPCC requirements, it will be challenging for the facility to both meet the substantive requirements (for example, spill notification, response and preparedness planning, equipment maintenance, inspection and training, secondary containment) as well as provide documentation to the regulators that the facility is in compliance. Additionally, EPA inspectors conducting site visits would have no written Plan or documentation to assess the facility's effectiveness in implementing its spill prevention strategy.

EPA also considered two administrative options to provide relief to qualified facilities: a compliance date extension and a suspension of all requirements. These options would not have an impact on compliance costs, but would only delay expenditures at affected facilities. EPA decided against these options because owners or operators of qualified facilities would remain uncertain about the timing and nature of future requirements that would apply to them. The preferred option would set forth explicit requirements for qualified facilities that reduce

[19] For detail, see "Proposed Reforms to the SPCC Professional Engineer Certification Requirement: Designing a More Cost Effective Approach for Small Facilities", Jack Faucett Associates, 2004.

compliance costs within the current compliance date schedule. The administrative options also would pose additional problems related to implementation and environmental protection. An extension would not explain what qualified facilities that should have had a Plan as of August 16, 2002, must do to "maintain a Plan" during the extension period. A suspension would increase environmental risks from potential discharges at qualified facilities during the interim period, due to the delayed implementation of preventive measures. A similar situation would occur under the extension option for facilities that begin operation after the August 16, 2002 effective date of the rule.

The following table presents the estimated cost savings associated with the proposed action and each of the alternative options considered by EPA for qualified facilities.

Exhibit 5-3
Estimated Cost Savings Associated with Considered Changes for "Qualified Facilities"

Option	Cost Savings ($ million)	
	3% Discounted	7% Discounted
Proposed (eliminate PE certification and provide integrity testing flexibility)	$11.2 - $33.7	$9 19 - $27.6
Alternative (same as proposed action plus a notification requirement)	$11.2 - $33.5	$9 13 - $27 4
Alternative (SBA's tier structure)	$42 9	$35.0
Extension	Not quantified	
Suspension	Not quantified	

6.0 Facilities with Qualified Oil-Filled Operational Equipment

EPA proposes to amend the Oil Pollution Prevention regulation (40 CFR part 112) to provide a definition of oil-filled operational equipment and an optional alternative to the general secondary containment requirements for oil-filled operational equipment that meets qualifying criteria (hereafter referred to as "qualified oil-filled operational equipment"). The proposal would allow owners and operators of facilities with qualified oil-filled operational equipment to have the alternative of preparing an oil spill contingency plan and a written commitment of manpower, equipment and materials to expeditiously control and remove any oil discharged that may be harmful, without having to make an individual impracticability determination as required in §112.7(d). The owner or operator would also be required to establish and document an inspection or monitoring program for this qualified oil-filled operational equipment to detect equipment failure and/or a discharge, in lieu of providing secondary containment.

EPA proposes to add §112.7(k) to define the SPCC eligibility criterion that oil-filled operational equipment must meet in order to be considered qualified oil-filled operational equipment. Eligibility of a facility with oil-filled operational equipment would be determined by considering the reportable discharge history from any oil-filled operational equipment. The qualified oil-filled operational equipment criterion specifically requires that the facility has had no discharges as described in §112.1(b) from any oil-filled operational equipment in the ten years prior to the SPCC Plan certification date, or since becoming subject to 40 CFR part 112 if the facility has been in operation for less than ten years.

6.1 Universe of Affected Facilities

The proposed changes for qualified oil-filled operational equipment could address such items as hydraulic systems, lubricating systems (e.g., those for pumps, compressors, pumpjacks, and other rotating equipment including pumpjack lubrication systems), gear boxes, machining coolant systems, heat transfer systems, transformers, circuit breakers, electrical switches, and other systems containing oil to enable operation of the devices. Due to data and time limitations, EPA focused its economic analysis on the electric utility sector. Consequently, the analysis likely underestimates the total cost savings from the proposed "qualified oil-filled operational equipment" action and the alternative options.

Specifically, EPA used data on the number of substations listed by each major utility reporting to the Federal Energy Regulatory Commission (FERC).[20] A national estimate was extrapolated from these data using the ratio of the megawatt hours sold by utilities to the estimated total retail megawatt hours of electricity sold nationwide according to the EIA.

EPA estimated that the total number of new facilities with oil-filled operational equipment would be approximately 2,040 in the first year. Over the next ten years, approximately 2,450 new facilities are expected to be added annually on average. This number underestimates the universe of facilities affected by the proposed change, since it does not include oil-filled

[20] Major regulated utilities must file FERC Form No. 1, on which utilities report information on their substations and electrical equipment. "Major" is defined as having (1) one million megawatt hours or more, (2) 100 megawatt hours of annual sales for resale; (3) 500 megawatt hours of annual power exchange delivered; or (4) 500 megawatt hours of annual wheeling for others (deliveries plus losses).

operational equipment from other industries. Facilities with qualified oil-filled operational equipment are expected to use a contingency plan with a written commitment of manpower, equipment and materials instead of secondary containment.

EPA assumed that existing SPCC-regulated facilities with qualified oil-filled operational equipment would already have secondary containment or a determination of impracticability of secondary containment with a contingency plan and a written commitment of manpower, equipment and materials in accordance with §112.7(d). In such cases, facilities would not benefit from this option.

EPA acknowledges that some fraction of new facilities would, according to the current SPCC rule requirements, provide an impracticability determination and provide a contingency plan and a written commitment of manpower, equipment and materials, rather than pursue secondary containment. In these cases, the proposed action's cost savings would be lower, since owners and operators would only be avoiding an impracticability determination rather than secondary containment. EPA does not know what fraction of facilities falls into this situation, and has decided not to incorporate the scenario in the analysis. As a result, EPA's analysis likely overestimates the cost savings to facilities in the electric utility industry from the proposed action.

However, EPA believes that the overall assessment of cost savings from this component of the rule may be significantly underestimated. This is due to the omission of potential cost savings that would accrue to all other industries outside of electrical utilities.

6.2 Compliance Cost Savings

EPA estimates that this component of the proposal could reduce compliance costs by as much as $56.7 million and $45.9 million per year, discounted at 3 percent and 7 percent, respectively. EPA calculated cost savings based on the assumption that new facilities with qualified oil-filled operational equipment would save the difference between the cost of secondary containment and the cost of preparing a contingency plan and a written commitment of manpower, equipment and materials. EPA estimated annual per-facility cost savings of $9,000 to $61,000 for new facilities, depending on a facility's size and other characteristics.

The Agency recognizes, that at some facilities, owners or operators with PE-certified SPCC Plans have made a determination that secondary containment is impracticable, and have implemented contingency plans and a written commitment of manpower, equipment and materials for the non-qualified oil-filled operational equipment. Such facilities would not see significant cost savings from this component of the current rule. The analysis of cost savings underestimates the number of facilities with qualified oil-filled operational equipment (as noted in section 6.1), but overestimates the cost savings for facilities that have been counted.

To assess the impact of the proposed action for facilities with oil-filled operational equipment, EPA estimated the cost of the contingency plan and a written commitment of manpower, equipment and materials that facilities would have an option to develop in lieu of providing secondary containment. A contingency plan prepared in accordance with 40 CFR 112.7(d) would define procedures and tactics for responding to discharges of oil into navigable waters or adjoining shorelines of the United States. The contingency plan is implemented whenever a discharge of oil has reached, or threatens, navigable waters or adjoining shorelines. EPA included the following elements in the cost estimate for a contingency plan: emergency response, hazard evaluation, discharge detection, and discussion of spill scenarios and plan implementation. The Agency estimated the total cost of a contingency plan at $4,000, which includes the costs of paperwork-related activities such as Plan preparation and capital investments such as equipment purchase and upgrade.

Exhibit 6-2 presents the per-facility annual cost of compliance for facilities with qualified oil-filled operational equipment by activity. For the typical existing facility with qualified oil-filled operational equipment, the estimated total annual cost of compliance for all activities required by SPCC is:

Category I and II facility: $436 per facility;
Category III facility: $900 per facility; and
Category IV facility: $2,248 per facility.

For the typical new facility with qualified oil-filled operational equipment, the estimated total annual costs for all activities required by the SPCC regulation is:

Category I and II facility: $17,900 per facility;
Category III facility: $74,051 per facility; and
Category IV facility:$242,182 per facility.
Estimated annual costs for new facilities are higher than those for existing facilities because

of the greater expense associated with preparing the Plan and the initial capital and startup costs. Since facilities of all sizes are expected to be affected by the proposed regulatory option, the per-facility estimate represents a weighted average of compliance costs for Category I - IV facilities.

Exhibit 6-2
Estimated Annual Burden and Cost Estimate for Required Paperwork-Related and Capital Activities
Facilities with Qualified Oil-Filled Operational Equipment

Activity	Annual Burden Hours			Total Hours Burden	Capital/ Startup Costs	O&M Costs	Annual Cost
	Management ($56.40/hr)	Technical ($47.40/hr)	Clerical ($25.00/hr)				
Prepare and Review the SPCC Plan	0 4	1.8	0.3	2.5	$0	$73	$189
Submit Plan in the Event of Certain Discharges of Oil	0 0	0 0	0 0	0.0	$0	$0	$0
Revise the SPCC Plan	0 0	0.4	0 1	0 5	$0	$66	$89
Maintain the SPCC Plan and Keep Records	0.0	2.1	0 5	2 6	$3	$0	$117
Total Paperwork-Related	**0.4**	**4.4**	**0.9**	**5.7**	**$3**	**$139**	**$395**
Secondary Containment	-	-	-	-	$663	-	$663
Other Capital	-	-	-	-	$969	-	$969
Total Capital	-	-	-	-	**$1,632**	-	**$1,632**
TOTAL[1]	**0.4**	**4.4**	**0.9**	**5.7**	**$1,635**	**$139**	**$2,030**

[1] The numbers do not add up to the total due to rounding

6.3 Alternative Regulatory Options

EPA considered limiting the proposed option by including two alternative storage capacity thresholds from which the owner/operator may determine the equipment or facility's eligibility: (1) the storage capacity of an individual piece of oil-filled operational equipment is 1,320 gallons or less, regardless of the facility's total oil-filled operational equipment aggregate capacity; or (2) the aggregate oil-filled operational equipment storage capacity at the facility is 10,000 gallons or less. EPA also considered regulatory options using a higher qualifying capacity for a piece of oil-filled operational equipment (ranging from 2,640 to 5,000 gallons) and for the facility aggregate capacity of 20,000 gallons, in order to provide a greater degree of burden reduction than the alternative thresholds considered by EPA.

EPA decided not to propose a threshold criterion because it believes this equipment is unique and different from bulk storage containers and manufacturing equipment (flow-through process) such that the spill history alone suffices as a qualifying criterion to determine eligibility. The Agency was also concerned about the limited amount of information provided in response to the NODA.

EPA explored a three-tiered structure option in response to comments on the Notice of Data Availability (NODA) for oil-filled operational equipment (69 FR 56184, September 20, 2004). The option is based on a proposal put forth by the Utility Solid Waste Activities Group (USWAG). The option would allow an owner or operator to define discrete units of equipment as individual facilities and reduce requirements imposed on units with capacities less than 20,000 gallons. EPA estimates that this alternative option could reduce compliance costs by $17.6 million and $14.2 million per year, discounted at 3 percent and 7 percent, respectively.

EPA assumes that 75 percent of oil-filled operational equipment is co-located with larger capacity equipment and oil storage containers that would require secondary containment regardless of the proposed changes to the rule. The remaining 25 percent of equipment is considered stand-alone. Under the alternative option, units with capacities of 1,320 gallons or less would no longer be regulated under the SPCC rule. Facilities with co-located units could see modest cost savings due to fewer equipment-specific requirements for these units (e.g., inspection). Facilities with stand-alone units would see more significant savings.

For the purpose of the regulatory analysis, EPA assumes that half of the facilities with equipment with capacities of 1,320 gallons or less of oil would no longer be regulated. The other half would have additional oil storage capacity on-site and remain subject to the rule, albeit at a lower compliance cost due to regulatory relief for a portion of their equipment. Existing facilities would not see significant benefits for equipment with capacities greater than 1,320 gallons and less than 20,000 gallons, since they already have secondary containment in place. However, new facilities could opt for a contingency plan and a written commitment of manpower, equipment and material and avoid the need for secondary containment for these units.

EPA decided not to propose a threshold criterion because it believes this equipment is unique and different from bulk storage containers and manufacturing equipment (flow-through process) such that the spill history alone suffices as a qualifying criterion to determine eligibility.

The Agency was also concerned about the limited amount of information provided in response to the NODA.

Although the Agency agrees that some regulatory modifications are appropriate for facilities containing oil-filled operational equipment, there is still a reasonable potential for discharge from this equipment and coverage by some type of SPCC Plan is warranted. The Agency believes this is true even for facilities composed entirely of oil-filled operational equipment. EPA also has concerns about the suggestion to allow facility owners and operators to define each piece of oil-filled equipment as a separate facility because of the potential for greater rule complexity, implementation questions and confusion across the wide variety of facilities covered by the SPCC rule. For example, the Agency may have to define and develop criteria that would be used by the facility owner or operator to determine which equipment is a separate facility, which is not, and how the elements of a facility plan would address these differences. Uncertainty and confusion about the definition of a facility could lead to a greater lack of compliance and the potential for greater environmental harm.

EPA also considered two administrative options to provide relief to oil-filled operational equipment: a compliance date extension and a suspension of all requirements. These options would not have an impact on compliance costs, but would only delay expenditures at affected facilities. EPA decided against these options because facility owners or operators would remain uncertain about the timing and nature of requirements that eventually would apply to them. Since many facilities have oil-filled operational equipment, delaying changes to these requirements could lead to a significant number of facilities needing to modify their existing Plans more than once to accommodate future rule changes. A suspension would increase the risk of discharge at facilities with qualified oil-filled operational equipment during the interim period, due to the delayed implementation of preventive measures.

The following table presents the estimated cost savings associated with the proposed action and each of the alternative options considered by EPA for facilities with oil-filled operational equipment.

Exhibit 6-3
Estimated Cost Savings Associated with Considered Changes for Facilities with Qualified Oil-Filled Operational Equipment

Option	Cost Savings ($ million)	
	3% Discounted	7% Discounted
Proposed (preparing a CP and a written commitment of manpower, equipment and materials in lieu of providing secondary containment for all facilities with OFE)	$56.7	$45.9
Alternative (USWAG tier structure)	$17.6	$14.2
Extension	Not quantified	
Suspension	Not quantified	

7.0 Facilities with Motive Power Containers

EPA proposes to amend the Oil Pollution Prevention regulation to exempt motive power containers, defined as "onboard bulk storage containers used solely to power the movement of a motor vehicle, or ancillary onboard oil-filled operational equipment used solely to facilitate its operation." This definition is intended to describe containers such as the fuel tanks that are used solely to provide fuel for a motor vehicle's movement or the hydraulic and lubrication operational oil-filled containers used solely for other ancillary functions of a motor vehicle. This definition would not include transfers of fuel or other oil into motive power containers at an otherwise regulated facility, or a bulk storage container mounted on a vehicle for any purpose other than powering the vehicle itself, for example, a tanker truck or refueler. The definition of motive power containers would not include oil drilling or workover equipment. Specifically, it would not apply to the drilling or workover rigs themselves; however, other earthmoving equipment (such as a bulldozer) located at a drilling or workover facility would be included in the scope of the definition.

Although EPA has no empirical data on the amount of such storage at facilities regulated by the SPCC rule, EPA does not expect that many facility owners and operators have included motive power containers in their oil storage capacity calculations and SPCC Plans. For those who have considered motive power storage, EPA assumes that the volume that would be exempt under the proposed rule would not represent a large fraction of the facility's aggregate capacity.

7.1 Universe of Affected Facilities

To identify industries that are potentially affected by motive power exemptions, EPA started with information from industry comments to the 2002 SPCC rule. Commenters from the crop production, forestry/logging, and utilities industries indicated that they had motive power equipment. EPA identified additional industry groups by examining industries targeted by the major motive power equipment manufacturers. Caterpillar, Deere & Company, Kubota Corporation, Joy Global Inc., CNH Global NV, and Terex Corporation are some of the largest motive power equipment manufacturers. Each company lists the industries targeted by their products. EPA used these listings as the basis for classifying industries likely to have motive power containers.

EPA has no empirical data on the number of facilities with motive power containers with oil storage capacity of 55 gallons or greater. To estimate the number of facilities affected by the "motive power" proposed rule, EPA examined three scenarios whereby 10 percent, 25 percent, and 50 percent of the facilities in sectors with motive power containers may be affected by the proposed regulatory option. EPA estimated that over the next ten years, approximately 29,000 facilities would have "motive power" oil storage under the 10-percent scenario; 71,600 facilities under the 25-percent scenario; and 143,000 facilities under the 50-percent scenario on average. Exhibit 7-1 presents the estimated number of existing and new SPCC-regulated facilities that are expected to take advantage of the proposed action.

Exhibit 7-1
Number of Existing and New Facilities with Motive Power Containers (10-Year Average)

Facility Type	Number of Facilities	10% Scenario	25% Scenario	50% Scenario
Existing	282,660	28,266	70,665	141,330
New	3,860	386	965	1,930
Total	**286,520**	**28,652**	**71,630**	**143,260**

7.2 Compliance Cost Savings

EPA estimates that the proposed action would reduce compliance costs by $0.92 million and $0.75 million per year, discounted at 3 percent and 7 percent, respectively. The main benefit of the proposed action would be to provide greater clarity of EPA's regulatory intent.

EPA assumed that 10 percent of the facilities in industries identified as having motive power storage might take advantage of the proposed exemption. Other facilities could also have motive power storage. EPA expects, however, that they have not considered such storage as part of their compliance with the SPCC rule. Because EPA expects most facilities with motive power storage to meet the SPCC rule's oil storage thresholds regardless of motive power, EPA assumes that the cost savings from the proposed exemption will be modest (perhaps 5 percent compliance cost savings). As a result of the proposed changes, existing and new facilities with motive power containers would save five percent of the full compliance cost. The estimated per-facility cost savings associated with the proposed action is $27.5 for existing facilities and $553 for new facilities. The cost savings for new facilities are higher than those for existing facilities because of greater expenses associated with preparing a new SPCC Plan and initial start-up and capital costs.

EPA also examined two other scenarios whereby 25 percent and 50 percent of facilities in industries identified as having motive power storage would take advantage of the proposed exemption. Under the 25-percent scenario, compliance costs would decrease by $2.29 million and $1.87 million per year, discounted at 3 percent and 7 percent, respectively. Under the 50 percent scenario, compliance costs would decrease by $4.58 million and $3.74 million, discounted at 3 percent and 7 percent, respectively.

Exhibit 7-2 presents the per-facility annual cost of compliance for facilities with motive power containers by activity. For the typical existing facility with motive power containers, the estimated total annual cost of compliance for all activities required by SPCC is $550. For the typical new facility with motive power containers, the estimated total annual cost for all activities required by the SPCC regulation is $11,068.

Estimated annual costs for new facilities are higher than those for existing facilities because of the greater expense associated with preparing the Plan and initial start-up and capital costs. Since most of the facilities that are expected to be affected by the proposed regulatory option are Category I and II, the per-facility estimate represents the compliance cost for those facilities.

EXHIBIT 7-2

Estimated Annual Burden and Cost Estimate for Required Paperwork-Related and Capital Activities

Facilities with Motive Power Containers

Activity	Annual Burden Hours			Total Hours Burden	Capital/ Startup Costs	O&M Costs	Annual Cost
	Management ($56.40/hr)	Technical ($47.40/hr)	Clerical ($25.00/hr)				
Prepare and Review the SPCC Plan	0 3	0 8	0.1	1.2	$0	$18	$75
Submit Plan in the Event of Certain Discharges of Oil	0.0	0 0	0.0	0.0	$0	$0	$0
Revise the SPCC Plan	0 0	0.5	0 1	0 6	$0	$75	$99
Maintain the SPCC Plan and Keep Records	0.0	1 8	0 5	2.3	$1	$0	$99
Total Paperwork-Related	**0.3**	**3.1**	**0.7**	**4.1**	**$1**	**$94**	**$274**
Integrity Testing	-	-	-	-	$132	-	$132
Secondary Containment	-	-	-	-	$30	-	$30
Other Capital	-	-	-	-	$252	-	$252
Total Capital	-	-	-	-	**$414**	-	**$414**
TOTAL[1]	**0.3**	**3.1**	**0.7**	**4.1**	**$415**	**$94**	**$688**

[1] The numbers do not add up to the total due to rounding

8.0 Airport Facilities with Mobile Refuelers

EPA proposes to exempt airport mobile refuelers from the specifically sized bulk storage secondary containment requirements of §112.8(c)(2) and (11). EPA defines an airport mobile refueler as a "vehicle with an onboard bulk storage container designed for, or used to, store and transport fuel for transfer into or from aircraft or ground service equipment." The general secondary containment requirements of §112.7(c) would still apply to these airport mobile refuelers and to the transfers associated with this equipment. Since airport mobile refuelers are mobile or portable bulk storage containers, the other provisions of §112.8(c) would still apply.

The Agency researched regulatory compliance of airports with SPCC requirements for secondary containment, and found that some airports do not have sized secondary containment in place. EPA found that secondary containment for mobile refuelers is not a common practice and that mobile refuelers rarely have a designated area to park. Factors such as the land value at many commercial airports prohibits a single, designated parking area for mobile refuelers.[21] EPA analyzed potential cost savings to the industry using an assumption that new facilities would have to provide sized secondary containment in accordance with §112.8(c)(2) and (11) for airport mobile refuelers. Therefore, the estimated annual cost savings consist of the potential expenditures avoided of providing sized secondary containment for new airport mobile refuelers.

The Agency estimated the total number of new airports at 479 in the first year. Over the next ten years, approximately 535 new airports are expected to be added annually on average. EPA assumed one to three mobile refuelers per airport,[22] or approximately two per airport on average. To estimate the total cost savings, the Agency multiplied the number of new airports by the cost of providing sized secondary containment for each airport.[23] Then the Agency annualized the total cost savings over the ten-year analytical period. EPA estimates that this component of the proposal could reduce compliance costs by $6.43 million and $5.23 million per year, discounted at 3 percent and 7 percent, respectively.

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[21] For detail, see "Results of Research Project on Airport Engineering and Construction Firms", Abt Associates Inc memorandum, 2004.

[22] Based on Federal Aviation Administration estimates (http://www.faa.gov/data_statistics/).

[23] The cost of providing secondary containment is estimated at $6,500 per refueler and $13,000 per airport. Insufficient data are available to differentiate cost estimates for sized versus unsized secondary containment.

9.0 Projected Impacts on Human Health, Welfare, and the Environment

Discharges of both petroleum and non-petroleum oils into the nation's marine and freshwater environments have the potential to cause damages to public health and welfare, and to the environment. Discharges from SPCC facilities can occur whenever oil is handled, stored, produced, transferred, used, or disposed. Causes of discharges include human error (e.g., overfilling tanks during transfer operations), equipment failure (e.g., deteriorated seals and ruptured pipes or tanks), and improper storage or abandonment.

The impact of such discharges into either the marine or freshwater environment can be devastating in the short-term, and some of the effects may last for years or even decades. Although studies have documented nature's ability to recover over time from the damage caused by a large oil discharge, both the extent of biological damage caused by a discharge and the speed of recovery depend on many factors, including: the geographic location, quantity of oil discharged, characteristics of the area affected, weather conditions, the season, the type of oil, and the nature of the response.

Physical, chemical, and biological transformations of discharged oil begin immediately upon introduction to marine or freshwater environments. The rate and degree of transformation depend on several factors related to advective and spreading processes. Advection is caused by the influence of overlying winds and underlying currents on the oil, while spreading results from the interplay among the forces of gravity, inertia, friction, viscosity, and surface tension.

The toxicity of the discharge depends on oil type. Freshly discharged crude is more acutely toxic than weathered oil because of the presence of the more toxic volatile constituents, which quickly evaporate or dissolve. Similarly, lighter refined products (e.g., diesel fuel and gasoline) are more acutely toxic than crude but dissipate more rapidly.

Depending on the location of the discharge as well as weather, some of the oil may affect shoreline areas. Unlike ocean discharges that are dispersed by wind and wave action, oil discharged near the shoreline typically concentrates and mixes with near-shore waters or collects along shorelines. As a result, wetlands, seagrass beds, beaches, rocky habitats, coral reefs, intertidal areas, and terrestrial ecosystems may be damaged. Oil deposited in near-shore sediments persists longer than in ocean sediments. Oil is particularly persistent in low-energy, wetland habitats.[24]

To varying degrees, coastal marine environments throughout the United States serve as breeding and nursing areas for resident and migratory species of fish and aquatic birds. Fish can be affected through ingestion of oil or oiled prey and uptake of dissolved petroleum compounds through the gills, or by changes in the ecosystem. Damage to fish eggs and larvae also may occur. Aquatic birds, especially diving birds, are highly vulnerable to oil discharged in coastal areas. Feathers that are coated with oil become water-logged and lose their insulating properties. As a result, birds may drown or die of hypothermia.

[24] U.S. Department of Energy, Report to Congress on Candidate Sites for Expansion of the Strategic Petroleum Reserve to One Billion Barrels, Office of Strategic Petroleum Reserve, March 1991, Document Number DOE/FE-0221P.

Oil discharges may also disrupt the structure and function of marine ecosystems. Differential rates of mortality resulting from oil discharges shift food web relationships. Changes in resource availability, competition, and predation affect individual organisms. Populations of species that are dependent on affected prey or habitats will decline while opportunistic species may increase. Rare species, small local populations, or species that are seasonally concentrated in the impacted habitat are the most likely to decline as a result of an oil discharge.

In addition to adverse effects on fish, aquatic birds, and marine ecosystems, human health may be at risk as a consequence of oil pollution of water. The main concern regarding the risk to humans is the known carcinogenicity of several of the oil components and exposure to toxic elements in oil through direct exposure or through oil-tainted food. Human health risks also include hazards encountered by workers during cleanup operations. Additionally, oil dischargers may impact drinking water and industrial water intakes.

The main benefit of the proposed rule is lower compliance costs for certain types of facilities and equipment. EPA expects these reduced expenditures to translate to net social benefits. These benefits may be partially offset by potential increases in risk of oil discharges, due to less stringent requirements compared to the existing SPCC rule. For example, owners and operators of qualified oil-filled operational equipment that implement a contingency plan and a written commitment of manpower, equipment and materials instead of implementing preventive measures such as secondary containment could see an increase in the risk of discharges. It is reasonable to assume that any non-compliance with SPCC regulations is at least partially attributable to the costs of compliance. To the extent that is true, it is likely that by reducing the costs of complying with SPCC requirements, this rule may induce some previously non-compliant facilities to conform to these requirements. However, to the extent that the rule increases compliance by reducing regulatory costs, the risk of discharge will decrease.

The facilities that are expected to take advantage of the proposed action for qualified facilities store small amounts of oil, and have demonstrated environmental responsibility by avoiding discharges in the past ten years. EPA has designed the proposed rule to minimize increases in environmental risk. For example, EPA is providing an option to avoid PE certification for qualified facilities that have no history of reportable discharges. Any decision to apply environmental equivalence or pursue an impracticability claim would still require PE certification.

Similarly, EPA believes that for qualified oil-filled operational equipment the complexity and the nature of its use may not lend itself to traditional secondary containment methods for bulk storage containers and thus flexibility is appropriate in this area and may improve compliance with oil pollution prevention measures. Most facilities where these units are located will have general secondary containment that would help prevent discharges as described in §112.1(b). In summary, although the magnitude of any increase in risk under the proposed rulemaking is unclear, EPA does not believe that these changes in discharge risk are significant.

10.0 Small Business Analysis

The Regulatory Flexibility Act (RFA) requires federal agencies to determine whether their regulatory actions will have a significant economic impact on a substantial number of small entities. If an agency does not or cannot certify that a proposed regulation will not have a significant economic impact on a substantial number of small entities, it must prepare a regulatory flexibility analysis and examine alternatives to the proposed regulation that may reduce adverse economic effects on significantly impacted small entities.

In 1996, Congress enacted the Small Business Regulatory Enforcement Fairness Act (SBREFA), which amended the RFA to strengthen its analytical and procedural requirements and to expedite Congressional review of rules SBREFA amended the RFA to reference the definition of a "small entity" found in the Small Business Act, which itself authorizes the Small Business Administration (SBA) to further define "small business" by regulation. The SBA's small business definitions are codified at 13 CFR 121.601 and the SBA reviews and reissues these definitions every year.

In determining whether a rule has a significant economic impact on a substantial number of small entities, the impact of concern is any significant adverse economic impact on small entities, since the primary purpose of the regulatory flexibility analyses is to identify and address regulatory alternatives "which minimize any significant economic impact of the proposed rule on small entities." 5 U.S.C. 603 and 604. Thus, an agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, or otherwise has a positive economic effect on all of the small entities subject to the rule.

The proposed revisions to the SPCC rule reduce the regulatory burden on qualified facilities and qualified oil-filled operational equipment. Qualified facilities would no longer need a licensed PE to certify their Plans. Facilities that store oil solely for motive power would no longer be regulated, while other facilities with oil storage in addition to motive power containers may incur lower compliance costs. The proposed revisions to the SPCC rule also allow greater use of contingency plans with a written commitment of manpower, equipment and materials without requiring an impracticability determination as an alternative to secondary containment for qualified oil-filled operational equipment. It also allows airport mobile refuelers to fall under a facility's general secondary containment requirements rather than require specific sized secondary containment. Thus, the Agency concludes that the proposed revisions to the SPCC rule provide regulatory relief for small entities and therefore, does not have any adverse impact on small businesses.

11.0 Key Limitations of the Analysis

One of the main limitations of the regulatory analysis is EPA's lack of data on facilities regulated under the SPCC rule. As mentioned earlier, the rule does not include a notification requirement and, with certain exceptions, regulated entities do not need to submit their SPCC Plans to EPA. Without conducting a statistically valid survey, EPA is limited to data already collected by state or federal agencies or by proprietary sources. Such data are collected for diverse purposes and are not necessarily ideal for evaluating regulatory options, and they often omit portions of the regulated universe or lack sufficient detail to ascertain the impacts of changes in certain requirements. The type of information collected also varies among the different sources. Data provided by industry organizations or individual businesses are often anecdotal or based on surveys that are not statistically valid, and cannot be reliably extrapolated to a larger universe. As a result of this limitation of data on regulated facilities, EPA has had to rely on updated figures from 1996 for some industry sectors as well as federal and proprietary sources for other sectors. Because none of these sources give adequate detail to evaluate the potential impacts of individual regulatory options, EPA has chosen to examine up to three scenarios for each option to bound the range of cost savings that could occur.

In many cases, the SPCC rule provides considerable flexibility with respect to compliance with individual requirements, deferring to the judgment of a PE. Approaches to compliance will depend on site-specific circumstances. For example, compliance costs vary not only on the volume of oil storage and handled, but also on the types of oil at a site, the number of tanks (and their volume), and the locations of the tanks across a site. Given the wide range of industries and facility sizes affected by the SPCC rule as well as geographical and climatic conditions it is difficult to specify a realistic baseline against which regulatory changes can be measured. Therefore, it is also difficult to estimate the changes that could occur under various regulatory options.

Additional limitations to the analysis include the Agency's lack of data on the number of affected electric utilities with oil-filled operational equipment (as well as such equipment in other settings) and limited knowledge of actual compliance rates with current SPCC requirements. Finally, many of the cost assumptions used in the regulatory analysis are based on interviews with a limited number of PEs. It is difficult to simply assess "typical" costs when the costs of compliance are closely related to site-specific factors. Ideally, future analyses could explicitly account for such variability in costs.

12.0 Conclusions

Applying both a 3 percent and a 7 percent nominal discount rate, the proposed regulatory changes could yield compliance cost savings of $22.5 million and $18.4 million for the "qualified facility" option; $56.7 million and $45.9 million for the "qualified oil-filled operational equipment" option; $0.92 million and $0.75 million for "motive power" exemption; and $6.43 million and $5.23 million for airports with mobile refuelers, respectively. EPA does not believe that these cost reductions would be offset by any significant losses in environmental protection.

EPA acknowledges that some industry sectors would be affected by the proposed rulemaking more significantly than the others. For example, farms and electric utility plants comprise a large fraction of affected facilities. Under the proposed action for qualified facilities, farms account for almost 45 percent of all affected facilities. Under the proposed action for facilities with qualified oil-filled operational equipment, electric utilities account for most of the affected facilities.

EPA is aware of industry concerns regarding potential non-compliance among certain facility sizes or sectors, although no reliable empirical evidence exists to assess the scope and magnitude of such non-compliance. Even if facilities are not currently complying with the rule, they still have already incurred the costs of meeting SPCC requirements. Facilities currently in non-compliance are merely postponing the actual expenditures of compliance. Therefore, facilities that are currently non-compliant will have to make expenditures associated with coming into compliance.

Acknowledging uncertain and potentially misleading effects of inflation, Exhibit 12-1 presents the annualized cost savings associated with each of the proposed rule changes for potentially affected facilities, based on constant 2004 dollar values. The total estimated impact represents simple addition of cost savings associated with each of the proposed rule components, which overstates cost savings by not accounting for interactions between the impacts of the different components. The annuity value of the discounted net present value over the ten-year period of the analysis is presented, using a real discount rate of 3% and 7%, respectively. The mid-range cost savings is approximately $94.2 million annually.

The total net present value of the stream of cost savings is presented in Exhibit 12-2. The mid-range estimate of the total NPV over a 10-year period is $793 million.

Estimations of changes in expenditures by regulated entities based on an assumed level of noncompliance and cost savings from a potential increase in the compliance rate are included in the economic impact analysis in Appendix I.

Exhibit 12-1: Estimated Annual Cost Savings Associated with Proposed Changes to the SPCC Rule (millions)

Proposed Change	Annualized Cost Savings		
	Low-End	Mid-Range	High-End
Relief for Qualified Facilities	$12.1[a]	$24.2[b]	$36.3[c]
Relief for Facilities with Qualified Oil-Filled Operational Equipment		$60.6	
Relief for Facilities with Motive Power Containers	$0.98[d]	$2.47[e]	$4.93[f]
Relief for Airport Mobile Refuelers		$6.96	
TOTAL[1]		$94.2	

[1] The totals represent simple addition of cost savings associated with each of the proposed rule components, which overstates cost savings by not accounting for interactions between the impacts of the different components. The savings cover a range using a 3% and 7% discount rate.

a) assumes 25% of small facilities qualify and take advantage of relief
b) assumes 50% of small facilities qualify and take advantage of relief
c) assumes 75% of small facilities qualify and take advantage of relief
d) assumes 10% of facilities are affected
e) assumes 25% of facilities are affected
f) assumes 50% of facilities are affected

Exhibit 12-2: Total Net Present Value of Cost Savings Associated with Proposed Changes to the SPCC Rule (millions)

NPV over 10-year Period	Low-End 7% Discounted	Mid-Range	High-End 3% Discounted
	$563	$793	$930

Appendix I: Alternative Economic Impact Analysis

A. Rationale for Conducting Alternative Analysis

The main body of this regulatory analysis accounts for the reductions in social costs resulting from the proposed rule, i.e., cost savings. EPA developed a baseline for the analysis to assess the change in compliance costs associated with the proposed actions. EPA used the SPCC rule requirements under 40 CFR part 112, as amended in 2002 (67 FR 47042), as the baseline. For the benefit-cost analysis, EPA assumed that the proposed rule would not affect facilities that are not already required to meet the standards of the SPCC rule. Therefore, EPA is treating costs to comply with the current SPCC rule as liabilities that the regulated entities currently have whether or not they have actually made the capital expenditures to comply. In this analytical construct, these firms are assumed to simply delay the expenditures for the costs they already carry.

EPA does recognize, however, that there is probably some level of non-compliance with SPCC requirements at present. Therefore, there might be some level of non-compliance during the period of analysis, ten years after the proposed compliance date of October 31, 2007. Facilities that are complying with existing (baseline) SPCC requirements would save money when some of those requirements are relaxed under the proposed rule. Those facilities that do not comply with those existing requirements, however, are not making those expenditures in the baseline, and thus would not save any expenditures as a result of this rule. The purpose of this economic impact analysis is to better understand the changes in actual expenditures by the regulated community, as opposed to the cost savings analyzed in the regulatory analysis.

Since there is no reliable empirical evidence to assess the extent and magnitude of the current non-compliance, EPA developed an alternative scenario assuming a rate of 50 percent non-compliance. The following section compares the estimated changes in expenditures resulting from the proposed regulation under the full and partial compliance scenarios.

B. Estimated Reductions in Expenditures for the Alternative Baseline

Under the full compliance scenario, anticipated reductions in expenditures would be equal to the cost savings in the benefit-cost analysis presented in the main body of this document. In this case, all facilities eligible for the proposed changes in the rule are expected to take advantage of less stringent requirements and reduce their expenditures.

Under the partial compliance scenario, anticipated reductions in expenditures would be less than the cost savings presented in the benefit-cost analysis. The reason for lower reductions in expenditures in this scenario is that the fraction of SPCC-regulated facilities assumed to be in non-compliance would not be affected by the proposed changes, and therefore, would not be able to lower their costs. Under a 50 percent non-compliance scenario, half of all facilities (all non-compliant facilities) will not have any cost savings resulting in cost savings equal to 50 percent of the cost savings calculated under the full compliance scenario. The estimated changes in expenditures under the full and partial compliance scenarios are presented in

Exhibit I-1. "Using constant 2004 dollar values (see Exhibit 12-1), the mid-range estimated annual cost savings is $47.1 million under the partial (50 percent) compliance scenario."

Exhibit I-1
Estimated Reductions in Expenditures Associated with Proposed Changes to the SPCC Rule under Full and Partial Compliance Scenarios

Proposed Change	Reductions in Expenditures ($ million/year)					
	Full Compliance			Partial (50 percent) Compliance		
	Not Discounted	3% Discounted	7% Discounted	Not Discounted	3% Discounted	7% Discounted
Relief for Qualified Facilities	$26.5	$22.5	$18.4	$13.3	$11.3	$9.20
Relief for Facilities with Oil-Filled Operational Equipment	$67.4	$56.7	$45.9	$33.7	$28.4	$23.0
Relief for Facilities with Motive Power Containers	$1.08	$0.92	$0.75	$0.54	$0.46	$0.38
Relief for Airport Mobile Refuelers	$7.61	$6.43	$5.23	$3.81	$3.22	$2.62

[1] The estimates represent simple addition of cost savings associated with each of the proposed rule components, which overstates cost savings by not accounting for interactions between the impacts of the different components.

Reducing the costs of complying with SPCC requirements may induce some previously noncompliant facilities to conform to these requirements. Increased compliance with the SPCC requirements could result in higher cost savings associated with the proposed changes in the rule. EPA does not know the extent to which the relaxed requirements would affect overall compliance. For this analysis, EPA considered the potential impacts of increasing a hypothetical 50-percent compliance rate to 60-percent compliance. The following annualized cost savings may result from a ten percent increased in compliance: $7.0 million for qualified facilities, $12.1 million for facilities with qualified oil-filled operational equipment, $1.7 million for facilities with motive power containers, and $2.9 million for airports with mobile refuelers. The actual compliance level does not affect the cost savings associated with the increased compliance rate because the relationship between the cost savings and the compliance rate is linear i.e., the increase in cost savings due to an incremental increase in the compliance is constant.

C. Ramifications of the Alternative Compliance Baseline

Facilities that are not complying with current SPCC requirements are not providing the concomitant levels of environmental protection assumed by the rule. Under the reduced compliance baseline, therefore, any increased risks associated with reduced levels of regulation

under the proposed rule also diminish, since there is no reduction in environmental protection for those facilities.

Facilities that are currently not complying with the rule have experienced the benefits of avoided compliance costs accrued during the period of non-compliance. These cost savings would further offset the current overall costs of compliance.

2002 SPCC Rule Issue – Oil and Gas Exploration and Production - Administrative Issues

Issue. The 2002 SPCC rule includes numerous administrative changes that, taken as a whole, greatly expands and increases the impact of the rules on the regulated community. Some of these changes are provided below.

Current Industry Practice and Impacts of the new rule. Many oil and gas production wells, especially marginal wells, are significantly impacted by the new SPCC requirements. Marginal crude oil and gas wells operate at the lower edge of profitability. The SPCC requirements could cause some of these marginal oil and gas wells to be prematurely plugged.

Definition of Facility: There is no definition of "facility" in the old rules; however, the old rule defined what may be included in an onshore production facility. The definition of facility in the new rule, Section 112.7(e)(5)(i), has been expanded to define what a facility includes; however, it does not state where the boundaries end. This will lead to various interpretations and compliance and enforcement discrepancies between the regulated community and the EPA. The operator should have the option of choosing how best to split up its facilities in a single field for the purpose of writing effective SPCC plans. Additionally, operators are concerned that a field-wide SPCC plan could lead to a requirement to prepare a facility response plan in circumstances quite different from those envisioned by Congress in the Oil Pollution Act of 1990.

"Shoulds and shalls" changed to "musts" or "implied musts": The old rule allowed the Professional Engineer and/or the operator flexibility in addressing the various conditions and situations that are encountered at oil and gas sites across the country. The 2002 rule provides prescriptive language versus guidance language and takes away the flexibility that a Professional Engineer and/or an operator should have to address the various site specific conditions.

Facility Drawings: In the old rules, Section 112.7(b) allowed the SPCC plan and facility drawing to be developed in accordance with good engineering practices that were appropriate and necessary for the site. In the new rule, Section 112.7(3) requires more detailed facility information which does nothing to prevent spills nor does it provide a benefit to the environment. It merely increases the cost and time for operators to include site specific details for each well.

SPCC Plan Development: Current SPCC regulations require that plans be prepared and implemented prior to beginning operations at a facility. Previously, operators were given six months to prepare a plan and an additional six months to implement a plan after the beginning of operations for a new facility. Since oil and gas facilities are usually located in remote locations that are not easily accessible, preparation of SPCC plans prior to operation of a facility will result in production delays, additional costs and inefficiency. Once a well is drilled, time is required to test the well and size the equipment for the production rates. The inefficiencies will result if a PE needs to visit a site a second time after the testing and completion phase. Site visits and development of SPCC plans after completion will delay production. In addition, the transfer of numerous facilities from one operator to another will cause inefficiencies and delay production, if a new plan must be prepared prior to operation of the facility by the new owner.

Impracticability: In the old rule, Section 112.7(d) did not require specific integrity and leak testing of bulk storage containers, valves and piping if the specified structures and equipment provided in the rule were not practicable. Operators were required to develop a contingency plan and a written commitment of manpower, equipment and materials to control and remove oil discharges. The new rule requires specific integrity and leak testing of bulk storage containers, valves and piping if specified structures and equipment provided in the rule are not practicable. Many tanks are located in remote areas. This would be costly and onerous for operators to comply with this requirement. Also, in the preamble of the new rule, there are conflicts in the text as to whether cost can be considered if an operator decides to deviate from a particular requirement (see 112.7(a)(2), 112.7(d)).

Modification &Recertification of a Plan When There is a Material Reduction in Volume: The production rate for oil and gas wells declines over the life of the well and typically ends up being classified as a marginal well. As such, there are times when the production equipment located on the facility needs to be re-sized to account for declining production. It is onerous, costly, and unnecessary for operators to modify and recertify their SPCC plans to account for a material reduction in the volume of oil stored at the site.

Industry Recommendations:
Definition of facility: The EPA should clarify in the rule that every bulk storage container operated by an operator in a geographical oil or gas field does not have to be covered by a single field-wide SPCC plan or be considered as a single facility.

"Shoulds and shalls" changed to "musts" or "implied musts". The EPA should revise the rule and allow the use of "shoulds and shalls" to return flexibility to the rule. The use of "shoulds and shalls" prior to the 2002 rule did not negate EPA's enforcement ability, and should have no impact if it is used again.

Facility drawings: The EPA should consider a more streamlined approach in implementing the SPCC requirements and focus on those facilities and equipment that truly present a significant risk to waters of the U.S. Paperwork such as detailed facility drawings does not prevent spills nor does it provide a benefit to the environment.

SPCC Plan Development: The regulation should allow six months after operation begins to prepare and implement a plan for a new facility and for acquisition of existing facilities.

Impracticability: The EPA should clarify in the rule that cost can be a consideration as long as alternative measures are in place to address the risk. In addition, EPA should clarify in the rule that that for shop constructed tanks, specific integrity and leak testing of bulk storage containers, valves and piping are not required.

Modification &Recertification of a Plan When There is a Material Reduction in Volume: The EPA should revise the rule to allow existing SPCC plans to remain in effect for an oil and gas production facility whenever there have been equipment changes because of a material reduction in the volume of oil stored at the site.

2002 SPCC Rule Issue – Oil and Gas Exploration and Production "Certain Facilities"

Issue. The 2002 SPCC rule (40 CFR Part 112) does not take into account the deminimis nature of marginal crude oil and natural gas wells as compared to larger bulk storage facilities and refineries. More practical and economic regulatory schemes would encourage marginal well operators to comply while maintaining the viability of this needed resource.

Marginal oil and gas wells have unique characteristics that diminish their potential impact on the environment i.e. their production rates (15 barrels per day or less of crude oil or condensate and/or 90,000 cubic feet per day of natural gas) are minimal by any measure, their storage facilities are substantially smaller, and they typically operate at lower pressures. Most of these wells are operated by small independent producers, similar to small family farms. Because of their marginal nature, they operate at the low edge of profitability.

The risk presented by these wells supports only a need for minimal regulation. In Oklahoma, the National Response Center data for 2003 shows that crude oil spills to water from E&P facilities accounted for approximately 664 barrels from production related activities. This amount is 1.03×10^{-5} percent (0.0000103 percent) of the overall production in the state.

The preservation of marginal crude oil and natural gas production is essential to the welfare of our country and our nation's energy supply. Approximately 30 percent of all of the onshore oil produced in the lower 48 states is produced from marginal wells (IOGCC, 2003).

Current Industry Practice. The "one size fits all" SPCC requirements do not take into consideration of the potential risk at different types of facilities that are subject to the rule. Even the EPA's own studies show that existing requirements for SPCC plans and PE certification for all sites subject to the rules do not lessen the potential for spills to occur.

Impacts of the new rule. Many production wells, especially marginal wells, are significantly impacted by the SPCC requirements. Marginal crude oil and gas wells operate at the lower edge of profitability. The SPCC requirements could cause some of these marginal oil and gas wells to be prematurely plugged, due to the economics of preparing plans and constructing, maintaining, and managing secondary containment around loading areas.

Industry Recommendations. The EPA should focus rule requirements on those facilities that provide a significant risk to waters of the U.S. The rules should be simplified which leads to effective spill prevention and control, and broader compliance by the regulated community.

In reference to "certain facilities", OIPA recommended to EPA a two tiered approach (see the proposal below). We proposed a threshold of 42,000 gallons i.e. 1000 barrels. Typically production sites have 2-4 storage tanks. In addition to this proposal, we would recommend that under the Tier 1 proposal, no tank on the facility would exceed approximately 300 barrels (roughly 12,700 gallons). The likelihood of all tanks at a facility failing at the same time is extremely low.

- Tier 1: Establish an aggregate threshold storage capacity of 1,000 barrels or less for each facility. Tier 1 would only require secondary containment around the storage tanks; however, it would eliminate requirements for operations/process equipment and flow lines, loading/unloading areas, integrity testing, Professional Engineer certification, and other various requirements. No single tank would exceed approximately 300 barrels in storage capacity. Tier 1 limits SPCC plan requirements to a one page form (which includes operator/owner's name, address and contact information; well name and location; size of storage tanks; calculation method showing size of secondary containment; emergency contact information; and signature of authorized representative of owner/operator).

- Tier 2: This would apply to wells with storage capacity greater than 1000 barrels (42,000 gallons). We believe there a numerous issues with the final July 2002 SPCC requirements that need resolution; however, once this is complete, those requirements would apply.

2002 SPCC Rule Issue – Oil and Gas Exploration and Production Secondary Containment around Flow and Gathering Lines

Issue. The focus of the SPCC rule has been on storage tanks where the likelihood of a spill could have the greatest risk of oil reaching Waters of the U.S. The change in the rule to require containment around flowlines and gathering lines is excessive since these types of lines are not oil storage vessels.

In addition, the containment requirements in Section 112.7(c) for exploration and production (E&P) flowlines and gathering lines is "not practicable". The goal of landowners, regulators and operators is to minimize surface impact. Requiring secondary containment around flowlines and gathering lines would cause large scale surface disturbances and environmental degradation. Finally, farmers would simply not allow the surface disturbance associated with secondary containment around flowlines and gathering lines in agricultural fields.

Furthermore, no data has been provided by EPA which indicates that spills from E&P flowlines and gathering lines contributes significantly to releases to Waters of the US.

Current Industry Practice. Oil and gas producers employ a variety of construction, inspection and maintenance practices to prevent pollution. These practices are aimed at preventing the loss of produced oil and gas which is critical to economical operations.

Impacts of the new rule. Secondary containment for flow and gathering lines will cause significant and unnecessary disturbance of the surrounding lands. Agricultural productivity may be disrupted and agricultural equipment safety may be compromised. Additionally, installing secondary containment (including double-walled piping) or retrofitting all existing flowlines and gathering lines is cost prohibitive.

Industry Recommendations. EPA should allow operators to implement reasonable and prudent practices to maintain flow and gathering line integrity to prevent discharges of oil to Waters of the U.S. Oil and gas operators focus resources and effort on responsible, risk-based flow line inspection, maintenance, and replacement spill prevention programs. EPA should clarify in the rule that Sec. 112.7 (c) containment requirements are not applicable to oil and gas production flowlines and gathering lines.

2002 SPCC Rule Issue – Oil and Gas Exploration and Production Integrity Testing

Issue. The 2002 SPCC rule requires specific integrity and leak testing of shop constructed bulk storage containers, valves and piping if the specified containment structures and equipment provided in the rule are not practicable. The requirement to raise tanks to allow visual inspection of the bottom (as recommended in the API lawsuit settlement agreement) is not practical because the very act of raising the tanks compromises the integrity of the tanks.

Current Industry Practice. In the old rule, Section 112.7(d) did not require specific integrity and leak testing of bulk storage containers, valves and piping if the specified structures and equipment provided in the rule were not practicable. Operators conduct visual inspections and develop contingency plans and a written commitment of manpower, equipment and materials to control and remove oil discharges.

In addition, volumetric testing occurs on a frequent basis by a variety of methods including tank gauges, tank strapping, and visual inspections in order to manage daily production. In-flow and out-flow are monitored and fluids are balanced to maximize production of saleable product and facilitate disposal of produced water.

Impact of the new rule. The EPA has removed the ability of the Professional Engineer to assess the risk and design spill prevention measures necessary to fit the situation at a given facility. Current production tanks are designed to rest on the ground. Raising tanks for visual inspection would require them to be re-engineered and structurally modified, or a new tank would have to be purchased. This can be very costly for wells that are considered marginally productive and operate at the lower edge of profitability. The SPCC requirements could cause some of these marginal oil and gas wells to be prematurely plugged. The benefit derived from this change would be negligible.

Industry Recommendations: The rules should be amended to allow the Professional Engineer and the operator to assess the risk and design spill prevention measures necessary for the conditions at a given site. Our recommendation is to continue visual inspections combined with current inventory management practices.

2002 SPCC Rule Issue – Oil and Gas Exploration and Production Secondary Containment at Loading Areas

Issue. The change in the rule to allow the term loading "rack" to cover a loading "area" at exploration and production (E&P) oil storage tanks is a significant expansion of the rule, and is not practical. Tank truck failures are relatively unknown in our industry and the risk of a discharge to Waters of the U.S. is very low. The EPA has not provided data to support this change and it has not identified the cost-benefit of such an expansion. Furthermore, EPA has removed the ability of the Professional Engineer (PE) to use discretion in the decision-making process.

Current Industry Practice. E&P loading operations account for a miniscule amount of the total time oil is in storage on an oil and gas lease versus the time the oil is stored in the storage tanks. Generally, loading operations occur approximately once every three months and the typical loading time is .5 to 1.5 hours. Additionally, tank loading operations are actively monitored by truck transport personnel. Furthermore, sites are typically equipped with spill prevention devices that were determined adequate by a PE.

Impacts of the new rule. A requirement for containment on all loading/unloading "areas" is a change that significantly increases facility costs without any corresponding environmental benefit or meaningful risk reduction. The management of rainwater alone would be an unnecessary burden operators would have to address on a daily basis. Many production wells, especially marginal wells, are significantly impacted by the SPCC requirements. Marginal crude oil and gas wells operate at the lower edge of profitability. The SPCC requirements could cause some of these marginal oil and gas wells to be prematurely plugged, due to the economics of preparing plans and constructing and maintaining secondary containment around loading areas.

Industry Recommendations. This issue was resolved in the API Settlement Agreement. EPA should follow through and amend the rule and withdraw its interpretation of the term "rack" to include any "area" where oil is loaded or unloaded at E&P facilities. Based on the infrequent nature of loading operations and the commensurate minimal risk posed by these operations, prescriptive containment measures should not be applied to E&P loading areas. It should be the discretion of the PE to assess the risk and design reasonable and prudent spill prevention measures as necessary.

2002 SPCC Rule Issue: Oil and Gas Exploration and Production Secondary Containment around Process Equipment & the Change from "Tanks" to "Containers"

Issue. The new SPCC rule, Section 112.1(b) includes the "use" of oil. The addition of this term expands the rule, and now requires processing and operating equipment at exploration and production (E&P) sites to be considered bulk storage containers requiring secondary containment. Leaks and breeches in heavy steel pressurized process equipment are extremely rare and present a low risk of a release of oil to Waters of the U.S. The EPA has not presented data demonstrating there is a significant history of documented spills of oil into Waters of the U.S. from this type of E&P equipment.

The containment of produced fluids around fired vessels, such as heater treaters, can also represent a serious safety hazard. Such equipment represents a source of ignition near any spilled hydrocarbon liquids and associated vapors. Many registered Professional Engineers have advised oil and gas operators that containment around fired vessels is ill advised and threatens the safety of workers. The regulation, as written, takes away the opportunity for the Professional Engineer (PE) to exercise good professional judgment.

The rule is inconsistent in regards to process/operating equipment among the different industrial sectors. At non-exploration and production sites, it is excluded from the definition of bulk storage containers. At E&P facilities, this type of equipment is considered bulk storage containers and subject to secondary containment requirements.

The purpose of a heater treater is to process oil/water mixtures, not to store them. Since the oil contained at any moment in time in process equipment (e.g. heater treater, piping, etc.) is only flowing through the equipment on its way to storage, any accounting for the oil in that type of equipment would amount to double-counting of that oil.

The change of "tank" to "container" has created confusion in the upstream oil and gas E&P industry. The term "tank" is commonly used; however, "containers" are not. In addition, the discrepancy in various sections of Part 112 creates uncertainty and allows for misinterpretation by EPA and industry. For example, there is no definition for "container", only "bulk storage container". The definition of "bulk storage container" excludes oil filled operating or manufacturing equipment; however the definition of "facility" and "production facility" includes "equipment". Section 112.7(a)(3)(iii) requires secondary containment around "containers" and "equipment". Section 112.9(c)(2) requires containment for the largest single "container".

Current Industry Practice. Currently pressured and fired vessels are located both in and out of secondary containment, depending on the specific company practices, equipment location and the advice of PE's certifying SPCC plans. The old SPCC rule did not provide for the inclusion of oil that was used in oil filled equipment and treated in process equipment in the volumetric calculations along with the requirement to provide secondary containment around these types of equipment.

Impacts of the new rule. Many production wells, especially marginal wells, are significantly impacted by the requirement to provide secondary containment around oil filled and process

equipment. The containment of produced fluids around fired vessels, such as heater treaters creates a safety hazard. In addition, the rule is confusing from one section to the other which leads to misinterpretation by EPA and industry and leads to non compliance. The rule as written takes away the opportunity for the PE to exercise good professional judgment based on the situation at a facility.

Industry Recommendations: The definition of "bulk storage container" should be modified as follows:

> "Oil containing equipment (i.e., heater-treaters, pumps, crankcases, flowlines, gathering lines, etc.) whose primary purpose is "process" related, not "storage" related, is not a bulk storage container."
>
> Alternatively, the definition could be changed as follows: "Bulk storage container means a storage tank".

In addition, the rule should be changed to allow the PE flexibility to exercise good professional judgment based on the situation at a given facility.

2002 SPCC Rule Issue – Oil and Gas Exploration and Production Produced Water Storage & Secondary Containment

Issue. The intent of the SPCC rule is to prevent and control oil discharges, not produced water discharges. Produced water storage tanks typically contain small volumes of oil that do not represent a significant source of oil storage. Produced water from the oil and gas exploration and production (E&P) should be exempt from the SPCC regulations because there is a very low risk of a significant discharge of oil to Waters of the U.S.

The EPA has not presented data demonstrating there is a significant history of documented spills of oil into Waters of the U.S. from produced water storage tanks. In some situations, oil may accumulate on top of produced water storage tanks (during upsets); however, the duration of the potential exposure is minimal and should not condemn the entire tank volume.

Oil and gas exploration and production equipment used to treat produced water should be subject to the wastewater exemption to the same extent as similar facilities in other industrial sectors. The EPA has singled out oil and gas water separation facilities for an increased level of regulation while facilities in other industry sectors using similar or nearly identical technologies and treatment goals are allowed to be exempted from these rules.

In addition, Section 112.7(c) requires the walls and floor of the containment structure to be constructed so that any discharge will not escape containment before cleanup occurs. This can be interpreted to require the containment structure be impervious vertically and horizontally. This will be a costly and impractical expansion of the rule.

Current Industry Practice. In some instances, produced water tanks are contained within secondary containment structures; however, this is not always the case. Operators are developing plans and constructing costly containment structures around produced water tanks, even though these containers present a very low risk of a significant discharge of oil to Waters of the U.S. In addition, the old containment structure requirements are adequate, economic, and allow the operator time to clean up the spill before it reaches Waters of the U.S.

Impacts of the new rule. The requirement to make secondary containment "impervious" will require the containment structures at every facility to be retrofitted which will be extremely costly for all operators. Many production wells, especially marginal wells, are significantly impacted by the SPCC requirements. Marginal crude oil and natural gas wells operate at the lower edge of profitability. The SPCC requirements could cause some of these marginal oil and gas wells to be prematurely plugged, due to the economics of preparing plans and constructing and maintaining secondary "impervious" containment around produced water tanks that contain deminimis amounts of oil.

Industry Recommendations. E&P produced water tanks should not be considered bulk oil storage containers and should not be subject to the SPCC regulation as they contain deminimis quantities of oil that do not present a significant risk of discharging oil to Waters of the U.S. Equipment containing produced wastewater should be included in the wastewater exemption to the same extent as similar facilities in other industrial sectors. In addition, the language in Section 112.7(c) in regards to "impervious" containment structures should revert back to the old language to prevent costly retrofits of every containment structure on every E&P facility.

United States Department of Agriculture
Rural Development

Fuel/Oil Storage and Delivery for Farmers and Cooperatives

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COOPERATIVE SERVICES
TECHNICAL ASSISTANCE

Confidentiality Clause

Cooperative Services, Rural Development, of the United States Department of Agriculture will treat this report as confidential to the extent provided for by law. This report was prepared for the sole use of National Council of Farmer Cooperatives. The board of directors and management of National Council of Farmer Cooperatives may make any use of this report they deem appropriate.

Preface

This report was prepared in response to a request made in December 2004 by the National Council of Farmer Cooperatives (NCFC). NCFC asked Cooperative Services (CS) to survey both farmers and cooperatives to assess U.S. agriculture's fuel/oil storage and delivery system to determine the level of awareness and potential impact with regard to the Environmental Protection Agency's (EPA) 2002 Spill Prevention, Control, and Countermeasures (SPCC) regulations.

Two questionnaires to study this issue were developed with the assistance of a coalition of agricultural associations. One questionnaire was used for farmers and one for agricultural cooperatives. This report analyzes the responses of over 1,700 farmers and 400 cooperatives to the aforementioned questionnaires.

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Executive Summary

Over the course of several months two questionnaires were developed to assess U.S. agriculture's fuel/oil storage and delivery system. Questionnaires were sent to 1,089 agricultural cooperatives and 3,850 farmers. CHS Inc. also made the same questionnaires available to farmers and cooperatives at their annual meeting and on their web site.

Farmer questionnaire summary:

- 1,712 farmers responded to the questionnaire.
- Less than half of the respondents were aware of EPA's SPCC regulations.
- The average respondent farmed slightly over 2,000 acres.
- Farms were made up of 10,185 parcels, with a range of 1 to 100 parcels.
- Average aggregated above ground storage capacity was 5,550 gallons.
- Over 74 percent of the respondents had storage of less than 5,000 gallons, farms with less than 1,000 acres averaged less than 2,500 gallons while those over 1,000 acres averaged almost 8,000 gallons.
- Half of the respondents had storage in one location, the other half had over 4,100 satellite storage locations that on average were 4.1 miles from the main site.
- Over 99 percent of the farmers had not experienced a fuel/oil spill in excess of 1,320 gallons.
- Cost of compliance to the SPCC rule was estimated to be $12,831 for an average tank size of slightly over 6,700 gallons.

Farmer cooperative questionnaire summary:

- 387 of 1,089 cooperatives responded to the questionnaire.
- Almost 95 percent of the respondent cooperatives were aware of EPA's SPCC regulations.
- The 387 cooperatives had over 41 million gallons of fuel/oil storage, or an average 120 thousand gallons.
- The cooperatives leased or rented storage tanks to farmers 31 percent of the time.
- Farms that cooperatives delivered to had aggregated storage in excess of 1,320 gallons 38 percent of the time. Only 8 percent had berms to contain spills.
- Cooperatives had asked to see a farm SPCC plan for about 4 percent of the farms they deliver to.
- The cooperatives had 894 fuel/oil delivery trucks with a capacity in excess of 660 gallons. Bermed or catch basin parking for 16 percent of these trucks was available when they were not in use.

The SPCC rule will have a substantial cost of compliance for the nation's farmers. A total compliance cost of almost $4.5 billion is projected. There is very little evidence of fuel/oil spills by farmers.

Introduction

In December 2004 the National Council of Farmer Cooperatives (NCFC) requested the assistance of Cooperative Services (CS) to survey both farmers and cooperatives to assess U.S. agriculture's fuel/oil storage and delivery system. An agricultural coalition assisted CS with the development of two questionnaires--one to survey farmers and the other to survey agricultural cooperatives. NCFC wanted the study to be conducted to determine the level of awareness and potential impact with regard to the Environmental Protection Agency's (EPA) 2002 Spill Prevention, Control, and Countermeasures (SPCC) regulations.

The July 2002 EPA SPCC final rule caught many in the agricultural community by surprise. An ag coalition was formed to review the rule and find remedies. The ag coalition is comprised of these members:

American Farm Bureau Federation
Agriculture Retailers Association
American Corn Growers Association
CF Industries
CHS Inc.

GROWMARK, Inc.
MFA Oil
Montana Council of Cooperatives
National Grape Cooperative Association
National Association of Wheat Growers

National Cotton Council
National Council of Farmer Cooperatives
National Farmers Union
National Grange
Nebraska Cooperative Council

North American Equipment Dealers Association
Oklahoma Agricultural Cooperative Council
Southern States Cooperative
South Dakota Association of Cooperatives
Soybean Producers of America

The Fertilizer Institute
USA Rice Federation
Wheat World

Highlights of EPA's 2002 SPCC final rule are as follows (for a more complete description of EPA's Revised SPCC Rule, see Appendix I, page 15):

- Exempts completely buried storage tanks subject to all of the technical requirements of the UST regulations (40 CFR Parts 280 or 281);
- Exempts portions of certain facilities or any facility used exclusively for wastewater treatment;
- Establishes a de minimis container size of 55 gallons;
- Establishes an aboveground storage capacity threshold of greater than 1,320 gallons and removes the 660 gallon threshold;
- Revises the trigger for submitting information on spills at SPCC regulated facilities to EPA. Facilities are now required to submit information after having 2 discharges (over 42 gallons) in any 12-month period or a single discharge of more than 1,000 gallons;
- Allows deviations from most rule provisions (with the exception of secondary containment requirements) when equivalent environmental protection is provided;
- Provides for a flexible plan format, but requires a cross-reference showing that all regulatory requirements are met; and
- Clarifies rule applicability to the storage and operational use of oil.

Questionnaire Design

Over the course of several months, two questionnaires were developed to assess U.S. agriculture's fuel/oil storage and delivery system. NCFC, CHS, Inc., and the agricultural coalition were consulted on the questions. The questionnaires are shown in appendices IV and V (pages 21 and 22, respectively). To enhance response rates both questionnaires were administered on a single page. Some of the questions on both questionnaires were similar so that they could be compared.

A mailing list of farmer addresses was obtained from USDA's Farm Service Agency. The list included rice, corn, soybeans, wheat, and cotton farmers. From this list, a random sample of 3,850 farmers was chosen to be surveyed.

For statistical significance at the 95% level of confidence for any single question on the farmer questionnaire, responses from at least 383 farmers were found to be needed in a population of over 100,000 farmers. A 10 percent response rate of farmers for the fuel/oil storage questionnaires was expected. However, the actual rate of farmer response was 22.3 percent (858 of 3,850 farmers surveyed with several hundred additional questionnaires arriving after the mid-March cut off date). Appendix II (page 18) shows the farmer respondents by region. There were few differences found by region, but the regional information is included in this report to show respondent dispersion.

CHS Inc. also made both questionnaires available on their web site. CHS Inc. introduced the questionnaires at their annual meeting in December 2004 and encouraged both local cooperatives and farmers to fill out questionnaires at their annual meeting or to download the questionnaire from the CHS Inc. web site. The cooperative questionnaire was mailed to 1,089 cooperatives that had retail sales of petroleum products.

There is considerable overlap between the CHS Inc. cooperatives contacted at their annual meeting and the 1,089 cooperatives surveyed by mail. Because of the overlap, the cover letter to the cooperatives asked the cooperatives to ignore the questionnaire if they had previously responded.

Farmer Questionnaire

The farmer response table is divided into a summary section of all respondents on the left followed by four fuel-storage size classes on the right (table 1, page 4).

The first question sought to determine what numbers of farmers were aware of the rule prior to the survey. About one-half of the farmers surveyed were aware of EPA's SPCC regulations.

Table 1—Farmer Questionnaire—All Respondents and by Above-Ground Storage Increments

Farmer Survey Summary--All		All Respondents			Less than 1,320 storage			1,320 to 5,000 storage			5,001 to 12,000 storage			12,001 to 29,999 storage		
			Number	Percent		Number	Percent		Number	Percent		Number	Percent		Number	Percent
1. Are you aware of the SPCC?	YES		754	44.04%		216	46.96%		294	46.08%		88	42.16%		63	36.84%
	NO		958	55.96%		244	53.04%		344	53.92%		118	57.84%		108	63.16%
2. Your farm size?	LESS THAN 200 ACRES		158	9.84%		82	17.82%		15	2.32%		6	2.88%		4	2.26%
	201 TO 500 ACRES		241	15.02%		162	34.82%		56	8.67%		8	3.85%		3	1.69%
	501 TO 1,000 ACRES		308	19.19%		118	25.21%		157	24.30%		22	10.58%		5	2.82%
	OVER 1,000 ACRES		898	55.95%		106	22.65%		418	64.71%		172	82.69%		165	93.22%
		Total Parcels	Average	Max	Min	Total Parcels	Average	Max	Total Parcels	Average	Max	Total Parcels	Average	Max	Total Parcels	Average	Max
3. Number of farm (parcels) totaling?		10,185	7	100	0	1,869	6	80	4,428	8	50	1,646	9	42	1,806	11	100
LESS THAN 200 ACRES		219	1	20	1	124	2	20	40	3	6	28	5	12	13	3	5
201 TO 500 ACRES		762	3	80	1	562	3	80	162	3	13	23	3	6	1	0	1
501 TO 1,000 ACRES		1,570	5	43	1	568	5	43	848	5	35	115	5	11	20	4	7
OVER 1,000 ACRES		7,634	9	100	0	637	6	35	3,378	8	50	1,481	9	42	1,772	11	100
				Number	Percent		Number	Percent		Number	Percent		Number	Percent		Number	Percent
4. Do you have above ground storage?	YES			1,535	88.12%		467	100.00%		645	100.00%		208	100.00%		177	100.00%
	NO			207	11.88%		0	0.00%		0	0.00%		0	0.00%		0	0.00%
5. Do you not the above ground storage?	YES			1,427	92.12%		425	91.59%		606	93.81%		189	90.87%		165	95.45%
	NO			122	7.88%		39	8.41%		40	6.19%		19	9.13%		8	4.55%
				Gallons	Ave. Gal.		Gallons	Ave. Gal.		Gallons	Ave. Gal.		Gallons	Ave. Gal.		Gallons	Ave. Gal.
6. Above ground storage (total gallons and average)				8,490,902	5,550		388,819	832		1,691,753	2,619		1,616,885	8,735		3,143,435	17,760
			Number	% of responses		Number	% of responses		Number	% of responses		Number	% of responses		Number	% of responses	
6. Above ground storage	LESS THAN 1,320 GALLONS		467	30.52%	832	467	100.00%	832	0	0.00%	0	0	0.00%	0	0	0.00%	0
	1,320 TO 5,000 GALLONS		646	42.22%	2,619	0	0.00%	0	646	100.00%	2,619	0	0.00%	0	0	0.00%	0
	5,001 TO 12,000 GALLONS		208	13.59%	8,735	0	0.00%	0	0	0.00%	0	208	100.00%	8,735	0	0.00%	0
	12,001 TO 29,999 GALLONS		177	11.57%	17,760	0	0.00%	0	0	0.00%	0	0	0.00%	0	177	100.00%	17,760
	30,000 OR MORE GALLONS		32	2.09%	46,319	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0
				Number	Percent		Number	Percent		Number	Percent		Number	Percent		Number	Percent
7. Your storage tanks are?	STATIONARY		7,622,783	89.97%		349,275	88.01%		1,475,093	86.95%		1,612,670	89.64%		2,637,965	90.62%	
	PORTABLE		849,509	10.03%		55,344	13.99%		221,390	13.05%		186,455	10.36%		293,770	9.38%	
					Average			Average			Average			Average			Average
8. You have a total of ...	ACRES		2,374,436	2,105		75,791	668		899,413	1,482		546,572	2,774		688,369	4,002	
					Percent			Percent			Percent			Percent			Percent
9. Are your storage tanks at this location?	YES		810	53.05%		331	71.85%		304	47.36%		106	50.48%		63	35.59%	
	NO		717	46.95%		131	28.35%		338	52.65%		103	49.52%		114	64.41%	
					Ave. Miles			Ave. Miles			Ave. Miles			Ave. Miles			Ave. Miles
10. Distance to the nearest tank site	NUMBER		4,174	4.1		334	2.0		2,469	3.4		462	5.1		559	5.7	
			Number	Miles		Number	Miles		Number	Miles		Number	Miles		Number	Miles	
10. Distance to your other storage tank sites	SITE 1		830	3.4		107	2.1		397	3.0		98	5.2		96	3.8	
	SITE 2		346	4.1		36	1.4		156	3.6		63	4.9		70	5.2	
	SITE 3		177	5.2		5	2.8		71	4.5		36	4.0		60	7.5	
	SITE 4		101	7.1		2	3.6		26	4.3		25	6.5		35	8.3	
			Number	Percent		Number	Percent		Number	Percent		Number	Percent		Number	Percent	
11. Have you had a leak of more than 1,000 gallons?	YES		6	0.39%		0	0.00%		5	0.77%		1	0.48%		0	0.00%	
	NO		1,545	99.61%		464	100.00%		641	99.23%		207	99.52%		175	100.00%	
12. Employee of your agency contacted you with SPCC?	YES		38	2.46%		4	0.87%		14	2.17%		4	1.94%		12	6.82%	
	NO		1,507	97.54%		458	99.13%		632	97.83%		202	98.06%		164	93.18%	
			Average	Responses		Average[1]	Responses		Average	Responses		Average	Responses		Average	Responses	
12.b. Total cost of compliance?	COST		12,831	32		2,100	3		6,890	10		12,500	3		17,217	12	
12.c. Tank sites affected for compliance?	GALLONS		6,737	32		4,287	3		1,879	10		7,333	3		9,583	12	

Surveys were returned from 35 retired or non-active farmers--their responses are not in this table. Surveys were returned from 210 farmers with no above ground storage--only their response to knowledge of SPCC rule were presented in this table.

[1] One respondent with aggregated storage of less than 1,320 gallons had a compliance estimate for an 11,000 gallon tank which made the average higher than the expected value of less than 1,320 gallons.

Table 1—Farmer Questionnaire—All Respondents and by Above-Ground Storage Increments (continued)

Farmer Survey Summary–All		All Respondents			30,000 or more storage			12,000 or less storage			12,001 or more storage		
			Number	Percent		Number	Percent		Number	Percent		Number	Percent
1. Are you [illegible]	YES		754	44.04%		13	41.94%		596	45.78%		76	37.62%
	NO		958	55.96%		18	58.06%		706	54.22%		126	62.38%
2. Your farm size	LESS THAN 200 ACRES		156	9.84%		0	0.00%		103	7.79%		4	1.91%
	201 TO 500 ACRES		241	15.02%		1	3.13%		226	17.10%		4	1.91%
	501 TO 1,000 ACRES		308	19.19%		0	0.00%		297	22.47%		5	2.39%
	OVER 1,000 ACRES		898	55.95%		31	96.88%		696	52.65%		196	93.78%
		Total Parcels	Average	Max	Min	Total Parcels	Average	Max	Total Parcels	Average	Max	Total Parcels	Average	Max
3. Number of farm parcels		10,185	7	100	0	346	12	76	7,985	7	80	2,152	11	100
LESS THAN 200 ACRES		219	1	20	1	0	0	0	193	2	20	13	3	5
201 TO 500 ACRES		782	3	80	1	5	5	5	747	3	80	6	2	5
501 TO 1,000 ACRES		1,570	5	43	1	0	0	0	1,529	5	43	20	4	7
OVER 1,000 ACRES		7,634	9	100	0	341	11	76	5,496	8	60	2,113	11	100
			Number	Percent		Number	Percent		Number	Percent		Number	Percent
4. Do you have above-ground storage	YES		1,535	88.12%		32	100.00%		1,320	100.00%		209	100.00%
	NO		207	11.88%		0	0.00%		0	0.00%		0	0.00%
5. Do you own the above-ground storage	YES		1,427	92.12%		30	93.75%		1,220	92.56%		195	95.19%
	NO		122	7.88%		2	6.25%		98	7.44%		10	4.81%
			Gallons	Ave. Gal.		Gallons	Ave. Gal.		Gallons	Ave. Gal.		Gallons	Ave. Gal.
6. Approximate capacity in gallons of above-ground storage			8,490,902	5,550		1,450,216	45,319		3,897,257	2,950		4,593,845	21,979
			Number	% of responses		Number	% of responses		Number	% of responses		Number	% of responses	
[illegible]	LESS THAN 1,320 GALLONS		487	30.52%	832	0	0.00%	0	487	35.35%	832	0	0.00%	0
	1,320 TO 5,000 GALLONS		646	42.22%	2,619	0	0.00%	0	646	48.90%	2,619	0	0.00%	0
	5,001 TO 12,000 GALLONS		208	13.59%	8,735	0	0.00%	0	208	15.75%	8,735	0	0.00%	0
	12,001 TO 29,999 GALLONS		177	11.57%	17,760	0	0.00%	0	0	0.00%	0	177	84.69%	17,760
	30,000 OR MORE GALLONS		32	2.09%	45,319	32	100.00%	45,319	0	0.00%	0	32	15.31%	45,319
				Number	Percent		Number	Percent		Number	Percent		Number	Percent
7. Your storage facility type	STATIONARY		7,822,763	89.97%		1,357,660	93.62%		3,428,038	88.10%		4,194,725	91.57%	
	PORTABLE		849,509	10.03%		92,550	6.38%		463,189	11.90%		386,320	8.43%	
					Average			Average			Average			Average
8. Your overall [illegible]	ACRES		2,374,435		2,105	160,003		5,000	1,521,776		1,651	848,371		4,159
					Percent			Percent			Percent			Percent
9. Are you [illegible]	YES		810	53.05%		3	9.38%		740	56.40%		66	31.58%	
	NO		717	46.95%		29	90.63%		572	43.60%		143	68.42%	
					Ave. Miles			Ave. Miles			Ave. Miles			Ave. Miles
9.5. You [illegible]	NUMBER		4,174		4.1	330		5.8	3,285		3.6	889		5.7
			Number		Miles	Number		Miles	Number		Miles	Number		Miles
10. Distance [illegible]	SITE 1		630		3.4	23		4.3	512		3.2	118		3.9
	SITE 2		348		4.1	19		6.4	257		3.6	89		5.4
	SITE 3		177		5.2	15		5.0	112		4.2	65		6.9
	SITE 4		101		7.1	13		8.4	53		5.3	48		9.0
				Number	Percent		Number	Percent		Number	Percent		Number	Percent
11. Do you [illegible]	YES		6		0.39%	0		0.00%	6		0.46%	0		0.00%
1,320 gallons	NO		1,545		99.61%	32		100.00%	1,312		99.54%	207		100.00%
12. Estimate [illegible]	YES		38		2.48%	4		12.50%	22		1.67%	16		7.69%
	NO		1,507		97.54%	28		87.50%	1,292		98.33%	192		92.31%
			Average		Responses	Average		Responses	Average		Responses	Average		Responses
12.2. [illegible]	COST		12,831		32	23,400		4	6,900		16	18,763		16
12.3. [illegible]	GALLONS		6,737		32	11,750		4	3,349		16	10,125		16

Unfortunately, because nearly 600 respondents in the first survey round were briefed about the rule immediately previous to the questionnaire being administered, no conclusion can be made from that group regarding their prior knowledge of the rule.

The farmer questionnaires administered by CHS Inc. and those administered by USDA show a large difference in the response to question 1, prior knowledge to EPA's SPCC rule (table 2). The CHS Inc. administered questionnaires found farmers equally aware and unaware of the rule while the USDA questionnaires found 61 percent of the farmers had no knowledge of the rule.

Table 2—Initial farmer questionnaires administered by CHS Inc. and USDA

		CHS Inc.		USDA	
1. Farmers aware of the EPA's SPCC	YES	422	49.41%	332	38.69%
	NO	432	50.59%	526	61.31%

Some breakout by farm acreage could perhaps provide insights about small versus large business impacts. The second question was asked to determine what size farm was represented and to base some judgments on the impacts of the ruling on small versus large farms. The average respondent farmed slightly over 2,000 acres.

USDA reports average farm size as slightly less than 500 acres.[1] However, only 18 percent of respondents to this questionnaire had farms of less than 500 acres. About 52 percent of all respondents (898 of 1,712) owned/operated a farm of greater than 1,000 acres. Of those 898, 31 (3 percent) possessed fuel storage capacity in excess of 30,000 gallons and 699 (78 percent) held less than 12,000 gallons of storage capacity.

The 1,712 respondents held farms made up of over 10,185 parcels. On average, a respondent farmed 7 parcels. Farms holding greater than 30,000 gallons in fuel storage spanned an average 9 land parcels. Farms holding 12,000 gallons or less spanned 7 parcels. Farms with over 1,000 acres averaged 8 parcels. The intent of the fourth question was to show the number of farmers, and what proportion of those surveyed, could be impacted by the above ground storage tank rule. Almost 90 percent of the farmers had above ground storage tanks

The fifth question was asked to determine if there is a bias regarding either the owner or the renter being affected by the rule if directed to comply – owner versus renter. Over 92 percent owned their own storage tanks. Almost 8 percent noted that they rented or leased their above ground storage tanks. A few respondents commented that their rented or leased tanks held oil.

[1] USDA, Agricultural Statistics 2004.

Question 6 was asked to determine what number/percentage of farms would meet the 1,320 trigger. Over 73 percent of all respondent farms have aggregated fuel storage in excess of 1,320 gallons. Total above ground fuel storage capacity is almost 7.6 million gallons among all respondents who farm over 2.3 million acres. On average, aggregated fuel storage capacity above ground was 5,550 gallons. Farms with an excess of 30,000 gallons averaged 45,319 gallons. Farms with 12,000 gallons or less averaged 2,950 gallons in storage capacity.

Given that there are various thresholds being suggested by industries, breakouts by 0-1320; 1321-5,000; 5001-12,000; 12001-30,000; and over 30,000 are provided to determine how many might be impacted at each threshold level. Over 64 percent (1,100) of respondents have aggregated above ground fuel storage of 5,000 gallons or less. Of that proportion, over 39 percent (467 of 1,100) hold storage of less than 1,320 gallons.

Almost 90 percent of the aggregated storage is in stationary tanks. Portable storage capacity therefore, averaged about 10 percent of total capacity (556 gallons) among all respondents, 6.4 percent (2,892 gallons) among farms with 30,000 gallons or more of storage, and 11.9 percent (351 gallons) among farms with 12,000 gallons or less in storage.

Question 8 was asked to determine what relationship if any exists between farm size and fuel/oil storage. However, this question provides only a general reference to that relationship. For example, it cannot speak to the various types of farm operations, i.e., grain, oilseed, cotton, rice, peanuts, etc.

Respondents with fuel storage capacity of less than 1,320 gallons held a combined acreage of 75,924 acres in production (3.2 percent of 2.37 million acres) or an average 684 acres per farm. Respondents with fuel storage capacity of between 1,320 and 5,000 gallons held 38 percent of the production acreage (899,413 acres), an average of 1,462 acres per farm.

Fifty-three percent of the respondents had all storage tanks in one location. On average, respondents with more than one fuel storage location had 6 satellite storage locations with each satellite site about 4.1 miles from the main storage site. Respondents were asked to provide the distance from the main storage to each satellite storage location for up to 4 sites. The distance to site 1 from the main location averaged 3.4 miles, to site 2, 4.1 miles; site 3, 5.2 miles; and site 4, 7.1 miles (table 3, page 8).

Table 3—Farms with other storage sites and distances, all respondents and storage volume

Farmer Survey Summary	All Respondents		Less than 1,320 storage		1,320 to 5,000 storage		5,001 to 12,000 storage	
	Number	Miles	Number	Miles	Number	Miles	Number	Miles
Other storage sites and distance	4,174	4.1	337	2.0	2,489	3.4	462	5.1
Site 1 (number and distance)	630	3.4	108	2.1	307	3.0	98	5.2
Site 2 (number and distance)	346	4.1	36	1.4	155	3.6	63	4.9
Site 3 (number and distance)	177	5.2	5	2.8	71	4.5	36	4.0
Site 4 (number and distance)	101	7.1	2	3.6	28	4.3	25	6.5

	12,000 or less storage		12,001 or more storage		12,001 to 29,999 storage		30,000 or more storage	
	Number	Miles	Number	Miles	Number	Miles	Number	Miles
Other storage sites and distance	3,285	3.6	889	5.7	559	5.7	330	5.8
Site 1 (number and distance)	512	3.2	118	3.9	95	3.8	23	4.3
Site 2 (number and distance)	257	3.6	89	5.4	70	5.2	19	6.4
Site 3 (number and distance)	112	4.2	85	6.9	50	7.5	15	5.0
Site 4 (number and distance)	53	5.3	48	9.0	35	9.3	13	8.4

Farms with aggregated storage of 1,320 or less gallons had over 330 additional storage sites, located 2 miles from each other on average. The storage sites increased in distance of separation as aggregated storage increased, going from 3.6 miles for those with less than 12,000 gallons to 5.8 miles for those with aggregated storage of 30,000 or more.

Less than 1 percent of farmers surveyed (6 of 1,712) experienced a fuel/oil spill in excess of 1,320 gallons. Another way of stating it, over 99 percent of the farmers surveyed did **not** have a fuel/oil spill.[2]

Less than 2.5 percent of the respondents asked a professional engineer the cost of compliance with the SPCC rule and fewer had an estimate of the cost of compliance. Only 38 respondents discussed the SPCC rule with a professional engineer. Of the 38, 32 provided an estimate of the cost of compliance of the rule. For an average tank size of a slightly more than 6,700 gallons, the cost of compliance of with the SPCC rule was estimated to exceed $12,800.

Farmer Cooperative Questionnaire

Agricultural cooperatives are farmer-owned business organizations that market farm products for and supply farm inputs to farmers (such as fuel and oil). Cooperative Services, Rural Development primarily works with farmer cooperatives. The cooperative questionnaire was mailed to 1,089 cooperatives. It was determined that a survey for cooperatives should be constructed and issued to see (1) the extent of compliance for cooperatives, (2) what impact the new rule might have, and (3) to ask some questions similar to the farmer survey to validate their responses.

The cooperative summary tables are also organized by storage capacities (table 4, page 9). Almost 95 percent of the respondent cooperatives were aware of the SPCC rule. Unfortunately,

[2] The survey did not solicit information that would indicate a widespread spill or proximity to water shorelines.

Table 4—Farmer Cooperative Questionnaire All Respondents and by Above-Ground Storage Increments

Farmer Cooperative Survey Results All		All Respondents		Less than 12,001 storage		12,001 to 50,000 storage		50,001 to 100,000 storage		More than 100,000 storage	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1. Is your cooperative aware of EPA's SPCC rule?	YES	366	94.57%	84	91.43%	39	97.50%	80	97.56%	143	98.31%
	NO	21	5.43%	6	8.57%	1	2.50%	2	2.44%	1	0.69%
2. Bulk delivery to your cooperative	LESS THAN 2,000 GALLONS	55	14.22%	7	9.59%	10	22.73%	24	25.53%	21	11.48%
	2001 TO 5,000 GALLONS	269	58.86%	34	46.58%	20	45.45%	62	65.96%	138	75.41%
	5,000 + GALLONS	47	10.28%	7	9.59%	3	6.82%	7	7.45%	23	12.57%
	OTHER	76	16.63%	25	34.25%	11	25.00%	1	1.06%	1	0.55%
3. Does your cooperative have a bulk storage	YES	340	91.64%	69	100.00%	41	100.00%	78	100.00%	145	100.00%
	NO	31	8.36%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
4. Your cooperative's total bulk storage	GALLONS	41,304,148	120,070	185,634	2,615	1,446,480	34,440	8,743,279	81,244	32,928,753	222,492
5. Percent of farm supplies delivered in bulk	PERCENT		31.27%		34.00%		44.20%		29.09%		31.13%
6. Number of farm supplies delivered in bulk	NUMBER	107,352		8,772		4,326		19,989		71,075	
7. Farm supplies delivered in bulk	NUMBER	40,453	37.68%	1,035	11.80%	1,229	28.42%	8,617	43.15%	28,494	40.09%
8. Farm supplies delivered in bulk to customers	NUMBER	3,316	8.20%	284	27.44%	130	10.58%	766	8.89%	2,063	7.24%
9. Farm supplies delivered in bulk to customers	NUMBER	29,789	27.75%	1,650	18.81%	804	18.59%	6,598	33.04%	20,364	28.65%
10. Average distance to farm customers	MILES	3.3		3.0		1.7		3.3		3.8	
11. Has your cooperative added to your bulk storage	YES	15	4.36%	3	5.56%	0	0.00%	5	6.17%	7	4.79%
	NO	329	95.64%	51	94.44%	34	100.00%	76	93.83%	139	95.21%
10. If YES, how many added to bulk storage	THIS YEAR	71	0.18%	5	0.48%	0	0.00%	52	0.60%	14	0.05%
	LAST 5 YEARS	112	0.28%	48	4.54%	0	0.00%	50	0.58%	14	0.05%
11. Your cooperative farmers have taken bulk delivery	NUMBER	894		86		60		147		572	
12. Farmers cooperatives that have bulk storage with 50,000 gallons	NUMBER	143	18.00%	21	24.42%	8	13.33%	29	19.73%	81	14.16%

Surveys were returned from 32 cooperatives that have no above ground storage—their responses are included in this table.

[1] For question 10, only one cooperative answered that they had seen plans this year or in the last five years with aggregated storage from 50,001 to 100,000 gallons. Those 52 and 50 responses are a large proportion of all responses.

nearly 100 respondents were briefed about the rule just prior to the questionnaire being administered at an annual cooperative meeting. No conclusions regarding prior knowledge therefore, can be made from that group.

The cooperatives delivered fuel/oil to almost 108 thousand farms, mainly in 2 to 5 thousand gallon delivery trucks. Trucks holding less than 2,000 gallons and over 5,000 gallons were also used.

About 92 percent of the cooperatives had above ground storage tanks, with a total storage capacity of over 41 million gallons, or 120 thousand gallons on average. Many of the cooperatives (31 percent) delivered to farms that leased or rented fuel/oil storage tanks from the cooperative. In comments given on the questionnaire, the tanks that farmers leased or rented from the cooperative were often oil storage tanks.

Question 6 attempts to determine the number of farms to which a co-op would deliver fuel/oil that are sufficiently large enough to trigger the oil spill requirements. Cooperatives delivered fuel/oil to farms that held aggregated storage tanks in excess of 1,320 gallons about 38 percent of the time. Of these farms, 8 percent had berms in place to contain spills.

Question 8 looks at how many have 1,320 gallons in at least one location. Results from this question may also provide data to validate similar results from the farmer questionnaire. These farms had two or more separate storage sites about 30 percent of the time, with the separate sites about 3.3 miles from the main site on average — a result consistent with that taken from the questionnaire administered to farmers.

Respondent cooperatives asked to see the SPCC plan of about 5 percent of the farms that they delivered fuel/oil to. For this year alone, the cooperatives saw less than one percent of the SPCC plans of farms with aggregated storage in excess of 1,320 gallons and less than one percent of the same farms over the last five years.

Cooperatives responded that they had 894 fuel/oil delivery trucks with a capacity in excess of 660 gallons. These trucks were parked in an area with a berm or catch basin when not in use about 16 percent of the time.

Analysis

USDA was asked by the National Council of Farmer Cooperatives (as a representative of the agricultural coalition) to conduct a survey of farmers and cooperatives to assess the impact of EPA's SPCC rule. While two questionnaires with limited questions may not fully assess all aspects of the fuel/oil storage situation of both farmers and cooperatives, some observations can be drawn from these surveys.

Farmers had very few fuel/oil spills in excess of 1,320 gallons. Six of 1,712 respondents (0.36 of 1 percent) indicated a spill exceeding the 1,320-gallon threshold. Such a low number of spills do not seem to justify 1,320-gallon trigger.

If the SPCC is trying to minimize the burden of farmer compliance, several inferences can be drawn from these questionnaires that could further reduce the farmer's burden.

1) There is very little evidence of fuel/oil spills by farmers.
2) The maximum aggregated storage of 1,320 gallons is insufficiently small.

Estimating the Cost of Compliance

To estimate the total burden of compliance with SPCC rule on U.S. farmers, information from the farmer survey was expanded to 1.36 million farms.[3] Table 5 accounts for the scope of any impacts in a rule change across farms and farm parcels in the U.S. A total of 1.36 million farms and 4.3 million farm parcels would be affected nationally.

Table 5 – Number of farms by farm size and projected number of farm parcels

Farms with	Farms	Farm parcels
	Number	
Less than 200 acres	783,597	1,543,449
201 to 500 acres	297,247	842,435
501 to 1,000 acres	134,118	677,344
Over 1,000 acres	147,646	1,233,835
Total	**1,362,608**	**4,297,063**

Farmer survey results were expanded to provide national estimates of impacts with respect to farm size, storage volumes, and compliance costs. Compliance with the rule is expected to cost $4.5 billion (table 6, page 12). The cost of compliance for the SPCC rule is presented by aggregated storage size increments because there is no direct relationship between farm size and storage.

The burden will be greatest on small farms because 89 percent of U.S. farms are less than 1,000 acres in size Compliance cost for farms with 1,320 to 5,000 gallons aggregated storage is projected to be $2.2 billion; 12,001 to 29,999, $960 million; and 30,000 or more, $130 million. The total projected compliance cost is sufficiently prohibitive to warrant re-analysis for meeting the requirements of the Small Business Regulation Enforcement Fairness Act (SBREFA).

[3] The 2002 Census of Agriculture lists 1,362,608 farms that have harvested cropland. The 1.3 million farms were used instead of 2.1 million farms also listed by USDA to eliminate numerous farms that are hobby or non-commercial farms.

Table 6—Total compliance cost, aggregated tank totals, and per tank cost of compliance

For aggregated tank groups	Total cost of compliance	Estimated farm storage tanks	Aggregated tank cost
	Millions of dollars	*Number*	*Dollars*
Less than 1,320 gallons		875,265	-
1,320 to 5,000 gallons	2,195.42	329,643	6,660
5,001 to 12,000 gallons	1,202.84	96,227	12,500
12,001 to 29,999 gallons	963	55,934	17,217
30,000 or more gallons	129.6	5,538	23,400
Total	**4,490.86**	**487,343**	**9,215**
1,320 to 12,000 gallons	3,398.26	425,870	7,980
12,001 or more gallons	1,092.60	61,473	17,774
Total	**4,490.86**	**487,343**	**9,215**

Total cost can be found by multiplying column two by column three.

[2] Farm numbers total 1.36 million if all storage categories are added in this column, i.e., 487, 343 + 875,265 = 1,362,608. These are expanded numbers and can be found in appendix III.

[3] Aggregated tank costs are cost estimates to comply with the 2002 EPA final rule. These costs would most likely include professional engineer costs as well as the cost of berming and fencing. The costs would be a one time cost with additional costs incurred whenever the tanks need to be re-inspected. The per tank costs are those reported in table 1.

Most of the respondents have other storage sites that are separate from their main sites (table 7). On average there are 2.7 other sites at a distance of 4.1 miles. The number of additional sites and distance to these sties will increase the cost of compliance to the SPCC rule.

Table 7 – Average storage capacity, number of other storage sites, and distance to other storage sites, by farm size

Farms with	Storage capacity	Number of other storage sites	Distance to other storage sites
	Gallons	*Number*	*Miles*
Less than 200 acres	1,790	1.3	1.4
201 to 500 acres	1,752	0.8	2.0
501 to 1,000 acres	2,436	1.3	2.6
Over 1,000 acres	7,997	3.9	4.9
Overall average	**5,550**	**2.7**	**4.1**

Methods to Reduce the Compliance Burden

The data can be analyzed by three different methods to reduce the compliance burden. The methods are: 1) by size of farms, 2) by average size of aggregated storage tanks, and 3) by least burden to farmers.

By size of farm, 51 percent of farms have less than 2,500 gallons of aggregated storage and most of these can be described as small farms. None of these farms would have a compliance burden should the trigger be raised to 2,500 gallons.

The average size of aggregated storage was found to be 5,550 gallons. If the compliance trigger was raised to 5,550 gallons, the burden of compliance would be lifted from 74 percent of all farms and the cost of compliance would drop from $4.49 to $2.29 billion.

By least burden to farmers, 86 percent of farms have aggregated storage tanks of 12,000 gallons or less. Compliance burden would drop from $4.49 billion to $1.09 billion.

Finally, if the compliance trigger were raised to 12,000 gallons, small cooperatives could also fall under this threshold. Seventy cooperatives or 20 percent of the respondents have 12,000 gallons or less in above ground storage capacity. Raising the compliance trigger to 12,000 gallons would also greatly reduce the compliance on farmer cooperatives.

Summary

The single objective determinant of farm compliance – the 1,320 gallons aggregated storage trigger is not supported by the survey data. Compliance at this level not only ignores the physical layouts of farm fuel storage but it also imposes a broad and extreme impact on the majority of farms. Nearly 70% of all farms would have to comply, at an average aggregated tank cost of $9,215 and a total compliance cost of $4.5 billion.

Other important factors should also be considered in the determination. In particular, factors involving the dispersion of fuel storage tanks across several non-contiguous fields (parcels) are critical to a representative consideration of the farmers use and storage of fuel/oil. Other factors related to fuel storage tank dispersal involve – how many sites, how much fuel is located at each site, and distances between sites. Nearly half (47%) of all farmers surveyed had multiple fuel storage sites on their farms – an average 6 sites per farm. Among farms that had more than one storage site, each satellite site was an average distance of 4.1 miles from the main site.

The dispersion of storage sites at such distances not only challenges the idea of a low aggregated compliance threshold but also serves to highlight the impracticality of forcing farms to fence, monitor, provide secondary containment and comply with other requirements because of the physical nature of farm fuel storage.

Unless the aggregated storage compliance threshold (trigger) is changed to 30,000 or more gallons, the cost will be at least $4.5 billion. If the aggregated storage threshold is increased to 30,000 gallons or more, compliance cost will still be $129.6 million.

Bibliography

Agricultural Statistics 2004, National Agricultural Statistics Service, United States Department of Agriculture, 2004

2002 Census of Agriculture, National Agricultural Statistics Service, United States Department of Agriculture, 2004

Appendix I

SPCC Rulemaking

The discussions in the July 17, 2002 EPA final rule (at 67 Federal Register47041) on oil spill prevention, control and countermeasures (SPCC), in addition to making some minor changes to earlier SPCC regulations, maintain all of the requirements from earlier regulations and require most farmers with over 1.320 gallons of petroleum products, vegetable oils and/or animal fats to have to comply.

Those requirements, updated over the past 30 years, are in Title 40 of the Code of Federal Regulations, section 122.

Although a summary of the major revisions to the current SPCC rules is on pages 47044-50, and actual language for the Code is found on pages 47140-52, the detailed discussions of the requirements are on the following pages:

- SPCC Plan items 47093
- Security of valves, fencing, lighting 47109-10
- Secondary containment 47100-3, 16-17
- Integrity testing 47103-6, 11, 19
- Professional Engineer certification 47084-6

The following information is from the U.S. Environmental Protection Agency's web page, www.epa.gov.

Revised Spill Prevention, Control and Countermeasure Rule

Introduction

On July 17th, 2002, EPA issued a final rule amending the Oil Pollution Prevention regulation promulgated under the authority of the Federal Water Pollution Control Act (Clean Water Act). This rule addresses requirements for Spill Prevention, Control and Countermeasure Plans (SPCC Plans) and some provisions may also affect Facility Response Plans (FRPs). EPA proposed revisions to the SPCC rule on three occasions, in 1991, 1993, and 1997. The final SPCC rule addresses these revisions and became effective on August 16, 2002. EPA published a final rule on August 11, 2004 that extended the deadlines by which facilities must amend (or, for new facilities, prepare) and implement their SPCC Plans. The SPCC rule can be found in Title 40 of the Code of Federal Regulations (CFR), Part 112 (Oil Pollution Prevention)

Background of the Oil Pollution Prevention Regulation

The goal of the oil pollution prevention regulation in 40 CFR Part 112 is to prevent oil discharges from reaching navigable waters of the United States or adjoining shorelines. The rule was also written to ensure effective responses to oil discharges. The rule further specifies

that proactive, and not passive, measures be used to respond to oil discharges. The oil pollution regulation contains two major types of requirements: prevention requirements (SPCC rule) and Facility Response Plan (FRP) requirements. The prevention requirements in sections 112.1 through 112.7 were first promulgated in the 1973 SPCC regulation. Required under the rule is an SPCC Plan that contains measures to prevent and control oil spills, including those resulting from human operational error or equipment failures.

Reasons for Final Changes

There were many reasons for the final changes. First, the final changes stem from the need to clarify the language and organization of the rule. The changes comply with the Presidential order requiring that all new rules or rule amendments be drafted in plain language. The changes reduce the information collection burden on the regulated community. The SPCC changes will reduce the regulatory burden by approximately 40 percent. The changes will eliminate duplicate regulation, exempt certain small facilities, exempt most wastewater treatment facilities, and require consideration of industry standards in prevention plans. The final rule also allows an owner or operator to substitute a required measure for another providing equivalent environmental protection, with the exception of secondary containment requirements. The number of facilities now regulated by the SPCC rule has been reduced by about 55,000 as a result of the changes.

General Applicability

The SPCC rule applies to owners or operators of facilities that drill, produce, gather, store, use, process, refine, transfer, distribute, or consume oil and oil products. The changes to the rule clarify applicability to owners or operators that use oil. The changes also allow for tracking the scope of the rule to conform with the expanded jurisdiction of the amended CWA. The broadened range includes waters of the contiguous zone and waters connected with activity under the Outer Continental Shelf Lands Act or Deepwater Port Act, as well as waters affecting certain natural resources of the United States.

Summary of the New SPCC Rule

The effect of the final SPCC rule is expected to be positive. The revised rule reduces the number of facilities regulated and the overall regulatory burden.

Highlights of Final Rule

- Exempts completely buried storage tanks subject to all of the technical requirements of the UST regulations (40 CFR Parts 280 or 281);
- Exempts portions of certain facilities or any facility used exclusively for wastewater treatment;
- Establishes a de minimis container size of 55 gallons;
- Establishes an aboveground storage capacity threshold of greater than 1,320 gallons and removes the 660 gallon threshold;
- Revises the trigger for submitting information on spills at SPCC regulated facilities to EPA. Facilities are now required to submit information after having 2 discharges

(over 42 gallons) in any 12-month period or a single discharge of more than 1,000 gallons;
- Allows deviations from most rule provisions (with the exception of secondary containment requirements) when equivalent environmental protection is provided;
- Provides for a flexible plan format, but requires a cross-reference showing that all regulatory requirements are met; and
- Clarifies rule applicability to the storage and operational use of oil.

Facility Response Plan Considerations

The revisions to the SPCC rule may affect whether you need to prepare and maintain a Facility Response Plan (FRP) or how you calculate worst case discharge planning levels. In some cases, your facility may not meet the storage capacity thresholds for the substantial harm criteria. In other cases, you must have an FRP, but you may be able to revise the calculations for worst case discharge planning levels.

The definitions used in part 112.2 also clarify terms used in the FRP rule. According to the new rule, the regulation no longer applies to the following:

- Completely buried tanks that are subject to all Underground Storage Tank technical requirements in 40 CFR parts 280 and 281;
- Containers with a storage capacity of less than 55 gallons; and
- Portions of certain facilities or any facility used exclusively for wastewater treatment.

Appendix II—Farmer Questionnaire – All respondents and by region

Farmer Survey Summary–All		All Respondents		Western States		Mountain States		Northern Plains States		Southern Plains States	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1. Are you aware of the EPA's SPCC	YES	764	44.04%	48	37.50%	69	42.07%	239	50.96%	27	34.18%
	NO	958	55.96%	79	62.20%	95	57.93%	230	49.04%	52	65.82%
2. Your farm size	LESS THAN 200 ACRES	158	9.84%	28	23.14%	11	6.83%	29	6.36%	8	11.76%
	201 TO 500 ACRES	241	15.02%	10	8.26%	23	14.29%	32	7.02%	4	5.88%
	501 TO 1,000 ACRES	308	19.19%	21	17.36%	27	16.77%	60	13.16%	9	13.24%
	OVER 1,000 ACRES	896	55.96%	62	51.24%	100	62.11%	335	73.46%	47	69.12%
		Total Parcels	Average	Total Parcels	Average	Total Parcels	Average	Total Parcels	Average	Total Parcels	Average
3. Number of farm parcels totaling		19,165	7	697	6	786	6	2,946	6	529	10
LESS THAN 200 ACRES		219	1	62	3	11	1	17	1	13	2
201 TO 500 ACRES		762	3	30	3	88	3	78	2	5	1
501 TO 1,000 ACRES		1,570	5	92	4	112	4	275	5	28	3
OVER 1,000 ACRES		7,634	9	393	6	598	4	2,576	6	474	10
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
4. Do you have above ground storage	YES	1,535	88.12%	117	88.64%	158	95.15%	440	92.44%	62	76.61%
	NO	207	11.88%	15	11.36%	8	4.82%	36	7.56%	20	24.39%
5. Do you plan to have above ground storage	YES	1,427	92.12%	118	97.45%	149	94.30%	434	98.19%	58	90.63%
	NO	122	7.88%	3	2.52%	9	5.70%	8	1.81%	6	9.38%
		Gallons	Ave. Gal.	Gallons	Ave. Gal.	Gallons	Ave. Gal.	Gallons	Ave. Gal.	Gallons	Ave. Gal.
6. Above ground storage capacity (gallons and average)		8,490,907	5,560	975,434	8,435	1,988,615	6,880	2,372,576	5,404	321,685	5,188
		Number	% of responses	Number	% of responses	Number	% of responses	Number	% of responses	Number	% of responses
6.b. Above ground storage capacity	LESS THAN 1,320 GALLONS	487	30.62%	20	17.24%	38	24.05%	120	27.33%	19	38.00%
	1,320 TO 5,000 GALLONS	646	42.22%	42	36.21%	66	41.77%	202	46.01%	22	35.48%
	5,001 TO 12,000 GALLONS	208	13.59%	25	21.55%	27	17.09%	53	12.07%	12	19.35%
	12,001 TO 29,999 GALLONS	177	11.57%	25	21.55%	21	13.29%	60	13.67%	9	14.52%
	30,000 OR MORE GALLONS	32	2.09%	4	3.45%	6	3.80%	4	0.91%	0	0.00%
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
7. Your storage tanks are	STATIONARY	7,622,783	89.97%	839,380	86.08%	987,330	90.23%	2,189,280	92.27%	271,535	85.20%
	PORTABLE	849,609	10.03%	134,294	13.92%	104,685	9.77%	183,635	7.73%	47,150	14.80%
			Average		Average		Average		Average		Average
8. You have an oil spill prevention	ACRES	2,374,435	2,105	233,047	2,354	332,654	2,749	809,515	2,438	104,056	2,478
			Percent		Percent		Percent		Percent		Percent
9. Are your storage tanks visible to passers-by	YES	910	53.06%	45	38.79%	87	55.77%	287	80.82%	26	40.32%
	NO	717	46.96%	71	61.21%	69	44.23%	172	39.18%	37	59.68%
			Ave. Miles		Ave. Miles		Ave. Miles		Ave. Miles		Ave. Miles
9.a. Your closest neighbor is within	NUMBER	4,174	4.1	281	4.6	168	6.8	2,085	3.5	138	7.3
		Number	Miles	Number	Miles	Number	Miles	Number	Miles	Number	Miles
10. Distance to your closest surface water	SITE 1	630	3.4	59	3.1	61	6.6	152	2.1	29	5.1
	SITE 2	348	4.1	41	4.8	26	7.9	80	3.8	16	6.4
	SITE 3	177	5.2	18	5.0	10	5.0	39	6.3	12	10.2
	SITE 4	104	7.1	13	10.6	0	0.0	21	7.6	8	12.5
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
11. Do you have a spill prevention control and countermeasure plan	YES	6	0.36%	1	0.84%	2	1.26%	0	0.00%	0	0.00%
	NO	1,545	99.64%	118	99.16%	157	98.74%	442	100.00%	64	100.00%
12. Is it likely that your company will have a SPCC	YES	38	2.46%	6	5.13%	4	2.55%	7	1.59%	0	0.00%
	NO	1,507	97.54%	111	94.87%	153	97.45%	434	98.41%	64	100.00%
		Average	Responses	Average	Responses	Average	Responses	Average	Responses	Average	Responses
13. b. Total cost of compliance	COST	12,831	32	13,700	5	9,767	3	20,486	7	n/a	0
13.a. Total cost of compliance	GALLONS	6,737	32	7,700	5	6,667	3	6,223	7	n/a	0

In this table, Western States include: Arizona, California, Oregon, and Washington; Mountain–Colorado, Idaho, Montana, Utah, and Wyoming; Northern Plains–Kansas, Nebraska, North Dakota and South Dakota; Southern Plains–Oklahoma, and Texas; Heartland States include: Illinois, Indiana, Iowa, Missouri, and Ohio; Lake–Michigan, Minnesota, and Wisconsin; Southeast–Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, and Tennessee; and Eastern States in this table include Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, North Carolina, South Carolina, Vermont, Virginia, and West Virginia.

Surveys were returned from 38 retired or non-active farmers–their responses are not in this table. Surveys were returned from 210 farmers with no above ground storage–only their response to knowledge of SPCC rule were presented in this table.

Appendix II—Farmer Questionnaire – All respondents and by region (continued)

Farmer Survey Summary--All		All Respondents		Heartland States		Lake States		Southeast States		Eastern States	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1. Are you aware of the SPCC rule?	YES	754	44.04%	107	37.54%	144	47.84%	91	41.94%	26	40.54%
	NO	958	55.96%	178	62.46%	157	52.16%	126	58.06%	41	59.42%
2. Your farm size is:	LESS THAN 200 ACRES	156	9.84%	39	14.89%	16	5.42%	23	11.76%	7	10.61%
	201 TO 500 ACRES	241	15.02%	43	17.77%	71	24.07%	31	15.90%	27	40.91%
	501 TO 1,000 ACRES	308	19.19%	57	23.55%	84	28.47%	35	17.95%	15	22.73%
	OVER 1,000 ACRES	898	55.95%	108	43.80%	124	42.03%	106	54.36%	17	25.76%
	Total Parcels	Average	Max	Total Parcels	Average	Max	Total Parcels	Average	Max	Total Parcels	Average	Max	Total Parcels	Average	Max
3. Number of tanks on farm	10,185	7	100	1,884	6	100	2,092	8	50	985	6	53	464	8	40
LESS THAN 200 ACRES	219	1	20	22	1	3	19	1	4	29	1	8	25	4	20
201 TO 500 ACRES	762	3	50	179	4	50	214	3	13	76	2	14	114	4	15
501 TO 1,000 ACRES	1,570	5	43	308	5	25	495	6	43	130	4	10	130	9	20
OVER 1,000 ACRES	7,634	8	100	1,375	13	100	1,274	10	50	730	7	53	214	13	40
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
4. Do you have above ground storage?	YES	1,535	88.12%	215	74.39%	293	96.38%	184	83.26%	65	91.55%
	NO	207	11.88%	74	25.61%	11	3.62%	37	16.74%	6	8.45%
5. Do you have underground storage?	YES	1,427	92.12%	187	84.23%	279	95.22%	143	77.72%	60	90.91%
	NO	122	7.88%	35	15.77%	14	4.78%	41	22.28%	6	9.09%
		Gallons	Ave. Gal	Gallons	Ave. Gal	Gallons	Ave. Gal	Gallons	Ave. Gal	Gallons	Ave. Gal
6. Above ground storage capacity		8,490,902	5,550	697,708	3,260	893,630	3,055	1,941,300	10,588	177,555	2,690
		Number % of responses		Number % of responses		Number % of responses		Number % of responses		Number % of responses	
7. Underground storage capacity	LESS THAN 1,320 GALLONS	487	30.62%	83	43.46%	85	29.11%	54	29.67%	38	57.58%	866
	1,320 TO 6,000 GALLONS	846	42.22%	86	41.12%	172	58.90%	33	18.13%	21	31.82%	2,366
	6,001 TO 12,000 GALLONS	208	13.59%	22	10.28%	24	8.22%	41	22.53%	4	6.06%	8,826
	12,001 TO 29,999 GALLONS	177	11.57%	10	4.67%	10	3.42%	39	21.43%	2	3.03%	18,036
	30,000 OR MORE GALLONS	32	2.09%	1	0.47%	1	0.34%	15	8.24%	1	1.52%	30,000
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
8. Do you have a stationary or portable tank?	STATIONARY	7,622,763	89.97%	839,116	90.43%	826,230	92.62%	1,723,400	88.52%	157,510	88.71%
	PORTABLE	849,508	10.03%	67,600	9.57%	66,500	7.48%	223,400	11.48%	20,045	11.29%
			Average		Average		Average		Average		Average
9. Do you have a farm pond?	ACRES	2,374,435	2,105	244,051	1,649	268,308	1,281	320,337	2,409	36,970	1,399
			Percent		Percent		Percent		Percent		Percent
10. Are you aware of Rule 112 in the SPCC rule?	YES	810	53.05%	118	54.72%	150	51.37%	80	43.48%	40	61.54%
	NO	717	46.95%	98	45.28%	142	48.63%	104	56.52%	25	38.46%
			Ave. Miles		Ave. Miles		Ave. Miles		Ave. Miles		Ave. Miles
11. Do you have a farm pond within 1 mile of a stream?	NUMBER	4,174	4.1	273	4.7	394	2.1	732	4.3	85	3.1
		Number	Miles	Number	Miles	Number	Miles	Number	Miles	Number	Miles
12. Distance to your closest farm pond:	SITE 1	630	3.4	56	4.1	134	2.4	85	3.8	22	2.8
	SITE 2	348	4.1	44	4.9	65	1.5	64	3.9	8	3.6
	SITE 3	177	5.2	18	8.2	24	2.7	50	4.4	5	3.3
	SITE 4	101	7.1	6	7.2	10	1.9	39	5.1	1	5.0
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
13. Do you have a farm pond within 1 mile of a well?	YES	6	0.39%	0	0.00%	2	0.68%	1	0.54%	0	0.00%
	NO	1,545	99.61%	224	100.00%	290	99.32%	183	99.46%	66	100.00%
14. Do you have a farm pond within 1 mile of a school?	YES	38	2.46%	6	2.70%	9	3.08%	5	2.70%	1	1.52%
	NO	1,507	97.54%	218	97.30%	283	96.92%	180	97.30%	65	98.48%
		Average	Responses	Average	Responses	Average	Responses	Average	Responses	Average	Responses
15. Cost of your farm pond	COST	12,531	32	11,733	6	8,200	5	7,000	4	20,000	2
16. Gallons of your farm pond	GALLONS	8,737	32	6,667	6	1,880	5	9,250	4	11,615	2

In this table, Western States include: Arizona, California, Oregon, and Washington; Mountain--Colorado, Idaho, Montana, Utah, and Wyoming; Northern Plains--Kansas, Nebraska, North Dakota and South Dakota; Southern Plains--Oklahoma, and Texas; Heartland States include: Illinois, Indiana, Iowa, Missouri, and Ohio; Lake--Michigan, Minnesota, and Wisconsin; Southeast--Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, and Tennessee; and Eastern States in this table include Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, North Carolina, South Carolina, Vermont, Virginia, and West Virginia.

Surveys were returned from 36 retired or non-active farmers--their responses are not in this table. Surveys were returned from 210 farmers with no above ground storage--only their response to knowledge of SPCC rule were presented in this table.

Appendix III—Farmer Questionnaire -- National Estimates by Size of Farm

Farmer Survey Summary--All	All Respondents				Less than 200 acres			201 to 500 acres			501 to 1,000 acres			Over 1,000 acres		
				Number	Percent		Number	Percent		Number	Percent		Number	Percent		Number	Percent
1. Farmers aware of the EPA's proposed [illegible]	YES			587,736	44.08%		311,640	39.80%		128,001	43.08%		61,228	45.65%		86,867	45.15%
	NO			794,872	55.92%		471,757	60.20%		169,246	56.92%		72,890	54.35%		80,976	54.85%
2. Farm size	LESS THAN 200 ACRES			783,597	57.51%		783,597	100.00%		0	0.00%		0	0.00%		0	0.00%
	201 TO 500 ACRES			297,247	21.81%		0	0.00%		297,247	100.00%		0	0.00%		0	0.00%
	501 TO 1,000 ACRES			134,118	9.84%		0	0.00%		0	0.00%		134,118	100.00%		0	0.00%
	OVER 1,000 ACRES			147,646	10.84%		0	0.00%		0	0.00%		0	0.00%		147,646	100.00%
	Total Parcels	Average	Max	Min	Total Parcels	Average	Max	Total Parcels	Average	Max	Total Parcels	Average	Max	Total Parcels	Average	Max
3. Number of farm pesticide handlers	4,297,062	7	100	0	1,543,449	3	20	842,435	3	15	877,344	5	43	1,233,835	8	100
LESS THAN 200 ACRES	1,543,449	1	20	1	1,543,449	2	20	0	0	0	0	0	0	0	0	0
201 TO 500 ACRES	842,435	3	15	1	0	0	0	842,435	3	15	0	0	0	0	0	0
501 TO 1,000 ACRES	877,344	5	43	1	0	0	0	0	0	0	877,344	5	43	0	0	0
OVER 1,000 ACRES	1,233,835	8	100	0	0	0	0	0	0	0	0	0	0	1,233,835	8.359711004	100
				Number	Percent		Number	Percent		Number	Percent		Number	Percent		Number	Percent
4. Any of goods storage [illegible]	YES			1,362,608	88.58%		783,597	100.00%		297,247	100.00%		134,118	100.00%		147,646	100.00%
	NO			0	11.42%		0	0.00%		0	0.00%		0	0.00%		0	0.00%
5. Own the above pesticide [illegible]	YES			1,266,681	93.04%		759,909	96.94%		265,656	89.37%		122,539	91.37%		138,677	94.06%
	NO			75,927	6.96%		23,688	3.06%		31,591	10.63%		11,579	8.63%		8,769	5.94%
				Gallons	Ave. Gal.		Gallons	Ave. Gal.		Gallons	Ave. Gal.		Gallons	Ave. Gal.		Gallons	Ave. Gal.
6. Average [illegible]				3,384,068,780	5,299		1,408,107,679	1,784		515,104,873	1,733		323,783,124	2,414		1,118,073,103	7,579
			Number	% of responses		Number	% of responses		Number	% of responses		Number	% of responses		Number	% of responses	
6.a. Storage capacity	LESS THAN 1,320 GALLONS			875,265	30.35%	843	585,860	76.04%	898	210,491	70.81%	773	50,839	37.91%	919	18,975	12.24%	974
	1,320 TO 5,000 GALLONS			329,843	43.28%	2,823	144,275	14.58%	2,294	72,534	24.40%	2,163	72,143	53.79%	2,318	70,891	47.86%	2,810
	5,001 TO 12,000 GALLONS			98,227	13.43%	8,730	48,975	6.25%	7,868	9,956	3.35%	7,829	9,199	6.86%	8,243	28,097	19.03%	8,871
	12,001 TO 29,999 GALLONS			55,834	19.23%	17,818	24,487	3.13%	14,100	2,844	0.96%	22,000	1,837	1.44%	17,650	26,606	18.06%	17,842
	30,000 OR MORE GALLONS			5,538	1.71%	43,065	0	0.00%	0	1,422	0.48%	40,000	0	0.00%	0	4,116	2.79%	43,198
				Number	Percent		Number	Percent		Number	Percent		Number	Percent		Number	Percent
7. Storage capacity [illegible]	STATIONARY			2,958,138,643	89.66%		1,206,412,881	85.80%		457,270,889	88.67%		289,658,521	89.46%		1,905,297,352	89.83%
	PORTABLE			404,928,137	10.34%		199,694,798	14.20%		57,333,984	11.13%		34,124,604	10.54%		113,775,751	10.17%
					Average			Average			Average			Average			Average
8. Acres in crop production	ACRES			529,989,442	2,065		67,406,155	196		44,836,704	347		68,804,696	725		354,139,887	2,733
					Percent			Percent			Percent			Percent			Percent
9.a. Storage tanks in the location	YES			898,208	54.59%		523,091	67.01%		217,602	73.21%		74,564	55.60%		70,949	48.05%
	NO			474,402	45.41%		258,506	32.99%		79,645	26.79%		59,554	44.40%		76,887	51.95%
					Ave. Miles			Ave. Miles			Ave. Miles			Ave. Miles			Ave. Miles
9.b. Other storage tank sites	NUMBER			1,904,893	4.1		907,065	1.4		220,448	2.0		173,821	2.6		573,341	4.8
				Number	Miles		Number	Miles		Number	Miles		Number	Miles		Number	Miles
10. Distance to other storage tank sites	SITE 1			444,117	3.4		280,428	1.9		72,534	1.4		53,260	2.7		67,896	4.1
	SITE 2			229,825	4.1		145,410	1.0		17,067	0.5		27,114	2.2		40,234	5.0
	SITE 3			73,497	5.3		32,313	4.5		7,111	0.6		11,820	2.9		22,452	6.0
	SITE 4			51,889	7.6		32,313	2.9		1,422	50.0		4,842	3.2		13,112	7.0
				Number	Percent		Number	Percent		Number	Percent		Number	Percent		Number	Percent
11. Field spills in excess of 1,320 gallons	YES			1,502	0.35%		0	0.00%		0	0.00%		965	0.72%		537	0.36%
	NO			1,361,106	99.64%		783,597	100.00%		297,247	100.00%		133,153	99.28%		147,108	99.64%
12. a. Estimate of cost of complying with SPCC	YES			29,874	2.56%		16,157	2.06%		2,872	0.97%		3,377	2.52%		4,468	3.03%
	NO			1,335,734	97.44%		767,440	97.94%		294,375	99.03%		130,741	97.48%		143,177	96.97%
				Average	Total Cost		Average	Total Cost		Average	Total Cost		Average	Total Cost		Average	Total Cost
12. b. Cost to comply	COST			32,806	4,490,863,897		7,250	1,794,845,253		4,833	689,774,227		6,375	628,808,450		14,148	1,377,435,757
12. c. Tank that exceeds 10 days [illegible]	GALLONS			12,416			1,250			1,267			1,683			8,217	

Expanded data in this table based on the proportion of farm sizes to 1,362,608 total farms.

Appendix III—Farmer Questionnaire

Please return this survey by February 24, 2005 to:
USDA
PO Box 16097
Arlington, VA 22215

United States Department of Agriculture
Rural Development

FARMER QUALITY OF ENERGY SURVEY

While you are not required to respond, your help is needed to provide data for a study on farm fuel/oil storage. All tabulations and analysis will be done by USDA Rural Development and individual responses will be treated confidentially.

State where farm(s) located _____

1. Are you aware of the Environmental Protection Agency's 2002 Spill Prevention, Control, and Countermeasures (SPCC) regulations and the need to have an SPCC plan, secondary containment for large tanks (like berms), certified professional engineer approval, and periodic tank integrity testing, etc.?
   YES ☐ NO ☐

2. How many acres do you farm (include owned and rented or leased, contiguous or separated acreage, etc.)

   PLEASE RESPOND BY CHECKING THE APPROPRIATE ACREAGE:

Less than 200 acres	201 to 500 acres	501 to 1,000 acres	Over 1,000 acres

3. If your farm has separate parcels, how many total land parcels make up the farm? ..... **NUMBER** ☐

4. Do you have above ground storage tanks for fuel/oil on your farm (*fuel/oil includes liquid fuels, vegetable oil, waste oils, and animal fats*)? YES ☐ NO ☐

5. Do you (or the owner of rented or leased acreage) own all or most of the fuel/oil storage tanks?
   YES ☐ NO ☐

6. What is the capacity in gallons of all your fuel/oil storage tanks (please include all storage tanks, 55 gallon drums, and all other larger storage tanks)? ..... **GALLONS** ☐

7. How many gallons of storage in Question 6 are in stationary tanks and how many gallons are in portable tanks? **STATIONARY–GALLONS** ☐ **PORTABLE –GALLONS** ☐

8. If the cumulative above ground tank capacity exceeds 1,320 gallons, how many acres in the farms that you own, rent, or lease are in crop production use? ..... **ACRES IN CROP PRODUCTION** ☐

9. Are all of your above ground fuel/oil storage tanks congregated in one location?
   YES ☐ NO ☐ If NO, how many tank sites exist? **NUMBER OF TANK SITES** ☐
   If NO, please continue to next question, If YES, please go to Question 11.

10. If you have above ground fuel/oil storage tanks in separate locations from the main fueling site, how far away are they?

    PLEASE RESPOND BY LISTING THE DISTANCE TO THE OUTSIDE TANK SITES FROM THE MAIN SITE (circle the correct measure of distance–miles or yards):

Outside tank site #1	Outside tank site #2	Outside tank site #3	Outside tank site #4
Miles or yards:	Miles or yards:	Miles or yards:	Miles or yards:

11. Have you ever had a fuel/oil spill on a farm that you own, rent, or lease in excess of 1,320 gallons?
    YES ☐ NO ☐

12. Have you had a professional engineer provide you cost estimates to comply with 2002 EPA final rule? ☐
    YES ☐ NO ☐ If YES, what was the estimate? **ESTIMATED COST** ☐
    Tankage size affected?..... **SIZE** ☐

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