Regulatory Assessment

The Ammonium Nitrate Security Program
Notice of Proposed Rulemaking

DHS-2008-0076

July 1, 2011
U.S. Department of Homeland Security

Acronyms

AN	Ammonium Nitrate
ANFO	Ammonium Nitrate Fuel Oil explosives
ANPRM	Advanced Notice of Proposed Rulemaking
ATF	Bureau of Alcohol, Tobacco, Firearms, and Explosives
CFATS	Chemical Facility Anti-Terrorism Standards
CSAT	Chemical Security Assessment Tool
DOJ	Department of Justice
DOT	Department of Transportation
FAST	Free and Secure Trade
HME	Hazardous Materials Endorsement
IED	Improvised Explosive Device
IME	Institute of Makers of Explosives
IRFA	Initial Regulatory Flexibility Analysis
NAICS	North American Industrial Classification System
NPRM	Notice of Proposed Rulemaking
POC	Point of Contact
RFA	Regulatory Flexibility Act
SBA	Small Business Administration
TSDB	Terrorist Screening Database
TWIC	Transportation Workers Identification Credential
UMRA	Unfunded Mandates Reform Act
4USDA	U.S. Department of Agriculture
VSL	Value of Statistical Life

Contents

1. Executive Summary

After the catastrophic terrorist attack in Oklahoma City in April 1995, in which ammonium nitrate was used in the bomb that killed 168 people and injured nearly 600 more, industry practices regarding the sale and transfer of ammonium nitrate have become increasingly more secure. However, in the interest of national security, Congress has directed the Department of Homeland Security (DHS or the Department) to promulgate regulations to protect the public from the misuse of ammonium nitrate in an act of terrorism.

As a result, the Department proposes the Ammonium Nitrate Security Program, which is outlined in the Notice of Proposed Rulemaking (NPRM). The program seeks to reduce the likelihood of a terrorist attack involving misused ammonium nitrate.

Broadly speaking, this proposed rule creates a registration program for purchasers and sellers of ammonium nitrate. Each purchaser and seller will be required to apply for an Ammonium Nitrate (AN) Registered User Number with the Department. Suitability for registration will be based on a comparison of the applicant against the Terrorist Screening Database (TSDB). Transactions involving the sale or transfer of ammonium nitrate will be regulated at the point of sale and procedures for reporting a theft or loss of ammonium nitrate will be established. Sellers of ammonium nitrate will be required to deny sale or transfer of ammonium nitrate to individuals who do not possess a valid AN Registered User Number accompanied by a valid photo ID. Businesses will be required to keep records of all ammonium nitrate transactions for two years.

The Department estimates the number of persons and entities that purchase ammonium nitrate to range from 64,950 to 106,200. These purchasers include farms, fertilizer mixers, farm supply wholesalers and cooperatives (co-ops), golf courses, landscaping services, explosives distributors, mines, retail garden centers and lab supply wholesalers. The Department estimates the number of persons and entities that sell ammonium nitrate to be between 2,486 and 6,236, many of which are also purchasers. These sellers include ammonium nitrate fertilizer and explosive manufacturers, fertilizer mixers, farm supply wholesalers and co-ops, retail garden centers, explosives distributors, fertilizer applicator services, and lab supply wholesalers. Individuals or firms that provide transportation services within the distribution chain may be categorized as sellers, agents, or facilities depending upon their business relationship with the other parties to the transaction. The total number of potentially regulated farms and other businesses ranges from 64,986 to 106,236 (including overlap between the categories).

The cost of this proposed rule ranges from $300 million to $1,041 million over 10 years at a 7% discount rate. The primary estimate is the mean which is $670.6million. For comparison, at a 3% discount rate, the cost of the program ranges from $364 million to $1.3 billion with a primary (mean) estimate of $814 million. The average annualized cost for the program ranges from $43 million to $148 million (with a mean of $96 million), also employing a 7% discount rate. Tables 1 and 2 present the summary discounted total and annualized costs for the rule.

Table 1. Summary of Estimated Total Costs ($ millions)

10 year/ Discount Rate	Primary estimate	Low population estimate	High population estimate
10 year , 7%	670.6	300.2	1,041.0
10 year, 3%	814.0	364.2	1,263.7

Table 2. Summary of Estimated Annualized Costs ($ millions)

	Primary estimate	Low population estimate	High population estimate
10 year , 7%	95.5	42.7	148.2
10 year, 3%	95.4	42.7	148.1

The largest cost component of the proposed rule is related to the point of sale. Depending on scenario (low population/low transactions vs. high population/high transactions), point of sale activities account for 55% to 80% of the total program cost. This is followed by registration activities, federal costs, recordkeeping, inspections/audits, and reporting theft/loss. Table 3 presents the estimated 10-year cost by program element.

Table 3. Estimated 10-year Cost by Program Element ($ millions)

	Registration	Appeals	Point of Sale	Record keeping	Reporting Theft/ Loss	Audits/ Inspcts.	Federal Costs	Total Cost
7% Discounted - Low–	56.2	0.2	166.0	21.4	0.1	1.8	54.6	300.2
7% Discounted - High–	86.3	0.4	841.6	52.2	0.1	4.4	56.0	1,041.0
3% Discounted - Low–	68.5	0.3	201.5	25.9	0.1	2.1	65.9	364.2
3% Discounted - High–	105.1	0.5	1,022.0	63.1	0.2	5.3	67.6	1,263.7

DHS conducted a break-even analysis that examines the required reduction in the potential frequency of an attack. The proposed rule is cost effective if the result is a reduction in the event frequency by at least one event the size of the Oklahoma City bombing per 14 years.

2. OMB Accounting Statement

As required by OMB Circular A-4, the Department has prepared an accounting statement showing the classification of the costs and benefits associated with this rule. Table 4 provides an estimate of the dollar amount of these costs and benefits expressed in 2009 dollars, at three percent and seven percent discount rates. The Department estimates the cost of this rule will be approximately $95.5 million annualized at the 7 percent discount rate and $95.4 million annualized at the 3 percent discount rate. Non-quantified benefits are reduced vulnerability.

Table 4. OMB Accounting Statement of Annualized Costs and Benefits (Program Years 1-10)

	3% discount rate			7% discount rate		
	Primary Estimate	Minimum Estimate	Maximum Estimate	Primary Estimate	Minimum Estimate	Maximum Estimate
COSTS						
Annualized monetized costs	$95.4 million	$42.7 million	$148.1 million	$95.5 million	$42.7million	$148.2 million
Annualized quantified, but un-monetized costs		None			None	
Qualitative (un-quantified) costs		None			None	
BENEFITS						
Annualized monetized benefits	None			None		
Annualized quantified, but un-monetized benefits		None			None	
Qualitative (un-quantified) benefits	Reduced vulnerability to terrorist attack using ammonium nitrate			Reduced vulnerability to terrorist attack using ammonium nitrate		

3. Benefits of the Ammonium Nitrate Security Program

"The April 19, 1995, bombing of the Alfred P. Murrah Federal Building (Murrah Building) in Oklahoma City sent shock waves throughout America. The bombing took its toll in human life and property damage and changed the community's and the Nation's general sense of safety and security. The explosion rocked downtown Oklahoma City, reduced the north face of the Murrah Building to rubble, and dealt extensive damage to each of the nine floors as they collapsed into the center, pancaking one on top of the other. When the dust cleared, one-third of the building lay in ruins. The force of the blast damaged 324 surrounding buildings, overturned automobiles, touched off car fires, and blew out windows and doors in a 50-block area. News reports indicated the explosion was felt 55 miles from the site and registered 6.0 on the Richter scale."[1] "The bomb damaged 312 buildings in Oklahoma City. Thirty buildings were heavily damaged and approximately 16 have since been torn down. Twenty blocks of downtown [Oklahoma City] had to be cordoned off due to the bomb's extent."[2] "At the close of the response, over 6,800 volunteers had worked on the job."[3] "Within days after a terrorist bomb destroyed [the] Murrah Federal Building and took 168 lives in Oklahoma City, on April 19, 1995, [the Federal government] embarked upon a program that has significantly upgraded security in the facilities under our control. Since that awful day, [the Federal government has]:

- Supervised the placement of nearly 8,000 security countermeasures recommended by lay committees in Federal buildings;
- Nearly doubled the size of our uniformed Federal Protective Service Officers, from 376 officers to a planned strength of 724 (with all but 52 actually on board);

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[1]Data comes from multiple sources and is adjusted to $ 2010 using a 42.3% increase in the Consumer Price Index (all items) between 1995 and 2010(Bureau of Labor Statistics, http://data.bls.gov/cgi-bin/cpicalc.pl). For various discussions of injuries and costs see:
"Physical Injuries and Fatalities Resulting From the Oklahoma City Bombing." JAMA, August 7, 1996
Sue Mallonee, RN, MPH; Sheryll Shariat, MPH; Gail Stennies, MD, MPH; Rick Waxweiler, PhD;
David Hogan, DO; Fred Jordan, MD, pp 382-387available at:
http://jama.ama-assn.org/cgi/reprint/276/5/382 ; estimates of injuries differ by source. DHS used the detailed JAMA article as it was based on survey and interview data and has thorough documentation. 167 individuals were killed by the explosion and 1 additional death of an emergency worker occurred during the rescue and recovery operation.
"Responding to Terrorism Victims: Oklahoma City and Beyond," U.S. Department of Justice, Office of Justice Programs, Office for Victims of Crime, October 2000, available at
http://www.ojp.usdoj.gov/ovc/publications/infores/respterrorism/welcome.html
[2] National Park Service OKC FAQs available at http://www.nps.gov/okci/faqs.htm
[3] The Oklahoma Department of Civil Emergency Management After Action Report: Alfred P. Murrah Federal Building Bombing, 19 April 1995 in Oklahoma City, Oklahoma. Available at
http://www.ok.gov/OEM/documents/Bombing%20After%20Action%20Report.pdf

- More than doubled the number of contracted guards in Federal work locations, from 2,300 to more than 5,000;
- Enhanced intelligence-sharing with other Federal law enforcement agencies; and, revised our policies to provide more protected sites for many new buildings and to discourage co-locating low-risk agencies with higher-risk ones;
- The Federal government has redirected training and duties of our security force and issued revised design criteria for new and renovated Federal buildings;
- All this comes at a cost, of course. The [Building Security Committee] countermeasures, which include large numbers of security screening and surveillance devices and additional personnel to monitor them, have come at a capital cost of $148 million, and with additional operating costs totaling $249 million, for a cost of $397 million since 1995. Virtually all of this cost has been funded through the Federal Buildings Fund, except for a small supplemental appropriation in fiscal year 1995."[4]

While the attack in Oklahoma City marks the most significant, successful terrorist attack using ammonium nitrate in the United States, for 30 years or more, ammonium nitrate has been used successfully in terrorist attacks throughout the world. For instance, the Provisional Irish Republican Army also used ammonium nitrate as part of its London bombing campaign in the early 1980s.[5] More recently, ammonium nitrate was used in the 1998 East African embassy truck bombings, killing hundreds and injuring thousands at the U.S. embassies in Dar es Salaam, Tanzania, and Nairobi, Kenya.[6] Ammonium nitrate was also used in a November 2003 series of truck bombings in Turkey, killing over 50 individuals and injuring an additional 700 individuals at multiple locations across Istanbul.[7] Additionally, since the events of 9/11, stores of ammonium nitrate have been confiscated during raids on terrorist sites around the world, including raids on sites in Canada,[8] England,[9] India,[10] and the Philippines.[11]

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[4] Security In Federal Buildings, Statement Of Robert A. Peck, Commissioner , Public Buildings Service, General Services Administration, Before The Subcommittee On Public Buildings And Economic Development, Committee On Transportation And Infrastructure United States House Of Representatives, June 4, 1998. As Retrieved From the Web on 03/18/2010.
http://www.gsa.gov/portal/gsa/ep/contentview.do?contenttype=gsa_basic&contentid=11807&noc=t
[5] http://www.encyclopedia.com/doc/1P2-834282.html
[6] http://www.justice.gov/opa/pr/2009/May/09-ag-496.html
[7] http://www.cbsnews.com/stories/2004/04/14/world/main611898.shtml
[8] http://threatswatch.org/inbrief/2006/06/canada-raid-breaks-cell-3-tons/
[9] http://news.bbc.co.uk/2/hi/uk_news/3582921.stm
[10] http://www.zeenews.com/news605486.html
[11] US Department of State Office of the Coordinator for Counterterrorism *Country Reports on Terrorism 2005*, pg 78

By securing the nation's supply of ammonium nitrate, it will be much more difficult for terrorists to obtain ammonium nitrate materials for use in improvised explosive devices (IEDs). As a result, there is a direct value in the deterrence of a catastrophic terrorist attack using ammonium nitrate.

There are several key benefits of this proposed rule.

- This proposed rule will standardize and build upon successful industry "know your customer" initiatives and state regulations to prevent the misappropriation or use of ammonium nitrate in a terrorist attack.
- This proposed rule will provide timely, accurate vetting of persons wishing to possess or transfer ammonium nitrate. By requiring individuals to be vetted against the TSDB, known and suspected terrorists would be denied an AN Registered User Number.
- This proposed rule will allow AN Sellers to identify non-authorized persons and requires them to deny sale or transfer of ammonium nitrate to these persons. By complying with the point of sale requirements to verify the accuracy and currency of a potential purchaser's AN Registered User Number and an inspection of his/her photo ID, AN Sellers will have the knowledge to allow or deny sale or transfer of ammonium nitrate.
- This proposed rule will eliminate gaps in Federal oversight of ammonium nitrate supplies used in explosives manufacturing.

To understand the cost-benefit relationship, costs and benefits of reducing the risk of a terrorist attack must first be quantified. The benefit of reducing risk of a terrorist attack is comprised of two components: the incremental risk reduction and the value of such a reduction. The incremental risk reduction is estimated in terms of casualties, property damage, and other non-monetary impacts resulting from the implementation of the proposed rule. Casualty and other non-monetary impacts are then translated into monetary terms via one of several widely accepted valuation methods, such as willingness to pay.

Ideally, the quantification and monetization of the beneficial security effects of this proposed regulation would involve two steps. First, the Department would estimate the reduction in the probability of a successful terrorist attack and avoidance of the consequences of the terror attack resulting from implementation of the proposed rule. Second, the Department would identify individuals' willingness to pay for this incremental risk reduction and multiply it by the population experiencing the benefit. Both of these steps, however, rely on key data that are not available for the proposed rule. In light of

these limitations, the Department conducted a "break-even" analysis to determine what reduction of overall risk of a terror attack, and consequently the resulting reduction in the expected losses for the nation due to a terror attack, would be necessary in order for the expected benefits of the proposed rule to exceed the domestic costs of compliance with the proposed rule.

Break-Even Analysis[12]

A break-even analysis for a rulemaking such as this proposed rule is aimed at framing the relationships between the effects of the rulemaking (in increasing domestic security and reducing the risk of terror attack), the cost of implementing the rule, and the baseline risks of domestic terror attacks which would be mitigated by increased security of the AN supply chain. Given the complex nature of the benefits expressed as reduced risk, it is difficult to quantify these kinds of benefits with any certainty. This is also the case with quantifying the risk reduction attributed to this proposed rule compared to the baseline risk of a terror attack involving ammonium nitrate.

The intent of the analysis is to organize information on benefits and costs and present them in a way to further inform decision makers in their assessment of the proposed rule. The proposed rule is cost beneficial if the benefits of risk reduction exceed the cost of implementing this proposed rule. The damages from a terror attack are many and it is difficult to quantify such losses. Data from past attacks are a starting point for analysis, but are imperfect proxies for what may occur in the future. In addition, it is difficult to estimate the likelihood with which a successful attack may occur over any given time period. In fact, this likelihood and the degree to which authorities are able to gauge it may change over time as geopolitical circumstances change.

The types of attacks that would be prevented by this regulation could vary widely in intensity and effect, depending both on the intent and effectiveness of those undertaking the attack. The most widely known incident involving ammonium nitrate in the U.S. was the April 19, 1995, bombing of the Alfred P. Murrah Federal Building in Oklahoma City.

The practice of benefits valuation is based on an extensive literature of an individual's willingness to pay for an incremental reduction in the risk of injury or death, constrained by that individual's financial resources. Because the willingness to pay for a reduction in risk of injury or death is not observable in the marketplace, economists use other methods

[12] For a background on break even analysis as applied to regulatory analysis in the context of terrorism prevention, see Latourrette, T. and Henry H. Willis, Rand Corporation, "Using Probabilistic Terrorism Risk Modeling for Regulatory Benefit-Cost Analysis: Application to the Western Hemisphere Travel Initiative Implemented in the Land Environment", May 2007, available at http://www.rand.org/pubs/working_papers/2007/RAND_WR487.pdf.

to elicit the value society places on these risk reductions. Surveys of individuals' preferences in a hypothetical situation can reveal these values, as can observations of individuals' purchases of items that reduce risk of injury or death (e.g., bike helmets). This measure of willingness to pay is known as Value of a Statistical Life (VSL). In order to compare the losses associated with such an event to the cost of the proposed rule, the Department assigns a statistical monetary value to potential casualties, and also takes into account other direct costs due to the attack, such as property damage. This analysis uses the Department of Transportation's (DOT) VSL of $6.0 million.[13] The VSL represents an individuals' willingness to pay to avoid a fatality, based on economic studies of the value individuals place on small changes in risk. The same guidance on the use of VSL recommends the use of a range of values rather than a point estimate. For this analysis the Department used the DOT 2009 guidance of one standard deviation which results in a range from $3.4 million to $8.6 million ($6.0±$2.6). Lastly, based on the same DOT standards, DHS values moderate injuries at 1.55% of the VSL and severe injuries at 18.75% of the VSL. *The Department emphasizes that the VSL is a statistical value used only for regulatory comparison and in no way suggests that the actual value of a life can be stated in dollar terms.*

Table 5 shows many cost components from the Oklahoma City attack. For the purpose of the break-even analysis, the Department believes that this is the best example to use as a potential attack. There were 168 deaths which are used as the multiplier times the value of a statistical life which results in just over $1 billion in valuation. ($6.0 million/statistical life * 168 lives = $1,008 million). The Department utilized "Physical Injuries and Fatalities Resulting from the Oklahoma City Bombing" for the injury data. Because the article categorizes injuries as to where they were treated and separately by specific kinds of injuries but without severity, there was no definite crosswalk to the DOT injury categories the Department utilizes. The Department used the hospitalization numbers for the severe injuries (18.75% of the VSL) and non-hospitalization valued at the DOT moderate category (1.55% of the VSL). The 83 hospitalizations results in $93.4 million while the non-hospitalization injuries add another $47.3 million. The statistical valuation for fatalities and injuries equates to somewhat more than $1.1 billion. The emergency appropriations in 1995[14] provided funding for the Federal building replacement and a number of Department of Justice (DOJ) emergency expenses directly related to the incident. Other agencies received emergency appropriations to cover losses but the information in the act is less clear as to the nature of the expenses. The DOJ expenses are clearly direct expenses

[13] U.S. Department of Transportation memorandum, *Treatment of the Economic Value of a Statistical Life in Departmental Analyses. 2009 Annual Revision.* Office of the Secretary of Transportation, March 19, 2009 at http://gov.rosenet.org/uploads/254/treatment_of_a_statistical_life_dot.pdf

[14] The emergency appropriations language and values is available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=104_cong_public_laws&docid=f:publ19.104.pdf

and would likely represent similar costs should another event occur. The statute and other references mentioned earlier in this section identify damage to 312 other buildings and businesses. The appropriation identified these costs at $39.4 million. The Oklahoma Department of Civil Emergency Management After Action Report[15] and GSA Commissioner Peck's testimony[16] reports these values as substantially higher with significantly more categories of expense. However, the descriptions mix indirect with direct cost so the Department has not included the larger numbers. Those items were described at the beginning of the benefits section to provide insight to potential costs even though not included in the values below. When the1995 non-injury costs are adjusted with an inflation factor of 1.42[17] the total event valuation is approximately $1.35 billion. The Department notes that our $1.35 billion estimate may not include every possible societal cost that stemmed from the attack, such as the economic turmoil it caused. The Department welcomes additional information from commenters that further informs our $1.35 billion estimate.

In addition to reducing the possibility of an ammonium nitrate-based terrorist attack, promulgating this rulemaking provides the benefit of allowing the Department to comply with the law. The Consolidated Appropriations Act, 2008[18], (H.R. 2764; Public Law 110–161) states the "Secretary shall regulate the sale and transfer of ammonium nitrate by an ammonium nitrate facility . . . to prevent the misappropriation or use of ammonium nitrate in an act of terrorism." Section II. A of the accompanying preamble provides a more detailed background discussion of the regulatory requirements expressly contained in the statute, such as the registration requirement for certain ammonium nitrate sellers and purchasers.

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[15] The Oklahoma Department of Civil Emergency Management After Action Report: Alfred P. Murrah Federal Building Bombing, 19 April 1995 in Oklahoma City, Oklahoma. Available at http://www.ok.gov/OEM/documents/Bombing%20After%20Action%20Report.pdf

[16] Security In Federal Buildings, Statement Of Robert A. Peck, Commissioner , Public Buildings Service, General Services Administration, Before The Subcommittee On Public Buildings And Economic Development, Committee On Transportation And Infrastructure United States House Of Representatives, June 4, 1998. As Retrieved from the Web on 03/18/2010. http://www.gsa.gov/portal/gsa/ep/contentview.do?contenttype=gsa_basic&contentid=11807&noc=t

17 CPI-U seasonally adjusted values from BLS. http://www.bls.gov/cpi/#data as of 4/12/2010 and represent the most recently available and August 1995 for the appropriations values (217.59/152.9=1.42).

[18] The Consolidated Appropriations Act, 2008, (H.R. 2764; Public Law 110–161) as found on pages 1002-1009. Retrieved from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_house_committee_prints&docid=f:39564e.pdf. All references in this evaluation to this act refer to this citation. For simplicity, some references have been shortened to the 2008 Consolidate Appropriations Act, Subtitle J, or merely legislation when mentioned near text that also discusses the statute.

Table 5. Cost Valuation of an Attack Based upon 1995 Murrah Federal Building Attack (Primary VSL Estimate; All $ millions)

	Number (A)	VSL (B)	VSL Multiplier for Injuries (C)	Valuation (D)= A*B*C
Lives Lost	168	$6.0	100%	$ 1,008.0
Severe Injuries	83	$6.0	18.75%	$ 93.4
Moderate Injuries	509	$6.0	1.55%	$ 47.3
Subtotal Valuation Life and Injuries				$ 1,148.7
		Value ($1995) (D)	Inflation Multiplier (E)	Value ($2010) (F)=D*E
Murrah Building Replacement Costs		$ 40.4	1.42	$ 57.5
Congressional Emergency Appropriation Other Building Recovery and community aid		$ 39.4	1.42	$ 56.1
Attorney General Terrorism fund associated to OKC		$ 34.2	1.42	$ 48.7
US Attorney Extraordinary expenses due to bombing		$ 10.3	1.42	$ 14.7
Additional Judge Security		$ 16.6	1.42	$ 23.6
Subtotal Property and Other Direct				$ 200.5
Total Impact (sum of 2 subtotals)				$ 1,349.2

Because VSL is likely to represent a range, this analysis uses the DOT guidance of plus or minus 1 standard deviation. Based on $6.0 million ± $2.6 million the lower VSL is $3.4 million and the upper is $8.6 million. The non-injury costs do not change but using the upper and lower VSL values moves costs ± $497.8 million around the $1.35 billion estimate. The detailed calculations are shown in the next two tables.

Table 6. Cost Valuation of an Attack Based upon 1995 Murrah Federal Building Attack (Lower VSL Estimate; All $ millions)

	Number	VSL	VSL Multiplier for Injuries	Valuation (D)= A*B*C
	(A)	(B)	(C)	
Lives Lost	168	$3.4	100%	$ 571.2
Severe Injuries	83	$3.4	18.75%	$ 52.9
Moderate Injuries	509	$3.4	1.55%	$ 26.8
Subtotal Valuation Life and Injuries				$ 650.9

	Value ($1995) (D)	Inflation Multiplier (E)	Value ($2010) (F)=D*E
Murrah Building Replacement Costs	$ 40.4	1.42	$ 57.5
Congressional Emergency Appropriation			
Economic revitalization, Other Building Recovery	$ 39.4	1.42	$ 56.1
Attorney General Terrorism fund associated to OKC	$ 34.2	1.42	$ 48.7
US Attorney Extraordinary expenses due to bombing	$ 10.3	1.42	$ 14.7
Additional Judge Security	$ 16.6	1.42	$ 23.6
Subtotal Property and Other Direct			$ 200.6
Total Impact (sum of 2 subtotals)			$ 851.5

Table 7. Cost Valuation of an Attack Based upon 1995 Murrah Federal Building Attack (High VSL Estimate; All $ millions)

	Number	VSL	VSL Multiplier for Injuries	Valuation (D)= A*B*C
	(A)	(B)	(C)	
Lives Lost	168	$8.6	100%	$ 1,444.8
Severe Injuries	83	$8.6	18.75%	$ 133.8
Moderate Injuries	509	$8.6	1.55%	$ 67.8
Subtotal Valuation Life and Injuries				$ 1,646.5

	Value ($1995) (D)	Inflation Multiplier (E)	Value ($2010) (F)=D*E
Murrah Building Replacement Costs	$ 40.4	1.42	$ 57.5
Congressional Emergency Appropriation			
Economic revitalization, Other Building Recovery	$ 39.4	1.42	$ 56.1
Attorney General Terrorism fund associated to OKC	$ 34.2	1.42	$ 48.7
US Attorney Extraordinary expenses due to bombing	$ 10.3	1.42	$ 14.7
Additional Judge Security	$ 16.6	1.42	$ 23.6
Subtotal Property and Other Direct			$ 200.5
Total Impact (sum of 2 subtotals)			$ 1,847.0

If the program is to be cost effective, the amount by which baseline risk must be reduced by the Ammonium Nitrate Security Program can be directly calculated as a ratio of annualized, discounted program costs to attack consequences. However, the underlying baseline risk of an attack in any given year is highly uncertain and variable over time, making the break-even analysis especially useful. To determine the frequency of attack that results in a break-even point, we divide the total attack valuation by the annualized proposed rule program costs discounted at 7%. The table below shows the calculation for three VSL values. The minimum frequency reductions in years between attacks are 14.1, 8.9, and 19.3 which represent the minimum reduction of one attack the size of the 1995 Oklahoma City bombing per the calculated number of years.

Table 8. Frequency of Attacks Averted for AN Security Costs to Equal Expected Benefits ($ millions; Frequency years)

	VSL=$6.0	VSL-1 Std Deviation ($3.4)	VSL+1 Std Deviation ($8.6)
Total Impact (sum of 2 subtotals)	$1,349.2	$851.4	$1,847.0
Total rule cost annualized at 7% (from Accounting Summary)	$95.5	$95.5	$95.5
Frequency of Attacks Averted by AN Security Procedures to Break Even. (Total Impact/Total Cost) Interpret attack rate as one attack per number of years	One attack every 14.1 years	One attack every 8.9 years	One attack every 19.3 Years

4. NPRM Description

The 2008 Consolidated Appropriations Act amends the Homeland Security Act of 2002 and provides the Department with the authority to "regulate the sale and transfer of ammonium nitrate by an ammonium nitrate facility . . . to prevent the misappropriation or use of ammonium nitrate in an act of terrorism." The Department published an Advance Notice of Proposed Rulemaking (ANPRM) for the Secure Handling of Ammonium Nitrate Program on October 28, 2008 (73 FR 64280). The ANPRM summarized the activities expected to be covered in this proposed regulatory program, including registration activities, point of sale activities, theft or loss reporting, inspections and audits, appeals and penalties, and establishing a threshold level of ammonium nitrate in a mixture for the purposes of regulation under this program. Simultaneously with the release of this Regulatory Assessment, the Department is releasing a Notice of Proposed Rulemaking containing a proposed rule. The proposed rule includes alternatives considered, and solicits public comment on the proposed approach.

This regulatory evaluation attempts to mirror the provisions laid out in the NPRM. The Department has made no attempt, however, to precisely replicate rule or NPRM language in this regulatory evaluation. Should there be a discrepancy between the regulatory evaluation and the proposed rule or NPRM, the language of the proposed rule or NPRM will

have precedence. This is particularly important with regards to terminology describing AN Facilities and AN Purchasers. For regulatory purposes, these two terms have specific legal definitions. To clearly identify cost groups and specific definitions applicable to analysis in support of the Regulatory Flexibility Act, such as the Initial Regulatory Flexibility Act Analysis (IRFA) in this document, some compromise and simplification is necessary to maintain simplicity when labeling cost information, particularly in tables. DHS believes the use of these two terms and similar terms in this document should be readily understandable. Use of these terms in this document does not alter the specific definitions and usage in the proposed rule text or in the NPRM. When we use these terms in this document, we are using them terms in broad manners, not in the precise manners in which they are used in the NPRM or in the proposed rule text. For purposes of this document only, 'AN Sellers' can include individuals who are AN Sellers, AN Facility Representatives, and Designated AN Facility POCs, and can also include businesses, organizations, and other entities that sell or transfer ammonium nitrate. Similarly, for purposes of this document only, 'AN Purchasers' can include individuals who are AN Purchasers, and can also include businesses, organizations, and other entities that buy or obtain ammonium nitrate. DHS invites comments on the clarity of the use of these simplified terms in this document.

For purposes of the proposed rule, an AN Facility is any person or entity that produces, sells, or otherwise transfers ownership of, or provides application services for, ammonium nitrate. The proposed rule requires that all AN Sellers (i.e., any individual involved in the sale or transfer of ammonium nitrate from an AN Facility or designated to act on behalf of an AN Facility for purposes of compliance with the proposed rule) and AN Purchasers (i.e., any individual seeking to purchase ammonium nitrate from an AN Facility) register with the Department to obtain an AN Registered User Number. Each applicant for an AN Registered User Number must apply electronically using the AN User Registration Portal, an online web portal. AN Facilities include producers, distributors, and some independent transporters of ammonium nitrate. The term producer is not used in Subtitle J and therefore the Department has not used this term in the proposed preamble and rule. For purposes of this Regulatory Assessment, the Department considers producers to be a subset of AN Facilities because they manufacture ammonium nitrate, sell or transfer the ammonium nitrate to distributors, applicators, retailers, etc. Therefore, producers of ammonium nitrate are subject to the same regulatory requirements as all other AN Facilities.

To register, AN Sellers must provide information including: name, address, telephone number, photo identification document number, place of birth, date of birth, citizenship, gender, and information identifying all AN Facilities where applicant will serve as an AN Seller or AN Facility Representative or Designated AN Facility POC. Additionally, application information we are reserving the right to collect includes any other information

deemed necessary by the Department to carry out vetting, and any other information deemed necessary by the Department to verify the results of previous TSDB vetting. Each applicant will be checked against the TSDB and may be denied an AN Registered User Number if there is a match on the TSDB. The Department intends to provide each applicant with their AN Registered User Number via e-mail within 72 hours. Where this is not practicable, the Department intends to provide notice of the delay to the applicants within the 72 hour timeframe. Each AN Registered User Number would be valid for five years after its generation by the Department.

Purchasers of ammonium nitrate will also have to register with the Department using the AN User Registration Portal. They will have to provide information as describe above for sellers, and may also provide names of any agents who may act on the AN Purchaser's behalf at the point of sale. Each purchaser's registration application will also have to provide a description of the intended use of the ammonium nitrate the purchaser plans to procure. As with AN Sellers, AN Purchaser's information will be checked against the TSDB. If a person moves, changes their name, etc., they are responsible for notifying the Department of these changes. They must notify the Department via the AN Registered User Portal.

The proposed rule requires the AN Seller to verify the purchaser holds a valid AN Registered User Number. The Department believes this will occur at the point of sale[19] although that is not a requirement. To do this, the Department is considering requiring the AN Seller to enter the potential purchaser's AN Registered User Number into an online web portal or call a call-center established by the Department for verification of the prospective purchaser's AN Registered User Number. For purposes of the primary estimate in this Regulatory Assessment, the Department is assuming that only the online web portal will be available to AN Sellers to use for this verification. The Department will confirm that the number provided is a valid AN Registered User Number.

The AN Seller must also perform a visual check of the photo identification (e.g., driver's license; passport) of the individual taking possession of the ammonium nitrate (i.e., the AN Purchaser or his/her agent). The AN Seller must record pertinent details about each ammonium nitrate transaction, including the AN Purchaser's (and, if applicable, agent's) name, address, telephone number, AN Registered User Number, Department Confirmation, documentation that a photo ID was inspected, and amount of ammonium nitrate in the transaction. Where an agent is used, photo ID of the agent must also be presented to verify the identity of the agent. The AN Facility must keep these records for at least two years.

[19] The "point of sale" is the point at which the possession of AN is transferred from an AN Facility to an AN Purchaser or his/her agent pursuant to a sale or transfer of AN.

Further, the Department requires that these records be and secured during this two-year period.

AN Facility Representatives (i.e., any AN Seller with responsibility for an AN Facility's overall compliance with the proposed rule) and Designated AN Facility POCs must report a theft or loss of ammonium nitrate to Federal law enforcement within one calendar day of discovering the theft or loss. The Department recognizes that much of the ammonium nitrate supply is bulk and because of the hygroscopic nature of the material, some losses are inevitable.

5. Period of Analysis

The Department has presented the costs for a ten year period. The Department assumes implementation will begin early in 2012 or 2013.

6. Estimates of Regulated Population

Congress defines ammonium nitrate for purposes of the 2008 Consolidated Appropriations Act as "solid ammonium nitrate that is chiefly the ammonium salt of nitric acid and contains not less than 33 percent nitrogen by weight." Included in the definition of ammonium nitrate is "any mixture containing a percentage of ammonium nitrate that is equal to or greater than the percentage determined by [the Department]." In establishing this mixture percentage, the Department is required to consult with the heads of appropriate Federal departments and agencies (including the Secretary of Agriculture) and to provide notice and an opportunity for comment. The Department is also considering establishing a minimum threshold amount of ammonium nitrate that must change hands as part of a sale or transfer before that sale or transfer (including the individuals participating in the transaction) is subject to Subtitle J's requirements.

Ammonium nitrate is primarily used as a nitrogen source in fertilizer and as an input into industrial explosives. The majority of ammonium nitrate in commerce is solid while a small amount of solution is used as a direct application fertilizer. Under Subtitle J, the Department has authority to regulate transactions (and the individuals conducting them) involving any amount of ammonium nitrate regardless of packaging. The Department believes, however, that the security benefits gained from regulating transactions involving either de minimis quantities of ammonium nitrate or products packaged in such a way as to make them unlikely to be chosen by an individual for conversion to an ammonium nitrate-based explosive may be outweighed by the costs of regulating those transactions. To avoid including these transactions and the individuals conducting them under its regulatory

authority, the Department is considering including both a minimum threshold weight and an individual products exemption in the definition of ammonium nitrate.

In agricultural applications, ammonium nitrate is used to fertilize pastureland, wheat, corn, grapes, fruit orchards, and other agricultural products. It is a readily available source of nitrogen and its fast release makes it a preferred fertilizer to other nitrogenous fertilizers (including urea, calcium ammonium nitrate, and ammonium sulfate) in relatively dry climates. According to the Fertilizer Institute, the largest ammonium nitrate consuming States include: Missouri, Alabama, Tennessee, Texas, Mississippi, Kentucky, Kansas, Arkansas, Georgia, and Oklahoma. Combined, these ten States accounted for 77.4% of ammonium nitrate fertilizer consumption in 2007.[20] There is no source of information about how many individual farms use ammonium nitrate fertilizer. According to the U.S. Department of Agriculture, 1,022,036 farms incurred expenses for Commercial fertilizer, lime, and soil conditioners. [21] Only a fraction of these farms use ammonium nitrate fertilizer, however. The Department assumes that between 100,000 and 150,000 farms use ammonium nitrate based on information provided by state plant food control officials.[22] Informed by discussions with the fertilizer industry, the Department assumes approximately 50% of these farms use fertilizer applicator services,[23] and thus never purchase ammonium nitrate directly. Rather, they purchase ammonium nitrate application services. Others in the ammonium nitrate supply chain include manufacturers, fertilizer mixers, explosives distributors, farm wholesalers/co-ops, retail garden centers, golf courses, landscaping services, blasting services, mines, and laboratory supply companies. Refer to Appendix A for more information on population estimates. Because point estimates were difficult to obtain, the Department has provided range estimates for several segments of the potentially regulated population. The Department welcomes comment on the estimates of AN Purchasers, Agents and Facilities.

Ammonium nitrate is also used in very small amounts in first aid cold packs[24] to generate an endothermic reaction when mixed with water. At this time, the list of such products that

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20 Association of American Plant Food Control Officials and The Fertilizer Institute, Commercial Fertilizers 2007, page 11.

21 U.S. Department of Agriculture, National Agricultural Statistics Services, 2007 Census of Agriculture (US data), Table 45.

22 4/17/09 listening session with plant food control officials from several States. Roughly 50,000 – 75,000 farms in Missouri and 3,000 farms in Texas were reported to use AN fertilizer. Estimating the average fertilizer consumption per State and applying to the national totals, DHS estimates roughly 100,000 to 150,000 farms using AN fertilizer.

[23] 4/17/09 listening session with plant food control officials from several States. Nationally, about half of farms were thought to use applicator services and thus never take custody of ammonium nitrate fertilizer.

[24] For purposes of the proposed rule, the Department proposes defining a cold pack as a small, commercially-available package commonly used as a replacement for ice in the application of first-aid. Only those cold packs containing unmixed water and AN that, immediately prior to use, is manipulated to cause the comingling of the water and the AN resulting in an endothermic reaction that significantly lowers the

the Department is considering granting an individual exemption to is limited to cold packs. The Department believes that not only would the cost of regulating cold packs far exceed the security benefit gained by including them in the regulations, but also that Congress did not intend cold packs—nor the sporting goods stores, recreational centers, schools, and other entities that purchase or sell/transfer them—to be covered under the Act.

Mixtures

For purposes of the proposed rule, the Department proposes to define ammonium nitrate to include any mixture that is 30 percent or more ammonium nitrate by weight. By setting the mixture rule at 30 percent, the Department believes the regulations will capture those ammonium nitrate mixtures that could be most effectively used in bomb-making, or that could be most effectively retooled or reconfigured for use in bomb-making.

The Department is aware that this proposed mixture rule differs from the mixture rule used for ammonium nitrate under the DHS Chemical Facility Anti-Terrorism Standards (CFATS).[25] Under CFATS, a mixture containing ammonium nitrate is counted towards the screening threshold quantity for ammonium nitrate if the ammonium nitrate represents 33 percent or more of the mixture. There are two primary reasons for the difference between this and the CFATS approach to ammonium nitrate mixtures. First, the two mixture rules exist to accomplish two different goals. First, the CFATS mixture rule exists to help the Department identify potentially high-risk chemical facilities subject to CFATS, and at the time of the development of CFATS, the Department believed that setting the ammonium nitrate mixture at 33 percent accomplished this goal. For this proposed rule, the threshold is solely meant to identify ammonium nitrate mixtures that have the potential to be misused in acts of terrorism. Accordingly, a more conservative and inclusive mixture rule is appropriate. Second, the CFATS mixture rule was based on the best information available to the Department at the time of the issuance of CFATS Appendix A, which occurred over eighteen months ago. Since that time the Department has better information from the FBI's Explosives Unit concerning experiments that have shown that mixtures containing as low as 30 percent ammonium nitrate by weight can be processed into viable explosives. In light of this new evidence, , the Department believes that setting the mixture rule for this rulemaking at 30 percent ammonium nitrate is the correct course of action.

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temperature of the package, could be affected. Many cold packs do not contain AN and would not require an exemption.

[25] CFATS was implemented by rulemaking and is an ongoing program. The original final rule can be viewed at http://www.regulations.gov/search/Regs/contentStreamer?objectId=09000064802228b5&disposition=attachment&contentType=pdf

For a variety of reasons discussed more extensively in the NPRM, the Department is proposing exempting mixtures regulated as "explosives" by the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) from the definition of ammonium nitrate for purposes of the regulation.

Purchaser

Individuals seeking to purchase or otherwise acquire 25 pounds or more of ammonium nitrate must apply to the Department of Homeland Security for an AN Registered User Number. As mentioned in the NPRM, most home use fertilizer doesn't contain enough AN to be regulated. The purchaser will be required to present his/her AN Registered User Number and submit to a purchaser identity verification process in order to purchase ammonium nitrate based upon the proposed thresholds for weight and mix.

Agents

The use of agents during the conduct of purchases or transfers of ammonium nitrate is a common practice. For example, an AN Purchaser's agent or representative will go to an AN Seller to arrange a transaction of ammonium nitrate and take custody of the ammonium nitrate on behalf of the AN Purchaser. Agents are not required to possess an AN Registered User Number. The Department may, however, require AN Purchasers to identify on their applications for a Registered AN User Number agents who they intend to use at the point of sale and/or to verify for the AN Seller at the time of an ammonium nitrate transaction that an individual is acting as an agent on the AN Purchaser's behalf.

Sellers

AN Sellers that must register with the Department include any person who may individually perform all aspects of a sale or transfer of ammonium nitrate on behalf of an AN Facility, including purchaser identity verification activities. Under this proposed rule framework, there are three categories of AN Sellers:

1. AN Seller
2. AN Facility Representative
3. Designated AN Facility POC

Subtitle J requires any person who owns an AN Facility to register with the Department. The Department is aware, however, that facilities selling or transferring ammonium nitrate come in many forms, including but not limited to corporations, partnerships, cooperatives, and sole proprietorships. For many of these organizations, it may not be practical or

sensible to require all "owners" to register (for example, it would not be sensible to require every shareholder of a publically-held company to register with the Department). Similarly, for some AN Facilities, such as those owned by large, publically-held companies, there is no single "owner" who can register on behalf of the AN Facility. Moreover, in many cases regardless of ownership structure, the AN Facility "owner" is not involved in the day-to-day transactions of an AN Facility, and thus would have no direct involvement in, or potentially even oversight of, sales or transfers of ammonium nitrate. For these reasons, simply requiring all AN Facility "owners" to register is not practicable.

In light of this, the Department is proposing that, any individual who has an ownership or operator interest in an AN Facility; is designated to act on behalf of an AN Facility for purposes of compliance with this regulation, such as, possibly, a site manager, sales manager, or corporate officer; or is involved in the sale or transfer of ammonium nitrate at an AN Facility, such as a sales clerk or cashier, may register as an "AN Seller." This would allow AN Facilities to conduct sales or transfers without direct involvement of an owner of the AN Facility, while also ensuring that no sale or transfer on behalf of an AN Facility is conducted by an individual who has not been vetted by and registered with the Department. For these reasons, the Department also is proposing that, while every AN Facility will be required to have at least one AN Seller registered with the Department, not every individual with an ownership interest in an AN Facility must register to be an AN Seller.

Within the category of AN Sellers, there is a subcategory of individuals called "AN Facility Representatives." The qualifications and responsibilities of AN Facility Representatives are discussed below. AN Sellers who are not AN Facility Representatives would have authority to perform all of the regulatory activities that "owners" must (e.g., verifying the identities of prospective AN Purchasers, recording the details of completed sales or transfers, and handing over possession of ammonium nitrate to approved AN Purchasers), but would not be liable for ensuring that other AN Facility personnel are following the Department's regulations.

The Department proposes that every AN Facility must have at least one registered AN Seller, but may register as many AN Sellers as it deems appropriate. Whether or not an AN Facility seeks registration of any additional AN Sellers is entirely discretionary. Under the Department's proposed approach, an AN Facility may decide that it is most cost-effective to register only a single AN Seller; however, in that case the single AN Seller must perform all point of sale purchaser verification activities and other regulatory compliance activities proposed by the NPRM.

The Department recognizes that not all AN Sellers will have the same level of non-regulatory responsibility and authority within an AN Facility, and that some AN Sellers may not be in a position to monitor or control overall AN Facility compliance or the compliance of other AN Facility employees with the final regulations. In light of this, the Department is proposing the creation of a subcategory of individuals called "AN Facility Representatives" within the broader class of AN Sellers. The Department proposes that AN Facility Representatives would be AN Sellers who are not only responsible for their own compliance with the regulations, but also would be responsible for the AN Facility's overall compliance with the regulations and the compliance of all other AN Facility employees.
The Department also proposes that, for purposes of these regulations, the definition of "AN Facility Representative" be broad enough to include not only individuals who own all or part of an AN Facility, but also any non-owner AN Facility employee or contractor designated to act on behalf of an AN Facility for purposes of compliance with this regulation. Thus, for purposes of the proposed regulation, an AN Facility would be allowed to designate as an "AN Facility Representative" an individual without any ownership in the AN Facility, such as, possibly, a site manager, sales manager, or corporate officer, to meet the "owner" registration requirements.
The Department proposes that every AN Facility must register at least one AN Facility Representative, but may register as many AN Facility Representatives as it deems appropriate. Whether or not an AN Facility seeks registration of any additional AN Facility Representatives is entirely discretionary. The Department also proposes that while an AN Facility must have at least one registered AN Facility Representative, whether or not an AN Facility seeks registration of any additional AN Sellers who are not AN Facility Representatives is entirely discretionary.

While the Department's proposal does not preclude the registration of multiple AN Facility Representatives for a single AN Facility, each AN Facility will be required to designate a single AN Facility Representative to act as the primary point of contact with the Department on behalf of the AN Facility. This individual will be referred to as the "Designated AN Facility POC." The Designated AN Facility POC will be the individual responsible for contacts with the Department regarding regulatory activities, such as the scheduling of inspections.

An individual registering as an AN Facility Representative will be expected to provide the name of and contact information for the Designated AN Facility POC for each AN Facility on behalf of which he/she is registering. Please note that a single individual may serve as an AN Facility Representative and/or Designated AN Facility POC for multiple AN Facilities.

Individuals can register for more than one class and the Department expects that many will. For the purpose of this analysis, however, the Department assumes that AN Purchasers and AN Sellers will be unique individuals.

The Department recognizes that some AN Facilities may be owned by State or local government entities. DHS invites comments about this kind of entity to assist in evaluating the burden on other government entities These AN Facilities would be required to comply with the provisions of this proposed rule.

The estimated number of AN Purchasers and AN Sellers is based in large part on discussions between the Department and members of multiple agricultural fertilizer and explosive industry associations, who represent a cross-section of many of the industry segments most likely to be covered by these regulations. These estimates also are based on discussions between the Department and various State officials (e.g., State plant food control officials) responsible for overseeing ammonium nitrate use within their respective States. The Department welcomes comment on the size of the regulated population. Table 9 estimates the number of purchasers of ammonium nitrate that will apply for an AN Registered User Number. For the purpose of this analysis, it is assumed that each establishment will have more than one person apply for an AN Registered User Number. The Department assumes that farms, mines, golf courses, landscaping and landscaping services will register two people at each establishment. Larger businesses and businesses engaged in reselling or distributing ammonium nitrate are assumed to have three applicants per establishment. The Department welcomes comment on the number of AN Purchasers and the number of AN Registered Users per establishment.

Table 9. AN Purchasers

	Number of establishments (A) Low	(B) High	Number of individual applicants (A x C) Low	(B x C) High	Average number of AN Registered Users per establishment (C)
Agricultural sector					
Fertilizer mixers	400	600	1,200	1,800	3
Farm wholesalers/co-ops	500	1,000	1,500	3,000	3
Retail garden centers	500	2,500	1,500	7,500	3
Fertilizer applicators	500	1,000	1,500	3,000	3
Farms	50,000	75,000	100,000	150,000	2
Golf courses	6,000	12,000	12,000	24,000	2
Landscaping services	4,500	9,000	9,000	18,000	2
Explosives Sector					
Explosives distributors	500	1,000	1,500	3,000	3
Blasting services	250	500	750	1,500	3
Mines	1,750	3,500	3,500	7,000	2
Other					
Laboratory supply	50	100	150	300	3
Total AN Purchasers	**64,950**	**106,200**	**132,600**	**219,100**	**n/a**

Table 10 estimates the number of AN Sellers. Many AN Sellers are also AN Purchasers due to their "middle position" in the supply chain. The Department assumes that most businesses will have five AN Registered Users at each establishment. Manufacturers of ammonium nitrate fertilizer and explosives are assumed to have ten AN Sellers at each establishment, while fertilizer applications are assumed to have three registered AN Sellers at each establishment. The Department welcomes comment on the number of AN Sellers and the assumptions regarding the number of AN Registered Users per establishment.

Table 10. AN Sellers

	Number of establishments (A)		Number of individual applicants (A x C)		Average number of AN Registered Users per establishment (C)
	Low	High	Low	High	
AN fertilizer manufacturers	26	26	260	260	10
AN explosives manufacturers	10	10	100	100	10
Fertilizer mixers	400	600	2,000	3,000	5
Explosives distributors	500	1,000	2,500	5,000	5
Farm wholesalers/co-ops	500	1,000	2,500	5,000	5
Retail garden centers	500	2,500	2,500	12,500	5
Fertilizer applicators	500	1,000	1,500	3,000	3
Laboratory supply	50	100	250	500	5
Total AN Sellers	**2,486**	**6,236**	**11,610**	**29,360**	**n/a**

7. Registration of AN Sellers and AN Purchasers

In order to legally sell or transfer ammonium nitrate, individuals, including those acting on behalf of a business enterprise, must first register with the Department to receive an AN Registered User Number.

The Department proposes registering to become an AN Seller (including designation as an AN Facility Representative or Designated AN Facility POC), will be done through an online web portal (the "AN User Registration Portal") developed by the Department and made available via the Internet. The Department preliminarily has decided that this will be the only available means of registration, and that alternate registration application processes will not be available. The Department will check the applicant's personal information against the TSDB and may deny the applicant an AN Registered User Number if their information matches information contained in the TSDB.

An individual may choose to register for multiple categories. Transporters of AN will register in one or more categories based upon the three different possible business relationship in their transactions. Based on the category(s) selected, the individual will be asked to provide answers to a series of questions, including, at a minimum, the following statutorily required information: name; address; telephone number; and, for AN Purchasers, the intended use of the ammonium nitrate.

OMB Circular A-4 directs agencies to consider alternative regulatory approaches; however, the Circular also affords agencies considerable flexibility to specify the number and type of alternatives that should be fully analyzed according to the formal principles of Executive Order 12866. In this case, the Department used this discretion to define a set of alternative approaches that reflected the most relevant policy choices made for this rulemaking.

The Department briefly considered having a paper-based registration system. This may have lowered costs for some applicants who will have to travel to use a computer with Internet access. Paper-based registration introduces opportunities for transcribing errors and subsequent delays in receiving an AN Registered User Number. It would be difficult to assure that AN Registered User Numbers could be generated within the 72 hour window because of the delay with mail and/or fax. Once DHS determined the paper option would not comply with the maximum response time, no further consideration or development of the concept was pursued. Also, the Department has had success with the Chemical Security Assessment Tool (CSAT) system for Top-Screen under CFATS and expects the regulated community will find the AN Registration Portal to be equally easy to navigate.

Tables 11 and 12 present the cost of registration activities for AN Purchasers for both the low and high population estimates. To estimate the cost of the time to register for an AN Registered User Number, the Department has assumed that individuals equivalent to a "purchasing manager" will undergo the application process. An average hourly wage at the 50th percentile plus benefits is assumed for each industry. To estimate the cost of individual's time registering for an AN Registered User Number, the Department has applied a loaded average hourly rate. Hourly rates represent the 50th percentile hourly rates published by the Bureau of Labor Statistics (BLS), Occupational Employment and Wage estimates (May 2008.[26]

According to the U.S. Department of Agriculture (USDA), approximately 60% of crop farms have Internet access.[27] Thus, the Department assumes that in the agricultural sector,

[26] All wage rate information with links to BLS data is provided in table form in Appendix B.
[27] Sources: "Farm Computer Usage and Ownership," United States Department of Agriculture National Agricultural Statistics

approximately 60% of farms have computers with Internet access. For this portion of the population, the time to apply for an AN Registered User Number is limited to the time to access the website, provide the required information, check their e-mail for registration confirmation, and record their AN Registered User Number. For the 40% of farms without computers with Internet access, the Department assumes that these AN Purchasers will travel a short distance public library, or other location where access to the Internet is available to apply for an AN Registered User Number. Further, the Department assumes that for applicants without Internet access, two trips will be required; one to complete the AN Registered User Number application, and a second trip after 72 hours to retrieve the e-mail containing the AN Registered User Number. The Department assumes that the round trip distance is 50 miles per trip[28] and has used the IRS mileage rate of $0.55 per mile.[29] The Department assumes the total extra time for each trip will average approximately one hour each way plus 1 hour for Internet access and registration for a total of 6 hours per farm registration. By multiplying 50 miles times two trips times $0.55 per mile totals $55 per individual for the mileage for the two trips associated with applying for and receiving an AN Registered User Number. Because of the minimal time and effort it takes to apply for and receive an AN Registered User Number, the Department believes this approach to be a cost-effective way to prevent ammonium nitrate misappropriation. DHS recognizes that in some instances farmers may be unaware of the requirements to have a registration number to make an Ammonium Nitrate purchase. These individuals would incur the opportunity cost of time to travel to make their purchase, but would not be able to complete their purchase in that trip. In order to calculate the opportunity cost of these missed purchases, we first need to determine how much of the regulated population might be unaware of the requirements of this regulation. DHS was unable to find a study that was highly specific to the population being regulated by thus rule; however, DHS did consult two papers[30] that addressed regulatory non-compliance due to lack of knowledge of the

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Service, August 2009, p. 1. As retrieved at http://usda.mannlib.cornell.edu/usda/current/FarmComp/FarmComp-08-14-2009.pdf on 7/22/2010

[28] DHS is using an average of one way distance of 25 miles based upon: "In the 2004 Agricultural Resource Management Survey, a joint effort by ERS and USDA's National Agricultural Statistics Service, farmers were asked how far they travel to purchase most of their farm inputs and equipment. Farmers were also asked the distance to the nearest town (the average was 8.3 miles) and nearest city of more than 10,000 people (the average was 24.2 miles)." USDA, Economic Research Service using data from USDA's Agricultural Resource Management Survey, 2004 Phase III, Version 1, summarized in Amber Waves, June 10, 2010, retrieved at http://www.ers.usda.gov/AmberWaves/June10/PDF/FarmExpenditures.pdf on 07/22/2010

[29] http://www.irs.gov/formspubs/article/0,,id=178004,00.html. IRS lists the data currency as "Page Last Reviewed or Updated: January 07, 2010"

[30] EPA/CMA Root Cause Analysis Pilot Project: An Industry Sur-vey" EPA 305 R 99 001) at http://www.epa.gov/compliance/resources/publications/assistance/sectors/rootcauseanalysis.pdf?bcsi_scan_1CFAD6D3D20A37D6=0&bcsi_scan_filename=rootcauseanalysis.pdf (27% p14); and Use of Random Response to Estimate Angler Noncompliance with Fishing Regulations North American Journal of Fisheries Management Volume 15, Issue 4, 1995, Pages 721 - 731 Authors: D. I. Schilla; P. A. Klinea at https://research.idfg.idaho.gov/Fisheries%20Research%20Reports/Res-Schilil1996%20Use%20of%20Random%20Response%20to%20Estimate%20Angler%20Noncompliance%20With%20Fi

requirements. For the purpose of this analysis, DHS considered the likely differences in the effectiveness of the planned outreach program and the very likely difference that farmers with internet have more access to information. DHS considered the available information and used the average of the two papers at the high end, 25% noncompliance for farmers without internet. For farmers with internet DHS believes the requirements will be much better known. As a starting point for public comment, DHS has used one quarter of the upper estimate average or 6.5% for the farmers with internet.

DHS assumes farmers attempting to make a purchase that do not have registration numbers will proceed directly to a public internet access point and register. For those farmers without internet, an additional 30 minutes was added onto their time to account for the opportunity cost of the missed purchase. Table 11 below provides the weighted average time for all farmers without internet which includes the additional 30 minutes that 25% of the farmers will need.

For farmers with internet, DHS assumes one additional trip for the 6.5% of the farmers that were unable to make the purchase and went home to register. The opportunity cost of this additional trip includes the estimated 2 hours to drive to and from the store (6.5% * 60,000 farmers * 2 hours) as well as the mileage cost (25% * 60,000 farmers * $.55/mile * 50 miles). The time for the additional trip for 6.5% of the farmers with internet has been added in to the total amount of time for all farmers with internet to register and divided by the total population to arrive at a weighted average registration time. These additional opportunity costs have been included in Table 11 below.

Businesses have a higher Internet penetration rate and usually are in close proximity to other businesses or public Internet access. Therefore, DHS has not adjusted other estimates for the opportunity cost of the missed purchase.

Table 11. Cost of Registration Activities for AN Purchasers – Low Population Estimate*

Number of Applicants	Loaded Hourly Wage - Purchasing Agents*	Hours required to register for AN Registered User Number	Total Hours	Cost of Time to apply for AN Registered User Number ($)	Travel Mileage Cost ($)	Total Registration Cost ($)
A	B	C	AxC	AxBxC	D	(AxBxC)+D

shing%20Regulations.pdf (pp 721, 725, and 726: 29% noncompliance * 75% accidental = 22%) Averaging 22% and the 27% yields 25% Additionally different sampled populations had noncompliance rates from .4% to 28%)

Fertilizer mixers	1,200	39	0.5	600	24,000	n/a	24,000
Farm wholesalers/co-ops	1,500	32	0.5	750	24,000	n/a	24,000
Retail garden centers	1,500	16	0.5	750	12,000	n/a	12,000
Fertilizer applicators	1,500	40	0.5	750	30,000	n/a	30,000
Farms w/ Internet access	60,000	41	0.6	37,500	1,539,000	412,500	1,951,500
Farms w/o Internet access	40,000	41	6.5	260,000	10,670,000	2,200,000	12,870,000
Golf courses	12,000	25	0.5	6,000	150,000	n/a	150,000
Landscaping services	9,000	28	0.5	4,500	128,000	n/a	128,000
Explosives distributors	1,500	39	0.5	750	29,000	n/a	29,000
Blasting services	750	38	0.5	375	14,000	n/a	14,000
Mines	3,500	36	0.5	1,750	63,000	n/a	63,000
Laboratory supply	150	39	0.5	75	3,000	n/a	3,000
Total	**132,600**	**n/a**	**n/a**	**313,800**	**11,557,000**	**2,612,500**	**15,298,500**

* Wage rate information is fully explained in Appendix B. Rounding may affect totals.

Table 12. Cost of Registration Activities for AN Purchasers – High Population Estimate*

	Number of Applicants	Loaded Hourly Wage - Purchasing Agents*	Hours required to register for AN Registered User Number	Total Hours	Cost of Time to apply for AN Registered User Number ($)	Travel Mileage Cost ($)	Total Registration Cost ($)
	A	B	C	AxC	AxBxC	D	(AxBxC)+D
Fertilizer mixers	1,800	39	0.5	900	35,000	n/a	35,000
Farm wholesalers/co-ops	3,000	32	0.5	1,500	47,000	n/a	47,000
Retail garden centers	7,500	16	0.5	3,750	61,000	n/a	61,000
Fertilizer applicators	3,000	40	0.5	1,500	61,000	n/a	61,000
Farms w/ Internet access	90,000	41	0.6	56,250	2,308,000	618,750	2,926,750
Farms w/o Internet access	60,000	41	6.5	390,000	16,005,000	3,300,000	19,305,000
Golf courses	24,000	25	0.5	12,000	301,000	n/a	301,000
Landscaping services	18,000	28	0.5	9,000	255,000	n/a	255,000
Explosives distributors	3,000	39	0.5	1,500	58,000	n/a	58,000
Blasting services	1,500	38	0.5	750	29,000	n/a	29,000
Mines	7,000	36	0.5	3,500	126,000	n/a	126,000
Laboratory supply	300	39	0.5	150	6,000	n/a	6,000
Total	219,100	n/a	**n/a**	**480,800**	**19,292,000**	**3,918,750**	**23,210,750**

* Wage rate information is fully explained in Appendix B. Rounding may affect totals.

While not required by this proposed rule, AN Purchasers may wish to register their agents with the Department of Homeland Security through the secure User Number Registration Portal. The pre-registration of agents is assumed to take 15 minutes (0.25 hours) for each AN Purchaser that pre-registers agents, including the time to log into the system and update the AN Registered User Number's record to include the names of his/her agents. The submission of an agent's name would simply be for ease of point of sale transactions, not for vetting against the TSDB. The agent's name is simply stored in the AN Purchaser Verification Portal to facilitate transactions involving a AN Purchaser's regular agent. As discussed in Section 7 - Point of Sale transactions, an oral confirmation (via telephone or in person) may be required when a transaction involves an agent that is not pre-registered with the Department. When a pre-registered agent appears at an AN Facility to take possession of ammonium nitrate on behalf of a registered AN Purchaser, the agent's name will be linked to the AN Registered User Number of the AN Purchaser and the time consuming process of obtaining a verbal confirmation is avoided. The Department assumes that 25% of AN Purchasers will register one or more agents. Tables 13 and 14 present the costs related to pre-registering agents.

Table 13. Cost of Pre-Registering Agents – Low Population Estimate*

	Number of AN Purchasers that will Pre-Register Agents	Loaded Hourly Wage - Purchasing Agents	Hours Required to Pre-Register Agents	Total Hours to Pre-Register Agents	Cost of Time to Pre-Register Agents
	A	B	C	AxC	AxBxC
Fertilizer mixers	300	39	0.25	75	$3,000
Farm wholesalers/co-ops	375	32	0.25	94	$3,000
Retail garden centers	375	16	0.25	94	$2,000
Fertilizer applicators	375	40	0.25	94	$4,000
Farms	25000	41	0.25	6250	$256,000
Golf courses	3000	25	0.25	750	$19,000
Landscaping services	2250	28	0.25	563	$16,000
Explosives distributors	375	39	0.25	94	$4,000
Blasting services	187.5	38	0.25	47	$2,000
Mines	875	36	0.25	219	$8,000
Laboratory supply	37.5	39	0.25	9	-
Total	33,150	n/a	n/a	8,289	$317,000

* Wage rate information is fully explained in Appendix B. Rounding may affect totals.

Table 14. Cost of Pre-Registering Agents – High Population Estimate

	Number of AN Purchasers that will Pre-Register Agents	Loaded Hourly Wage - Purchasing Agents*	Hours Required to Pre-Register Agents	Total Hours to Pre-Register Agents	Cost of Time to Pre-Register Agents
	A	B	C	AxC	AxBxC
Fertilizer mixers	450	39	0.25	113	$4,000
Farm wholesalers/co-ops	750	32	0.25	188	$6,000
Retail garden centers	1,875	16	0.25	469	$8,000
Fertilizer applicators	750	40	0.25	188	$8,000
Farms	37,500	41	0.25	9,375	$385,000
Golf courses	6,000	25	0.25	1,500	$38,000
Landscaping services	4,500	28	0.25	1,125	$32,000
Explosives distributors	750	39	0.25	188	$7,000
Blasting services	375	38	0.25	94	$4,000
Mines	1,750	36	0.25	438	$16,000
Laboratory supply	75	39	0.25	19	$1,000
Total	54,775	n/a	n/a	13,697	$509,000

* Wage rate information is fully explained in Appendix B. Rounding may affect totals.

Tables 15 and 16 present the costs for registration activities of AN Sellers at the low and high population. The Department proposes requiring each AN Facility to register one and only one Designated AN Facility POC, while an AN Facility may register as many AN Sellers as it chooses. For the purpose of estimating the cost of their time, the Department assumes that the Designated AN Facility POC is an individual equivalent to a Sales Manager, and AN Sellers are individuals who are equivalent to "sales representatives."

Table 15. Cost of Registration Activities for AN Sellers – Low Population Estimate*

	No. of AN Seller Owners/ POC	Other AN Seller Applicants	Total Number of Applicants	Loaded Hourly Wage – Sales Manager	Loaded hourly Wage - Sales Rep.	Hours required to apply for AN Registered User Number	Total Hours	Total Registration Cost
	A	B	A+B	C	D	E	(AxE)+(BxE)	(AxExC)+ (BxExD)
AN fertilizer manuf.	26	234	260	61	52	0.5	137	7,000
AN explosives manuf.	10	90	100	74	54	0.5	53	3,000
Fertilizer mixers	400	1,600	2,000	61	52	0.5	1050	56,000
Explosives distributors	500	2,000	2,500	73	47	0.6	1375	72,000
Farm wholes./co-ops	500	2,000	2,500	63	38	0.6	1438	62,000
Retail garden centers	500	2,000	2,500	44	32	0.6	1438	50,000
Fertilizer applicators	500	1,000	1,500	87	36	0.6	863	46,000
Laboratory supply	50	200	250	73	47	0.5	131	7,000
Total	**2,486**	**9,124**	**11,610**	**n/a**	**n/a**	**n/a**	**6,485**	**303,000**

* Wage rate information is fully explained in Appendix B. Rounding may affect totals**.**

Table 16. Cost of Registration Activities for AN Sellers – High Population Estimate

	No. of AN Seller Owners/ POC	Other AN Seller Applicants	Total Number of Applicants	Loaded Hourly Wage - Sales Manager	Loaded hourly Wage - Sales Rep.	Hours required to apply for AN Registered User Number	Total Hours	Total Registration Cost
	A	B	A+B	C	D	E	(AxE)+(BxE)	(AxExC)+ (BxExD)
AN fertilizer manuf.	26	234	260	$61	$52	0.5	137	7,000
AN explosives manuf.	10	90	100	$74	$54	0.5	53	3,000
Fertilizer mixers	600	2,400	3000	$61	$52	0.5	1,575	85,000
Explosives distributors	1,000	4,000	5000	$73	$47	0.6	2,750	144,000
Farm wholes./co-ops	1,000	4,000	5000	$63	$38	0.6	2,875	124,000
Retail garden centers	2,500	10,000	12500	$44	$32	0.6	7,188	248,000
Fertilizer applicators	1,000	2,000	3000	$87	$36	0.6	1,725	91,000
Laboratory supply	100	400	500	$73	$47	0.5	263	14,000
Total	6,236	23,124	29,360	n/a	n/a	n/a	**16,564**	**716,000**

* Wage rate information is fully explained in Appendix B. Rounding may affect totals.

Tables 17 and 18 summarize the cost of registration activities for the low and high population estimates as detailed in Tables 11 - 16. The individual agent is not a registrant but providing the purchasers provision of the information as part of the registration or update process is a part of the costs of registering. Therefore the pre-registration of agents is a registration activity that is included in summary calculations from this point forward.

Table 17. Summary Cost of Registration Activities – Initial Year, Low Population Estimate

	Total Number of Applicants/ Activities	Total Hours	Travel Cost	Total Registration Cost
AN Purchaser Registration	132,600	313,800	2,612,500	15,298,500
Pre-Registration of AN Agents	33,150	8,289	n/a	317,000
AN Seller Registration	11,610	6,485	n/a	304,000
Total AN Purchasers and Sellers	177,360	**328,574**	**2,612,500**	**15,919,500**

Table 18. Summary Cost of Registration Activities – Initial Year, High Population Estimate

	Total Number of Applicants/ Activities	Total Hours	Travel Cost	Total Registration Cost
AN Purchaser Registration	219,100	480,800	3,918,750	23,210,750
AN Purchasers Pre-Registering Agents	54,775	13,697	n/a	509,000
AN Seller Registration	29,360	16,564	n/a	740,000
Total AN Purchasers and Sellers	303,235	**511,061**	**3,918,750**	**24,459,750**

Table 19 presents the Department's assumptions regarding patterns in registration activity. Based upon DHS program staff industry knowledge and the conversations with industry described elsewhere, the Department assumes that new entrants will apply for AN Registered User Numbers at a rate of 20% of the total registered user population per year[31]. In addition, the Department assumes 5% of applicants will update their information in a given year. Both updating and renewing an AN Registration are assumed to take 30 minutes, the same amount of time as an initial AN Registration. Following the five-year registration period, the Department assumes 15% of AN Registered Users will leave the program (i.e., not renew after five years). The timely renewal of an AN Registered User Number will allow the user to keep the same number. An applicant may renew his/her AN Registered User Number within 60 days before its expiration. After one year beyond the expiration of the AN Registered User Number, the applicant will be required to submit a new application and will receive a new AN Registered User Number.

[31] When individuals move between employers, their existing registration number remains valid at the new employer. Because of this provision, many "new" employees will already have numbers in the system. As in all aspects of the evaluation, DHS invites comments on these assumptions.

Table 19. Assumptions Regarding Growth in Registrations

New Entrants	20%
Updated Information	5%
Leaving Program (not renewing)	15%

* Note: These averages apply against different base amounts therefore cannot be summed for a net percentage. Details are provided in the next two charts

Table 20 presents the total registration activity costs by program year. Each AN Registered User Number is valid for five
years. For purposes of this Regulatory Assessment, the Department assumes all AN Purchasers and AN Sellers will register during the first year of implementation.

Table 20. Total Registration Activity Costs by Program Year

	Registration Activities Low Population	Total Registration Cost - Low Population	Registration Activities High Population	Total Registration Cost - High Population
PY1	177,360	$15,918,500	303,235	$24,435,750
PY2	44,340	$3,979,600	75,809	$6,108,938
PY3	46,557	$4,178,600	79,599	$6,414,384
PY4	48,885	$4,387,500	83,579	$6,735,104
PY5	51,329	$4,606,900	87,758	$7,071,859
PY6	116,589	$10,464,200	199,334	$16,063,031
PY7	95,814	$8,599,600	163,815	$13,200,820
PY8	100,605	$9,029,600	172,006	$13,860,861
PY9	105,635	$9,481,000	180,606	$14,553,904
PY10	110,917	$9,955,100	189,637	$15,281,600
Total	**898,032**	**$80,600,600**	**1,535,379**	**$123,726,251**

Appeals

Individuals denied an AN Registered User Number, or whose AN Registered User Number has been revoked by the Department have the opportunity to appeal. The Department proposes to fulfill this requirement by permitting each person to request copies of the materials on which denial or revocation was based, and to file statements explaining why he/she believes that he/she has been inappropriately denied registration and containing any applicable supporting evidence, to be reviewed by the Department. These proposed appeals procedures are based, in part, on appeals procedures the Department offers as part of the TWIC and HME programs. Specifically, the Department proposes that a person may initiate an appeal by filing a written Request for Materials requesting copies of the materials on which denial or revocation was based within 60 days of the date of denial or revocation. Upon review of those releasable materials, the appellant will have 60 days to file a Request for Appeal containing the rationale or information upon which he/she disputes the Department's denial or revocation determination. After reviewing this rationale or information, the Department will serve the appellant with a Final Determination of the Department's resolution of his/her appeal.

It is difficult to estimate the number of individuals that may be found to be a potential security threat. Strictly for purposes of this analysis, we will assume approximately 0.2% of workers may be disqualified based on their TSDB vetting results. Of these, DHS assumes 95% will appeal. The remaining 5% may be discouraged and will not seek an appeal. DHS assumes the time it will take to prepare the needed paperwork to request the appeal, if necessary, would take an average of 6 hours to complete. As discussed previously, DHS assumes a weighted average loaded hourly wage rate of $16-$42 per hour based on the 50th percentile hourly wage for AN Purchasers. For AN Sellers, the weighted average loaded hourly wage rate ranges from $64-$86. The costs of appeals are presented in Tables 21 through 24.

Table 21. Cost of Appeals for AN Purchasers –Initial Year, Low Population Estimate*

	Number of Applicants	DQ Rate	% of Applicants that Appeal	No. of Hours per Appeal	Loaded hourly Wage - Prchsng. Agent	Total Number of Appeals	Total Cost of Appeals
	A	B	C	D	E	AxBxC	AxBxCxDxE
Fertilizer mixers	1,200	0.20%	95%	6	$39	2	500
Farm wholesalers/co-ops	1,500	0.20%	95%	6	$32	3	600
Retail garden centers	1,500	0.20%	95%	6	$16	3	300
Fertilizer applicators	1,500	0.20%	95%	6	$40	3	500
Farms with Internet access	50,000	0.20%	95%	6	$41	95	23,400
Farms w/o Internet access	50,000	0.20%	95%	6	$41	95	23,400
Golf courses	12,000	0.20%	95%	6	$25	23	3,500
Landscaping services	9,000	0.20%	95%	6	$28	17	2,900
Explosives distributors	1,500	0.20%	95%	6	$39	3	700
Blasting services	750	0.20%	95%	6	$38	1	200
Mines	3,500	0.20%	95%	6	$36	7	1,500
Laboratory supply	150	0.20%	95%	6	$39	0	0
Total	132,600	n/a	n/a	n/a	n/a	252	57,500

* Wage rate information is fully explained in Appendix B. Rounding may affect totals.

Table 22. Cost of Appeals for AN Purchasers –Initial Year, High Population Estimate*

	Number of Applicants	DQ Rate	% of Applicants that Appeal	No. of Hours per Appeal	Loaded hourly Wage - Prchsng. Agent	Total Number of Appeals	Total Cost of Appeals
	A	B	C	D	E	AxBxC	AxBxCxDxE
Fertilizer mixers	1,800	0.20%	95%	6	$39	3	700
Farm wholesalers/co-ops	3,000	0.20%	95%	6	$32	6	1,100
Retail garden centers	7,500	0.20%	95%	6	$16	14	1,400
Fertilizer applicators	3,000	0.20%	95%	6	40	6	1,500
Farms with Internet access	90,000	0.20%	95%	6	$41	171	42,100
Farms w/o Internet access	60,000	0.20%	95%	6	$41	114	28,100
Golf courses	24,000	0.20%	95%	6	$25	46	6,900
Landscaping services	18,000	0.20%	95%	6	$28	34	5,800
Explosives distributors	3,000	0.20%	95%	6	$39	6	1,400
Blasting services	1,500	0.20%	95%	6	$38	3	700
Mines	7,000	0.20%	95%	6	$36	13	2,800
Laboratory supply	300	0.20%	95%	6	$39	1	200
Total	219,100	n/a	n/a	n/a	n/a	417	92,700

* Wage rate information is fully explained in Appendix B. Rounding may affect totals.

Table 23. Cost of Appeals for AN Sellers –Initial Year, Low Population Estimate*

	Number of Applicants A	DQ Rate B	% of Applicants that Appeal C	No. of Hours per Appeal D	Loaded hourly Wage - Sales Rep. E	Total Number of Appeals AxBxC	Total Cost of Appeals AxBxCxDxE
AN fertilizer manuf.	260	0.20%	95%	6	52	0	$0
AN explosives manuf.	100	0.20%	95%	6	54	0	$0
Fertilizer mixers	2,000	0.20%	95%	6	52	4	$1,200
Explosives distributors	2,500	0.20%	95%	6	47	5	$1,400
Farm wholesalers/co-ops	2,500	0.20%	95%	6	38	5	$1,200
Retail garden centers	2,500	0.20%	95%	6	32	5	$1,000
Fertilizer applicators	1,500	0.20%	95%	6	36	3	$600
Laboratory supply	250	0.20%	95%	6	47	0	$0
Total	11,610	n/a	n/a	n/a	n/a	22	$5,400

* Wage rate information is fully explained in Appendix B. Rounding may affect totals.

Table 24. Cost of Appeals for AN Sellers –Initial Year, High Population Estimate*

	Number of Applicants A	DQ Rate B	% of Applicants that Appeal C	No. of Hours per Appeal D	Loaded hourly Wage - Sales Rep. E	Total Number of Appeals AxBxC	Total Cost of Appeals AxBxCxDxE
AN fertilizer manuf.	260	0.20%	95%	6	52	0	$0
AN explosives manuf.	100	0.20%	95%	6	54	0	$0
Fertilizer mixers	3,000	0.20%	95%	6	52	6	$1,900
Explosives distributors	5,000	0.20%	95%	6	47	10	$2,800
Farm wholesalers/co-ops	5,000	0.20%	95%	6	38	10	$2,300
Retail garden centers	12,500	0.20%	95%	6	32	24	$4,600
Fertilizer applicators	3,000	0.20%	95%	6	36	6	$1,300
Laboratory supply	500	0.20%	95%	6	47	1	$300
Total	29,360	n/a	n/a	n/a	n/a	57	$13,200

* Wage rate information is fully explained in Appendix B. Rounding may affect totals.

The costs of appeals by program year are presented below. The Department assumes that the number of new entrants into the system is 20% per year and 5% of applicants will update their information in a given year. By year 4, the Department assumes 15% of applicants will leave the program. The annual changes combined with the mass registration

in the beginning which is good for five years results in peaks beginning every five years thereafter. The cost appeals by program year are detailed in Table 25.

Table 25. Cost of Appeals by Program Year

	Total Appeals Cost - Low Population	Total Appeals Cost - High Population
PY1	$63,100	$105,900
PY2	$15,900	$26,600
PY3	$16,600	$27,900
PY4	$17,500	$29,300
PY5	$18,400	$30,800
PY6	$41,700	$69,700
PY7	$34,300	$57,400
PY8	$35,900	$60,100
PY9	$37,800	$63,200
PY10	$39,600	$66,400
Total	**$320,800**	**$537,300**

8. Point of Sale Activities

Only AN Purchasers with valid AN Registered User Numbers may purchase ammonium nitrate. AN Facilities must refuse to sell or transfer ammonium nitrate to prospective AN Purchasers who are not validly registered. The "point of sale" is the point at which the possession of ammonium nitrate is transferred from an AN Facility to an AN Purchaser or his/her agent pursuant to a sale or transfer of ammonium nitrate.

AN Facilities must refuse to sell or transfer ammonium nitrate to prospective AN Purchasers unable to satisfactorily prove their identities at the point of sale. AN Facilities must also record certain identity information at the point of sale. Further, DHS is required to encourage AN Facilities to exercise caution in selling or transferring ammonium nitrate under suspicious circumstances, and to take other precautionary measures designed to prevent the misappropriation of ammonium nitrate. AN Sellers should deny a sale or transfer of ammonium nitrate under "suspicious" circumstances and are encouraged to contact law enforcement officials in the event of a "suspicious" ammonium nitrate transaction or attempted transaction.

As mentioned previously, the Department is aware that ammonium nitrate transactions occur in a variety of formats and that there may be a time lag between when the ammonium nitrate is ordered and when it is ultimately transferred. All of the verification activities must occur before the AN Seller transfers possession of ammonium nitrate to the

prospective AN Purchaser or an agent acting on the prospective AN Purchaser's behalf. Outside of that requirement, the time at which the AN Seller performs the verification activities is entirely within the discretion of the AN Seller. For instance, in a situation where the AN Purchaser places an advance order for ammonium nitrate to be picked up at a later date, the AN Seller may perform these activities at the time of sale or at the time of transfer of possession. Similarly, for transactions in which the prospective AN Purchaser intends to use an agent on his or her behalf, the identity verification activities can occur simultaneously (e.g., when the prospective AN Purchaser places the order; when the agent arrives to take possession of the ammonium nitrate), or can be done separately (e.g., verifying the identity and AN Registered User Number of the prospective AN Purchaser when the order is placed and verifying the agent's identity immediately prior to transfer of possession). At least 12 states already have a similar process in place which reduces the expected burden due to this proposed regulation.

Based upon the DHS staff industry experience, the Department has identified three principal transaction formats commonly used to sell or transfer ammonium nitrate:

1. The AN Purchaser appears at the AN Facility and takes possession of the ammonium nitrate from the AN Seller directly. Based upon DHS program industry knowledge, DHS believes that sales models will resemble other commercial purchases with order information provided to a customer service representative separate from the payment or verification step which allows the purchaser to minimize delay. For this reason, DHS has shown the opportunity cost of this delay as similar to a merchant credit card or check transaction (calculations and costs shown in at the end of this section);
2. The AN Purchaser places an advanced order either in person or through other means (e.g., via telephone; online), and the AN Seller delivers the ammonium nitrate to the AN Purchaser; or
3. The AN Purchaser places an advanced order either in person or through other means (e.g., via telephone; online), and an agent acting on behalf of the AN Purchaser takes possession of the ammonium nitrate from the AN Seller.

The Department is proposing to require that an AN Seller perform the following specific verification activities for each sale or transfer of ammonium nitrate:

1. Verification of a prospective AN Purchaser's identity (based on the prospective AN Purchaser's AN Registered User Number application information);
2. Verification of the currency and accuracy of the prospective AN Purchaser's AN Registered User Number;

3. Visual check of the photo identification of the individual taking possession of ammonium nitrate (either the AN Purchaser or his/her agent); and
4. If an agent is used, verification that the agent is acting on the approved AN Purchaser's behalf.

Verification of AN Purchaser's Identity

The AN Seller must verify the prospective AN Purchaser's identity as required by the Department. The manner of verification of a prospective AN Purchaser's identity varies depending on whether or not the AN Purchaser has opted to use an agent. If the AN Purchaser opted not to use an agent, then the AN Seller verifies the AN Purchaser's identity based upon the visual check of the AN Purchaser's photo identification. If the AN Purchaser opted to use an agent, then the AN Seller verifies the AN Purchaser's identity by submitting certain information provided by the AN Purchaser to the Department for comparison against information contained in the AN Purchaser's AN Registered User Number application.
In the event a prospective AN Purchaser's uses an agent to complete the transaction, the AN Seller must also verify both (1) the agent's identity based upon a visual check of the agent's photo identification, and (2) that the agent is acting on the approved AN Purchaser's behalf.

Verification of AN Purchaser's Registered User Number

In order to bolster the effectiveness of AN Registered User Numbers in preventing the misappropriation of ammonium nitrate, the Department proposes that the AN Seller will be required to verify the authenticity and currency of a prospective AN Purchaser's AN Registered User Number prior to completing transfer of ammonium nitrate. This will be done in the same manner as the verification of the prospective AN Purchaser's identity against information contained in the prospective AN Purchaser's AN Registered User Number Application (i.e., through either the Purchaser Verification Portal or the Purchaser Verification Call Center).

To provide sellers of ammonium nitrate with the ability to check the accuracy and currency of a prospective AN Purchaser AN Registered User Number, the Department is considering several approaches:

- Purchaser Verification Portal (an Internet-based application)
- Purchaser Verification Call Center
- Combination of both the Internet-based verification portal and the call center.

Purchaser Verification Portal

The first option is to create a secure purchaser verification web portal ("Purchaser Verification Portal") through which AN Sellers can submit information to the Department that will allow the Department to confirm or deny for the AN Seller the prospective AN Purchaser's right to purchase or possess ammonium nitrate. The Department proposes making the Purchaser Verification Portal available via the Internet to registered AN Sellers only, who will be asked to provide their AN Registered User Number and authenticate themselves (enter a password or answer a series of security questions) to gain access to the portal. Upon accessing the portal, the AN Seller will enter into the system, at a minimum, the prospective AN Purchaser's name and AN Registered User Number. To help strengthen the purchaser identification process, facilitate the performance of compliance audits and inspections, and better prevent the misappropriation or use of ammonium nitrate in an act of terrorism, the Department is considering requiring the AN Seller to enter additional information into the portal, such as the quantity of ammonium nitrate being purchased and the prospective AN Purchaser's proposed use of the ammonium nitrate.

The Department anticipates that the confirmation or denial notice resulting from the web verification process will typically be sent to and received by the seller much like how merchants receive approval or denial notices prior to authorizing purchases via credit card. To support recordkeeping requirements, the Department is considering providing to the AN Seller, along with its web verification notice, confirmation and/or printable web verification notice record receipt.

To be able to use the Purchaser Verification Portal, an AN Seller must have a computer and an Internet connection. DHS assumes the majority of AN Facilities already have this equipment in order to conduct business. Table 26 provides a description of assumptions by industry and cost component[32]. For the purpose of this analysis, DHS assumes a percentage of AN Facilities will require the purchase of a computer and the installation and maintenance of a second phone line to be used for point of sale AN Purchaser verification. DHS assumes a standard computer and printer can be purchased for $1,000.[33] According to

[32] The Impact of Broadband Speed and Price on Small BusinessColumbia Telecommunications Corporation for SBA Office of Advocacy. . Vol. under contract number SBAHQ-09-C-0050., 2010. ; page 33. Approximately 94% of businesses responding to the survey use computers, including 95% of metro businesses and 90% of rural businesses. DHS applied the report percentages to the seller population to determine how many would need to make the purchases.

[33] http://www.dell.com.

the Federal Communications Commission the average installation cost for a business phone line is $100, and the average annual cost of maintaining a business phone line is $600 per year.[34] The Department assumes that businesses will purchase a new computer and printer every five years as equipment becomes obsolete.

Purchaser Verification Call Center

The second option the Department is considering is the creation of a Purchaser Verification Call Center to perform verification of an AN Purchaser's AN Registered User Number. Via the call center, the AN Seller would dial a toll-free number to connect via telephone to the Department. Once connected to the Department, the AN Seller would talk to a person or be led through a series of telephone tree menus. During the phone call, the AN Seller would be expected to provide, at a minimum, the prospective AN Purchaser's name and AN Registered User Number. An option being considered would have AN Sellers provide information regarding quantities being transferred and other data that would allow the Department to monitor the accuracy of records during AN Facility inspections. The operator or automated telephone system would enter the information provided into the Department's Registered User database system, wait for electronic confirmation, and then provide verbal confirmation to the caller along with a Department confirmation for that specific transaction.

A call center may be preferable to a web portal, as presumably all AN Sellers have telephones, while not all AN Sellers have computers with Internet access, particularly at the point of sale. There are some potential disadvantages, though, including the likelihood that the call center approach would take more time per transaction than the web portal approach; if manned at all, the call center potentially would only be manned during specific times (e.g., regular business hours); and it would be significantly more costly for the government to establish and operate a call center.

For the purpose of this analysis, the Department assumes that some AN Sellers will install a dedicated phone line to handle ammonium nitrate verification activities. The average installation cost for a business phone line is $100 and the average annual cost of maintaining a business phone line is $600 per year.[35]

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[34] Federal Communications Commission, Reference Book of Rates, Price Indices, and Household Expenditures for Telephone Service (2008). http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-292593A1.pdf. The Internet market and pricing is constantly changing. Very low cost dialup still exists while testimony before the FCC put broadband costs around $36/month. The $600 per year is likely to be a conservative cost estimate as the $36/month equates to $432/month. The testimony is available at http://www.ustelecom.org/uploadedFiles/Issues/Filings/USTelecom-CITI-Comments.pdf.

[35] Federal Communications Commission, Reference Book of Rates, Price Indices, and Household Expenditures for Telephone Service (2008). http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-292593A1.pdf

Purchaser Verification Portal and Call Center

The third approach DHS is considering is providing both the Internet-based verification portal and a call center. The advantage of this alternative is that all AN Facilities would be accommodated – those with telephone access only and those with Internet access who find the verification web portal option more efficient. However, this approach would be the most costly of the alternatives for the government to establish and operate but is the method in the costing of the primary alternative.

Visual Check of Photo ID

DHS also proposes that the AN Seller must verify, by performing a visual check of an identification document such as a driver's license or passport, the identity of the individual (either the prospective AN Purchaser or an AN Agent acting on his/her behalf) who will be taking possession of ammonium nitrate from the AN Seller at the completion of the sale or transfer. The Department proposes using the definition of "identification document" similar to that used by the Department's Secure Flight Program, 49 CFR 1560.3, to establish what qualifies as an acceptable form of identification for this verification process. Specifically, the Department proposes defining "identification document" as: "Any of the following documents containing a unique document number: (a) An unexpired passport issued by a foreign government which contains a photograph; or (b) An unexpired document issued by a U.S. Federal, State, or tribal government that includes the following information for the person: (1) full name; (2) date of birth; and (3) photograph; or (3) Such other documents that the Department may designate as valid identification documents."

Creation of the Transaction Record

For each sale or transfer of ammonium nitrate, the AN Seller must record, among other things, the name, address, telephone number, and AN Registered User Number issued to the purchaser of ammonium nitrate; if applicable, must record the name, address, and telephone number of an agent acting on behalf of the registered AN Purchaser at the point of sale; and must record the date of sale or transfer and the quantity of ammonium nitrate sold. In addition, the AN Seller may be required to record the DHS confirmation and photo identification document number. The Department allows some flexibility regarding how these records are stored. These records could be stored electronically or on paper, either as an amendment to a sales invoice or with a log book similar to the one many pharmacies use to record information on sales of certain regulated medicines. Some states with the same requirement have recommended the information be recorded directly on the retained

invoice copy. If the Department decides to use a Purchaser Verification Portal online, it may require that the confirmation that appears on the screen be printed and attached to other paper records. The Department assumes that each transaction will take five minutes to complete (or 0.083 hours) for transactions using the web-based Purchaser Verification Portal. Each transaction is assumed to take six minutes (0.10 hours) when the call center is used. The additional minute for the call center option factors in additional time to use a phone tree menu and the relative awkwardness of using a telephone keypad vs. computer keyboard. In addition to the per transaction costs, the Department assumes each AN Facility will spend one hour each year to train each registered AN Seller to conduct compliant ammonium nitrate transactions.

The Department recognizes that some AN Facilities may choose to integrate this process into their existing point of sale systems. Because electronic records are not required, estimates to retrofit existing point of sale and other accounting/billing software to capture ammonium nitrate transactions are not presented in this analysis. The Department welcomes comments on these costs.

Tables 26 and 27 present the assumptions regarding how many AN Seller Facilities will have a computer with Internet access required to use the web-based Purchaser Verification Portal and the costs associated with purchasing a computer, printer, and bringing in an extra phone line. Based upon the SBA Office of Advocacy (2010) report just mentioned, DHS assumed that only a handful of ammonium nitrate manufacturers, mixers, and laboratory supply businesses (5%) will require the purchase of a new computer and the installation of an extra phone line. The Department assumes 10% of explosives distributors and 15% of farm wholesalers/co-ops and retail garden centers will require the additional equipment.

Table 26. Physical Costs for Web Portal-Based Point of Sale Activities – Low Population Estimate

	Number of AN Facilities	% without computer & phone	Initial Installation Cost	Computer & Printer	Annual Cost of Phone Line	Total Initial Cost	Total Annual Cost
	A	B	C	D	E	AxBx(C+D+E)	AxBxE
AN fertilizer manuf.	26	5%	100	1,000	600	2,200	800
AN explosives manuf.	10	5%	100	1,000	600	900	300
Fertilizer mixers	400	5%	100	1,000	600	34,000	12,000
Explosives distributors	500	10%	100	1,000	600	85,000	30,000
Farm wholesalers/co-ops	500	15%	100	1,000	600	127,500	45,000
Retail garden centers	500	15%	100	1,000	600	127,500	45,000
	500	15%	100	1,000	600	127,500	45,000
Laboratory supply	50	5%	100	1,000	600	4,300	1,500

Total	2,486	n/a	n/a	n/a	n/a	**$508,900**	**$179,600**

Table 27. Physical Costs for Web Portal-Based Point of Sale Activities – High Population Estimate

	Number of AN Facilities	% without computer & phone	Initial Installation Cost	Computer & Printer	Annual Cost of Phone Line	Total Initial Cost	Total Annual Cost
	A	B	C	D	E	AxBx(C+D+E)	AxBxE
AN fertilizer manuf.	26	5%	100	1,000	600	2,200	800
AN explosives manuf.	10	5%	100	1,000	600	900	300
Fertilizer mixers	600	5%	100	1,000	600	51,000	18,000
Explosives distributors	1000	10%	100	1,000	600	170,000	60,000
Farm wholesalers/co-ops	1000	15%	100	1,000	600	255,000	90,000
Retail garden centers	2500	15%	100	1,000	600	637,500	225,000
	1000	15%	100	1,000	600	255,000	90,000
Laboratory supply	100	5%	100	1,000	600	8,500	3,000
Total	6,236	**n/a**	**n/a**	**n/a**	**n/a**	**$1,380,100**	**$487,100**

Table 28 presents DHS estimates of the total hours per year spent on point of sale activities using the web-based AN Verification Portal. DHS assumes that all the point of sale activities and transaction record creation will take five minutes per transaction (or 0.083 hours). Further, DHS assumes that the number of annual transactions per AN Facility to be between 1,000 and 5,000 per year based on discussions with the fertilizer and explosives industries and State plant food control officials.[36] The total number of annual ammonium nitrate transactions at all points in the supply chain range from 5 million to 30 million. DHS welcomes comment on the number of transactions.

Table 28. Web Portal-based Seller Transaction and Labor Cost by Industry, Low Population (First Year)

	Number of AN Facilities	Number of Transactions per Facility	Total Number of Transactions	Estimated Total Annual Hours (5 minutes/60 minutes/hr * transactions)	Loaded hourly Wage - Sales Representative $	Annual Cost of Compliance $	Avg Cost/ Transaction
	A	B	C = A x B	D = 5/60 * C	E	F = D x E	G = F / C
Ammonium nitrate fertilizer manufacturers	26	1,000	26,000	2,167	52	112,400	4.32

[36] There is a dearth of information on the number of transactions that occur in the ammonium nitrate supply chain. Some AN Facilities may have relatively few transactions during a given year while others may be involved in a high number of transactions. The number of transactions drives the point of sale costs and thus, the cost of the program. DHS has assumed a broad range to capture the potential variation in this variable and seeks comment on these assumptions.

AN explosives manufacturers	10	1,000	10,000	833	54	45,400	4.54
Fertilizer mixers	400	1,000	400,000	33,333	52	1,728,700	4.32
Explosives distributors	500	2,500	1,250,000	104,167	47	4,917,700	3.93
Farm wholesalers/coops	500	2,500	1,250,000	104,167	38	3,996,900	3.20
Retail garden centers	500	2,500	1,250,000	104,167	32	3,331,300	2.67
Fertilizer applicators	500	2,500	1,250,000	104,167	36	3,752,100	3.00
Laboratory supply	50	1,000	50,000	4,167	47	196,700	3.93
Total	2,486	n/a	5,486,000	457,168	n/a	18,081,200	3.30
Average		2,207		184		3.30	

* Wage rate information is fully explained in Appendix B.

Tables 29 and 30 present the labor costs for web portal-based point of sale activities for the low and high population estimates. AN Sellers engaged in day-to-day sales are assumed to be equivalent to a sales representative.

Table 29. Web Portal-based Seller Transaction and Labor Cost by Industry, High Population Estimate

	Number of AN Facilities	Number of Transactions per Facility	Total Number of Transactions	Estimated Total Annual Hours (5 minutes/60 minutes/hr * transactions)	Loaded hourly Wage - Sales Rep $	Annual Cost of Compliance $	Avg Cost/ Transaction
	A	B	C = A x B	D = 5/60 * C	E	F = D x E	G = F / C
Ammonium nitrate fertilizer manufacturers	26	2,500	65,000	5,417	52	280,900	4.32
AN explosives manufacturers	10	2,500	25,000	2,083	54	113,500	4.54
Fertilizer mixers	600	2,500	1,500,000	125,000	52	6,482,500	4.32
Explosives distributors	1,000	5,000	5,000,000	416,667	47	19,670,800	3.93
Farm wholesalers/coops	1,000	5,000	5,000,000	416,667	38	15,987,500	3.20
Retail garden centers	2,500	5,000	12,500,000	1,041,667	32	33,312,500	2.67
Fertilizer applicators	1,000	5,000	5,000,000	416,667	36	15,008,300	3.00
Laboratory supply	100	2,500	250,000	20,833	47	983,500	3.93
Total	6,236	n/a	29,340,000	2,445,001	n/a	91,839,500	3.13
Average		4,705		392		3.13	

* Wage rate information is fully explained in Appendix B.

In lieu of (or in addition to) the web-based portal, the Department is also considering a call center-based system to verify AN Purchasers' AN Registered User Numbers. All activities conducted with the web-based portal (including verification of an AN Registered User Number, checks of pre-registered agents, etc.) could be conducted telephonically via the call center. Table 30 estimates the total hours spent on point of sale activities under the call center option. DHS estimates it will take six minutes per transaction (0.10 hours) to obtain and record verification via a call center.

Table 30.Call Center-Based Transactions for Point of Sale Activities (Hours Spent)

	Number of Transactions per AN Facility		Hours per Transaction	Hours Spent on POS Transactions per Year	
	Low	High		Low	High
	A	B	C	AxC	BxC
AN fertilizer manufacturers	1,000	2,500	0.1	100	250
AN explosives manufacturers	1,000	2,500	0.1	100	250
Fertilizer mixers	1,000	2,500	0.1	100	250
Explosives distributors	2,500	5,000	0.1	250	500
Farm wholesalers/co-ops	2,500	5,000	0.1	250	500
Retail garden centers	2,500	5,000	0.1	250	500
Fertilizer applicators	2,500	5,000	0.1	250	500
Laboratory supply	1,000	2,500	0.1	100	250

Tables 31 and 32 present the labor costs for call center-based point of sale activities for the low and high population estimates. AN Sellers engaged in day-to-day sales are assumed to be equivalent to a sales representative. These estimates are presented for comparison purposes.

Table 31. Labor Costs for Call Center-Based Point of Sale Activities – Low Population Estimate

	Number of AN Facilities	Estimated Annual Hours	Estimated Total Annual Hours	Loaded hourly Wage - Sales Representative	Annual Cost of Compliance
	A	B	AxB	C	AxBxC
AN fertilizer manuf.	26	100	2,600	52	$134,800
AN explosives manuf.	10	100	1,000	54	$54,500
Fertilizer mixers	400	100	40,000	52	$2,074,400
Explosives distributors	500	250	125,000	47	$5,901,300
Farm wholesalers/co-ops	500	250	125,000	38	$4,796,300
Retail garden centers	500	250	125,000	32	$3,997,500
Fertilizer applicators	500	250	125,000	36	$4,502,500
Laboratory supply	50	100	5,000	47	$236,100
Total	**2,486**	**n/a**	**548,600**	**n/a**	**$21,697,400**

* Wage rate information is fully explained in Appendix B.

Table 32. Labor Costs for Call Center-Based Point of Sale Activities – High Population Estimate

	Number of AN Facilities A	Estimated Annual Hours B	Estimated Total Annual Hours AxB	Loaded hourly Wage - Sales Representative C	Annual Cost of Compliance AxBxC
AN fertilizer manuf.	26	250	6,500	52	$337,100
AN explosives manuf.	10	250	2,500	54	$136,200
Fertilizer mixers	600	250	150,000	52	$7,779,000
Explosives distributors	1,000	500	500,000	47	$23,605,000
Farm wholesalers/co-ops	1,000	500	500,000	38	$19,185,000
Retail garden centers	2,500	500	1,250,000	32	$39,975,000
Fertilizer applicators	1,000	500	500,000	36	$18,010,000
Laboratory supply	100	250	25,000	47	$1,180,300
Total	**6,236**	**n/a**	**2,934,000**	**n/a**	**$110,207,600**

* Wage rate information is fully explained in Appendix B.

Agent Verification

An agent is a person obtaining possession of ammonium nitrate on behalf of an AN Purchaser. Because agents are not required to apply for and present an AN Registered User Number, measures must be taken to confirm that the agent who is taking possession of ammonium nitrate has been authorized to do so by the AN Purchaser. The Department proposes three options to verify the identity of AN Purchaser's agents.

1. Requiring AN Purchasers to submit the names of their agents to the Department via the User Number Registration Portal, and requiring the AN Seller to confirm with the Department, prior to transferring possession of the ammonium nitrate, that the prospective AN Purchaser has submitted the name of the agent to the Department;
2. Requiring the AN Seller to orally confirm with the AN Purchaser prior to each sale or transfer that the agent is acting on behalf of the AN Purchaser;
3. A combination of the first two options, where an AN Seller checks with the Department to see if the prospective AN Purchaser has submitted the name of the agent to the Department and, the AN Seller verbally confirms with the prospective AN Purchaser that the agent is acting on his/her behalf.

Based on discussions with industry, the Department assumes about 20% of ammonium nitrate transactions will involve an agent. For the purposes of analysis, the Department assumes that 25% of agent transactions (5% of the total transactions) will require verbal confirmation. The AN Seller must confirm with the AN Purchaser that the agent is acting on the AN Purchaser's behalf prior to the transfer of ammonium nitrate to the agent. Each agent verification is assumed to take 10 minutes. The Department assumes the remaining 75% of transactions involving agents will use an agent that has been pre-registered with the Department, and thus, will not require verbal confirmation. The costs of pre-registration of agents by AN Purchasers are discussed in Section 6 - Registration Activities.

Tables 33 and 34 present the costs associated with verifying agents.

Table 33. Labor Costs for Agent Verification – Low Population Estimate*

	Number of AN Facilities	5% of Transactions per AN Facility	Hours per verification (10 minutes)	Hours Spent on POS Agent Verifications per Year	Loaded hourly Wage - Sales Representative	Annual Cost of Agent Verification
	A	B	C	BxC	D	AxBxCxD
AN fertilizer manuf.	26	50	0.2	8.3	$52	11,200
AN explosives manuf.	10	50	0.2	8.3	$54	4,500
Fertilizer mixers	400	50	0.2	8.3	$52	172,900
Explosives distributors	500	125	0.2	20.8	$47	491,800
Farm wholesale/co-ops	500	125	0.2	20.8	$38	399,700
Retail garden centers	500	125	0.2	20.8	$32	333,100
Fertilizer applicators	500	125	0.2	20.8	$36	375,200
Laboratory supply	50	50	0.2	8.3	$47	19,700
Total	**2,486**	**n/a**	**n/a**	**n/a**	**n/a**	**1,808,100**

* Wage rate information is fully explained in Appendix B. Rounding may affect totals.

Table 34. Labor Costs for Agent Verification – High Population Estimate*

	Number of AN Facilities	5% of Transactions per AN Facility	Hours per verification 10 minutes)	Hours Spent on POS Agent Verifications per Year	Loaded hourly Wage - Sales Representative	Annual Cost of Agent Verification
	A	B	C	BxC	D	AxBxCxD
AN fertilizer manuf.	26	125	0.2	20.8	$52	28,100
AN explosives manuf.	10	125	0.2	20.8	$54	11,300
Fertilizer mixers	600	125	0.2	20.8	$52	648,300
Explosives distributors	1000	250	0.2	41.7	$47	1,967,100
Farm wholesale/co-ops	1000	250	0.2	41.7	$38	1,598,800
Retail garden centers	2500	250	0.2	41.7	$32	3,331,300
Fertilizer applicators	1000	250	0.2	41.7	$36	1,500,800
Laboratory supply	100	125	0.2	20.8	$47	98,400
Total	**6,236**	**n/a**	**n/a**	**n/a**	**n/a**	**9,184,100**

* Wage rate information is fully explained in Appendix B. Rounding may affect totals.

Tables 35 to 36 present the total costs by program year for web portal-based point of sale activities.

Table 35. Total Costs for Web Portal-Based Point of Sale Activities by Program Year – Low Population Estimate ($)

	Computer and Phone Line	Labor Costs (Transactions)	Agent Verification	Purchaser Opportunity Cost	Total Annual Costs
PY1	508,900	18,081,000	1,808,100	3,488,500	23,886,500
PY2	179,600	18,081,000	1,808,100	3,488,500	23,557,200
PY3	179,600	18,081,000	1,808,100	3,488,500	23,557,200
PY4	179,600	18,081,000	1,808,100	3,488,500	23,557,200
PY5	179,600	18,081,000	1,808,100	3,488,500	23,557,200
PY6	508,900	18,081,000	1,808,100	3,488,500	23,886,500
PY7	179,600	18,081,000	1,808,100	3,488,500	23,557,200
PY8	179,600	18,081,000	1,808,100	3,488,500	23,557,200
PY9	179,600	18,081,000	1,808,100	3,488,500	23,557,200
PY10	179,600	18,081,000	1,808,100	3,488,500	23,557,200
Total	**2,454,600**	**180,810,000**	**18,081,000**	**34,885,000**	**236,230,600**

Table 36. Total Costs for Web Portal-Based Point of Sale Activities by Program Year– High Population Estimate ($)

	Computer and Phone Line	Labor Costs (Transactions)	Agent Verification	Purchaser Opportunity Cost	Total Annual Costs
PY1	1,380,100	91,839,600	9,184,000	18,112,900	120,516,600
PY2	487,100	91,839,600	9,184,000	18,112,900	119,623,600
PY3	487,100	91,839,600	9,184,000	18,112,900	119,623,600
PY4	487,100	91,839,600	9,184,000	18,112,900	119,623,600
PY5	487,100	91,839,600	9,184,000	18,112,900	119,623,600
PY6	1,380,100	91,839,600	9,184,000	18,112,900	120,516,600
PY7	487,100	91,839,600	9,184,000	18,112,900	119,623,600
PY8	487,100	91,839,600	9,184,000	18,112,900	119,623,600
PY9	487,100	91,839,600	9,184,000	18,112,900	119,623,600
PY10	487,100	91,839,600	9,184,000	18,112,900	119,623,600
Total	**6,657,000**	**918,396,000**	**91,840,000**	**181,129,000**	**1,198,022,000**

Tables 37 and 38 present the total costs by program year for call center-based point of sale activities.

Table 37. Total Costs for Call Center -Based Point of Sale Activities by Program Year – Low Population Estimate ($)

	Labor Costs (Transactions)	Agent Verification	Total Annual Costs
PY1	21,697,200	1,808,100	23,505,300
PY2	21,697,200	1,808,100	23,505,300
PY3	21,697,200	1,808,100	23,505,300
PY4	21,697,200	1,808,100	23,505,300
PY5	21,697,200	1,808,100	23,505,300
PY6	21,697,200	1,808,100	23,505,300
PY7	21,697,200	1,808,100	23,505,300
PY8	21,697,200	1,808,100	23,505,300
PY9	21,697,200	1,808,100	23,505,300
PY10	21,697,200	1,808,100	23,505,300
Total	216,972,000	18,081,000	235,053,000

Table 38. Total Costs for Call Center-Based Point of Sale Activities by Program Year – High Population Estimate ($)

	Labor Costs (Transactions)	Agent Verification	Total Annual Costs

PY1	110,207,500	9,184,000	119,391,500
PY2	110,207,500	9,184,000	119,391,500
PY3	110,207,500	9,184,000	119,391,500
PY4	110,207,500	9,184,000	119,391,500
PY5	110,207,500	9,184,000	119,391,500
PY6	110,207,500	9,184,000	119,391,500
PY7	110,207,500	9,184,000	119,391,500
PY8	110,207,500	9,184,000	119,391,500
PY9	110,207,500	9,184,000	119,391,500
PY10	110,207,500	9,184,000	119,391,500
Total	1,102,075,000	91,840,000	1,193,915,000

Opportunity Cost

Whether the seller utilizes a web-based portal, the call center option, or some combination, the purchaser will likely have some additional time added to the transaction purchase. As described at the beginning of this section (Point of Sale Activities) any increase in time is an opportunity cost to the purchaser. Based upon the Department's estimate that the average increase will resemble a credit card or check verification, the Department has used an estimate of an average of 60 seconds (.017 hrs) for each transaction times the number of transactions times the average loaded wage rate from Appendix B. DHS believes most transactions will resemble existing commercial order fulfillment with orders being place in advance such that the purchaser contact time for information exchange will be minimal, perhaps almost as quick as a normal credit card transaction. Additionally, as previously mentioned, 12 states already require the same basic information except for the registration number DHS is proposing. The following table shows the calculations of this marginal cost.

Table 39. Point of Sale Opportunity Costs (First Year Detail and Yrs 1 -10)

First Year Detail	Total Number of Transactions (A)	Hrs/ Transaction (B)	Total Hours (C=A*B)	Weighted Average Wage Rate (D: From Appendix B)	Purchaser Opportunity Cost (E=C*D)	Avg Cost/ Transaction (F=E/A)
Low Estimate	5,486,700	0.017	91,445	$38.15	$3,488,523	$0.64
High Estimate	29,342,486	0.017	489,041	$37.04	$18,112,934	$0.62

9. Recordkeeping

The Department requires that AN Facilities maintain records of each ammonium nitrate sale or transfer that include among other elements:

- Date of sale or transfer;
- Quantity of ammonium nitrate sold or transferred;
- Name, address, telephone number, AN Registered User Number, and passport or photo identification document number of the AN Purchaser purchasing or taking possession of the ammonium nitrate sold or transferred;
- If an AN Agent purchases or takes possession of ammonium nitrate, name, address, telephone number, and passport or driver's license number of the AN Agent purchasing or taking possession of the ammonium nitrate sold or transferred; and
- Confirmation received from the Department as part of the notification process described in 6 CFR 31.305(a) (4) and 6 CFR 31.310(a) (4).

The records generated at the point of sale must be kept on file for two years. These records could be stored electronically or on paper, in any format the seller chooses, for example as an amendment to a sales invoice or with a log book similar to the one many pharmacies use to record information on sales of certain regulated medicines. The cost of creating the transaction record is included in the cost of point of sale activities. The Department requires that these records be protected by reasonable actions. Recent point of sale records can be kept out of public view in an employee-only area.

For the purpose of this analysis, the Department assumes that all AN Facilities will purchase a locked filing cabinet to maintain records at a cost of $350 each.[37] In addition, AN Facilities that use paper records will also incur the cost of additional paper and printer ink/toner. The department assumes an additional box of paper ($50) and additional printer ink/toner supplies ($200).[38]

The Department assumes an administrative or office worker will spend 48 hours per year (four hours per month) maintaining records, such as filing, binding, etc. The average loaded hourly wage at the 50th percentile ranges from $17 to $24 per hour.

The Department also considered requiring maintaining records in encrypted electronic files. This would have placed a significant burden on the regulated community with little gain in the security of the records. Rather, the Department is allowing the regulated

[37] http://www.staples.com.
[38] http://www.staples.com.

community to maintain their records either electronically or on paper as long as reasonable actions are taken to protect the information.

The Department also considered requiring AN Facilities to keep more detailed transaction records, including information on the number of acres treated (for agricultural consumers).

AN Purchasers are under no obligation to maintain records proposed in this rule. Tables 40-45 show the costs for paper-based recordkeeping, the primary estimate.

Table 40. Physical Costs for Paper-Based Recordkeeping – Low Population Estimate

	Number of AN Facilities A	Locked filing cabinet B	Paper & Toner C	Initial Cost B+C	Annual Cost C	Total Initial Cost Ax(B+C)	Total Annual Cost AxC
AN fertilizer manuf.	26	350	250	600	250	15,600	6,500
AN explosives manuf.	10	350	250	600	250	6,000	2,500
Fertilizer mixers	400	350	250	600	250	240,000	100,000
Explosives distributors	500	350	250	600	250	300,000	125,000
Farm wholesalers/co-ops	500	350	250	600	250	300,000	125,000
Retail garden centers	500	350	250	600	250	300,000	125,000
Fertilizer applicators	500	350	250	600	250	300,000	125,000
Laboratory supply	50	350	250	600	250	30,000	12,500
Total	**2,486**	**350**	**250**	**600**	**250**	**1,491,600**	**621,500**

Table 41. Physical Costs for Paper-Based Recordkeeping – High Population Estimate

	Number of AN Facilities	Locked filing cabinet	Paper & Toner	Initial Cost	Annual Cost	Total Initial Cost	Total Annual Cost
	A	B	C	B+C	C	Ax(B+C)	AxC
AN fertilizer manuf.	26	350	250	600	250	15,600	6,500
AN explosives manuf.	10	350	250	600	250	6,000	2,500
Fertilizer mixers	600	350	250	600	250	360,000	150,000
Explosives distributors	1,000	350	250	600	250	600,000	250,000
Farm wholesalers/co-ops	1,000	350	250	600	250	600,000	250,000
Retail garden centers	2,500	350	250	600	250	1,500,000	625,000
Fertilizer applicators	1,000	350	250	600	250	600,000	250,000
Laboratory supply	100	350	250	600	250	60,000	25,000
Total	**6,236**	**350**	**250**	**600**	**250**	**3,741,600**	**1,559,000**

Table 42. Labor Costs for Paper-Based Recordkeeping – Low Population Estimate

	Number of AN Facilities	Average loaded hourly wage - Office & administrative support services	Hours per AN Facility spent on recordkeeping	Total cost for recordkeeping
	A	B	C	AxBxC
AN fertilizer manufacturers	26	$22	48	27,500
AN explosives manufacturers	10	$24	48	11,400
Fertilizer mixers	400	$22	48	423,200
Explosives distributors	500	$22	48	534,200
Farm wholesalers/co-ops	500	$18	48	442,100
Retail garden centers	500	$17	48	403,400
Fertilizer applicators	500	$17	48	417,100
Laboratory supply	50	$22	48	53,400
Total	**2,486**	**n/a**	**n/a**	**2,312,300**

* Wage rate information is fully explained in Appendix B.

Table 43. Labor Costs for Paper-Based Recordkeeping – High Population Estimate

	Number of AN Facilities	Average loaded hourly wage - Office & administrative support services*	Hours per AN Facility spent on recordkeeping	Total cost for recordkeeping
	A	B	C	AxBxC
AN fertilizer manufacturers	26	$22	48	27,500
AN explosives manufacturers	10	$24	48	11,400
Fertilizer mixers	600	$22	48	634,800
Explosives distributors	1,000	$22	48	1,068,500
Farm wholesalers/co-ops	1,000	$18	48	884,200
Retail garden centers	2,500	$17	48	2,017,200
Fertilizer applicators	1,000	$17	48	834,200
Laboratory supply	100	$22	48	106,800
Total	**6,236**	**n/a**	**n/a**	**5,584,600**

* Wage rate information is fully explained in Appendix B.

Table 44. Total Costs for Paper-Based Recordkeeping – Low Population Estimate

	Physical costs for recordkeeping	Labor costs for recordkeeping	Total cost for time for recordkeeping
PY1	1,491,600	2,312,400	3,804,000
PY2	621,500	2,312,400	2,933,900
PY3	621,500	2,312,400	2,933,900
PY4	621,500	2,312,400	2,933,900
PY5	621,500	2,312,400	2,933,900
PY6	621,500	2,312,400	2,933,900
PY7	621,500	2,312,400	2,933,900
PY8	621,500	2,312,400	2,933,900
PY9	621,500	2,312,400	2,933,900
PY10	621,500	2,312,400	2,933,900
Total	**7,085,100**	**23,124,000**	**30,209,100**

Table 45. Total Costs for Paper-Based Recordkeeping – High Population Estimate

	Physical costs for recordkeeping	Labor costs for recordkeeping	Total cost for time for recordkeeping
PY1	3,741,600	5,584,600	9,326,200
PY2	1,559,000	5,584,600	7,143,600
PY3	1,559,000	5,584,600	7,143,600
PY4	1,559,000	5,584,600	7,143,600
PY5	1,559,000	5,584,600	7,143,600
PY6	1,559,000	5,584,600	7,143,600
PY7	1,559,000	5,584,600	7,143,600
PY8	1,559,000	5,584,600	7,143,600
PY9	1,559,000	5,584,600	7,143,600
PY10	1,559,000	5,584,600	7,143,600
Total	**17,772,600**	**55,846,000**	**73,618,600**

Alternatively, although it is not required, businesses may keep their records electronically. Under this scenario, DHS assumes that a small number of businesses will need to purchase a computer loaded with basic spreadsheet software. Additionally, there may be a larger time commitment to updating records and inputting data into a spreadsheet. Therefore, DHS estimates six hours per month to maintain electronic records. Tables 46 to 51 present the costs associated with the alternative electronic-based recordkeeping.

Table 46. Physical Costs for Electronic-Based Recordkeeping – Low Population Estimate

	Number of AN Facilities A	% without computer B	Computer & Printer C	Initial Cost D=AxBxC	Annual Maintenance (10% of total) .1 * D
AN fertilizer manufacturers	26	5%	1,000	1,300	130
AN explosives manufacturers	10	5%	1,000	500	50
Fertilizer mixers	400	5%	1,000	20,000	2,000
Explosives distributors	500	10%	1,000	50,000	5,000
Farm wholesalers/co-ops	500	15%	1,000	75,000	7,500
Retail garden centers	500	15%	1,000	75,000	7,500
Fertilizer applicators	500	15%	1,000	75,000	7,500
Laboratory supply	50	5%	1,000	2,500	250
Total	**2,486**	**n/a**	**n/a**	**299,300**	**29,930**

Table 47. Physical Costs for Electronic-Based Recordkeeping – High Population Estimate

	Number of AN Facilities A	% without computer B	Computer & Printer C	Initial Cost D=AxBxC	Annual Maintenance (10% of total) .1 * D
AN fertilizer manufacturers	26	5%	1000	1,300	130
AN explosives manufacturers	10	5%	1000	500	50
Fertilizer mixers	600	5%	1000	30,000	3,000
Explosives distributors	1000	10%	1000	100,000	10,000
Farm wholesalers/co-ops	1000	15%	1000	150,000	15,000
Retail garden centers	2500	15%	1000	375,000	37,500
Fertilizer applicators	1000	15%	1000	150,000	15,000
Laboratory supply	100	5%	1000	5,000	500
Total	**6,236**	**n/a**	**n/a**	**811,800**	**81,180**

Table 48. Labor Costs for Electronic-Based Recordkeeping – Low Population Estimate

	Number of AN Facilities A	Average loaded hourly wage - Office & administrative support services* B	Hours per AN Facility spent on recordkeeping C	Total cost for recordkeeping AxBxC
AN fertilizer manufacturers	26	22	72	41,259
AN explosives manufacturers	10	24	72	17,107
Fertilizer mixers	400	22	72	634,752
Explosives distributors	500	22	72	801,360
Farm wholesalers/co-ops	500	18	72	663,120
Retail garden centers	500	17	72	605,160
Fertilizer applicators	500	17	72	625,680
Laboratory supply	50	22	72	80,136
Total	**2,486**	**n/a**	**n/a**	**3,468,574**

* Wage rate information is fully explained in Appendix B.

Table 49. Labor Costs for Electronic-Based Recordkeeping – High Population Estimate

	Number of AN Facilities	Average loaded hourly wage - Office & administrative support services*	Hours per AN Facility spent on recordkeeping	Total cost for recordkeeping
	A	B	C	AxBxC
AN fertilizer manufacturers	26	22.04	72	41,259
AN explosives manufacturers	10	23.76	72	17,107
Fertilizer mixers	600	22.04	72	952,128
Explosives distributors	1,000	22.26	72	1,602,720
Farm wholesalers/co-ops	1,000	18.42	72	1,326,240
Retail garden centers	2,500	16.81	72	3,025,800
Fertilizer applicators	1,000	17.38	72	1,251,360
Laboratory supply	100	22.26	72	160,272
Total	**6,236**	**n/a**	**n/a**	**8,376,886**

* Wage rate information is fully explained in Appendix B.

Table 50. Total Costs for Electronic-Based Recordkeeping – Low Population Estimate

	Physical costs for recordkeeping	Labor costs for recordkeeping	Total cost for time for recordkeeping
PY1	299,300	3,468,574	3,767,874
PY2	29,930	3,468,574	3,498,504
PY3	29,930	3,468,574	3,498,504
PY4	29,930	3,468,574	3,498,504
PY5	29,930	3,468,574	3,498,504
PY6	299,300	3,468,574	3,767,874
PY7	29,930	3,468,574	3,498,504
PY8	29,930	3,468,574	3,498,504
PY9	29,930	3,468,574	3,498,504
PY10	29,930	3,468,574	3,498,504
Total	**838,040**	**34,685,741**	**35,523,781**

Table 51. Total Costs for Electronic-Based Recordkeeping – High Population Estimate

	Physical costs for recordkeeping	Labor costs for recordkeeping	Total cost for time for recordkeeping
PY1	811,800	8,376,886	9,188,686
PY2	81,180	8,376,886	8,458,066
PY3	81,180	8,376,886	8,458,066
PY4	81,180	8,376,886	8,458,066
PY5	81,180	8,376,886	8,458,066
PY6	811,800	8,376,886	9,188,686
PY7	81,180	8,376,886	8,458,066
PY8	81,180	8,376,886	8,458,066
PY9	81,180	8,376,886	8,458,066
PY10	81,180	8,376,886	8,458,066
Total	**2,273,040**	**83,768,861**	**86,041,901**

10. Reporting Theft and/or Loss

Any AN Facility Representative who has knowledge of theft or unexplained loss of ammonium nitrate is required to report such theft or loss to Federal law enforcement authorities within 24 hours of the time at which knowledge of theft or loss is acquired. The Department additionally encourages all other individuals who have possession or control over ammonium nitrate (be they AN Sellers, AN Purchasers, any agents acting on their behalf, or any other individuals) similarly to report any theft or unexplained loss of ammonium nitrate that they become aware of.

Any time an AN Facility Representative or any other individual employed by an AN Facility encounters a situation where they believe a theft of ammonium nitrate has occurred, the AN Facility Representative is responsible for ensuring that the theft is reported using the procedures described below. Determining when to report a loss, however, is not as straightforward a proposition, as for bulk ammonium nitrate (as opposed to packaged or bagged ammonium nitrate), it is not atypical for small percentages of ammonium nitrate to be "lost" as part of normal industrial and shipping business practices. While individually, such losses may tend to be de minimis, in the aggregate, they may amount to large amounts of lost ammonium nitrate. The Department seeks not to unduly burden individuals involved in the manufacturing, storage, transportation, or use of bulk ammonium nitrate, but on the other hand does seek to impose loss reporting requirements which will aid the Federal government in preventing terrorist misappropriation of ammonium nitrate. Accordingly, the Department is proposing to require the AN Facility Representative to report any loss of ammonium nitrate they become aware of to ATF when the loss deviates

from the amount of loss that typically occurs during routine production, storage, transportation, or use of the ammonium nitrate. Because of ATF's unique explosives-related law enforcement mission, the Department is proposing allowing ATF to take the lead on investigating theft or loss of ammonium nitrate. If this occurs, the Department will coordinate with ATF to ensure proper tracking and coordination of reported ammonium nitrate thefts and losses.

Thefts and losses of ammonium nitrate are to be reported to ATF by telephoning a nationwide toll free number, followed up with submission to ATF of a completed paper form detailing the incident. The Department would work with ATF to determine the appropriate information to be reported and proper template for a form specific to reporting the theft or loss of ammonium nitrate. While there is no statutory requirement for AN Facility Representatives or other registered individuals who have knowledge of a theft or unexplained loss to report such incidents to local law enforcement, the Department encourages AN Facilities and individuals to do so in addition to reporting the theft or loss to ATF.

Because of the seriousness of theft or loss of ammonium nitrate, the total time to report a theft or loss is assumed to include 1.8 hours of an inventory manager plus one hour of the general manager. This includes the time for the reporter to organize useful details for law enforcement and conduct a brief investigation. There will likely be additional time for a more thorough follow-up investigation. Strictly for purposes of this analysis, the Department assumes that 2% of AN Facilities will report loss or theft once per year.

Table 52 shows the number of theft and loss reports expected to be generated in a typical year.

Table 52. Estimated Number of Theft/Loss Reports Generated

	AN Facility Owners		% of AN Facilities reporting theft/loss	Annual Number of Theft/Loss Reports Generated	
	Low	High		Low	High
	A	B	C	AxC	BxC
AN fertilizer manufacturers	26	26	2.0%	0.5	0.5
AN explosives manufacturers	10	10	2.0%	0.2	0.2
Fertilizer mixers	400	600	2.0%	8	12
Explosives distributors	500	1,000	2.0%	10	20
Farm wholesalers/co-ops	500	1,000	2.0%	10	20
Retail garden centers	500	2,500	2.0%	10	50
Fertilizer applicators	500	1,000	2.0%	10	20
Laboratory supply	50	100	2.0%	1	2
Total	**2,486**	**6,236**	**n/a**	**50**	**125**

Tables 53 through 55 present the costs for reporting theft and loss.

Table 53. Costs for Reporting Theft and Loss – Low Population Estimate

	Annual Number of Reports	Total Hours for Inventory Manager (1.8 hours per report)	Average loaded hourly wage - Transportation, storage, & dist mgr*	Total Hours for General Manager (1.0 hour per report)	Average loaded hourly wage - General Manager	Total cost
	A	Ax1.8	B	Ax1.0	C	(1.8AxB)+(AxC)
AN fertilizer manufacturers	0.5	0.9	47	0.5	61	76
AN explosives manufacturers	0.2	0.4	52	0.2	74	34
Fertilizer mixers	8	14.4	47	8	61	1166
Explosives distributors	10	18.0	52	10	73	1661
Farm wholesalers/co-ops	10	18.0	48	10	63	1486
Retail garden centers	10	18.0	47	10	44	1294
Fertilizer applicators	10	18.0	45	10	87	1671
Laboratory supply	1	1.8	52	1	73	166
Total	50	**89.5**	**n/a**		**n/a**	7,554

* Wage rate information is fully explained in Appendix B.

Table 54. Costs for Reporting Theft and Loss – High Population Estimate

	Annual Number of Reports	Total Hours for Inventory Manager (1.8 hours per report)	Average loaded hourly wage - Transportation, storage, & dist mgr*	Total Hours for General Manager (1.0 hour per report)	Average loaded hourly wage - General Manager	Total cost
	A	Ax1.8	B	Ax1.0	C	(1.8AxB)+(AxC)
AN fertilizer manufacturers	0.5	0.9	47	0.52	61	76
AN explosives manufacturers	0.2	0.4	52	0.2	74	34
Fertilizer mixers	12	21.6	47	12	61	1,749
Explosives distributors	20	36.0	52	20	73	3,323
Farm wholesalers/co-ops	20	36.0	48	20	63	2,971
Retail garden centers	50	90.0	47	50	44	6,470
Fertilizer applicators	20	36.0	45	20	87	3,343
Laboratory supply	2	3.6	52	2	73	332
Total	**125**	**224.0**	**n/a**	**125**	**n/a**	**18,297**

* Wage rate information is fully explained in Appendix B.

Table 55. Annual Costs for Reporting Theft and Loss

	Low Population	High population
PY1	7,556	19,143
PY2	7,556	19,143
PY3	7,556	19,143
PY4	7,556	19,143
PY5	7,556	19,143
PY6	7,556	19,143
PY7	7,556	19,143
PY8	7,556	19,143
PY9	7,556	19,143
PY10	7,556	19,143
Total	75,556	191,428

11. Audits and Inspections

The proposed rule requires AN Facilities to undergo an inspection or audit of their records to evaluate their compliance with the ammonium nitrate rules. This includes a review of all records maintained as part of the recordkeeping requirements for point of sale transactions. Further, the Department is considering inspecting documents relating to the identities and registration status of persons selling, transferring, and/or purchasing ammonium nitrate. For this analysis, it is assumed that 25% of AN Facilities will be audited/inspected per year. Thus, about 500-1,300 inspections/audits would be performed each year. Generally speaking, DHS inspectors will give AN Facilities a minimum of 24 hours notice prior to an audit/inspection. Preparation for an inspection/audit will take two hours of both an AN Facility Manager (or equivalent position) and a clerical person. The audits could take less than an hour for a small business to a full day for a larger volume business, but on average, each audit is assumed to take four hours to complete. During the day of the audit/inspection, the Department assumes another four hours for both the AN Facility Manager and a clerical person who will be on hand to retrieve the records and be available to answer questions of the auditor. Thus, each inspection is expected to require a total of six hours of each the AN Facility Manager and a clerical person. The average loaded hourly wage for the AN Facility Manager ranges from $47-$52 and the average loaded hourly wage for the clerical person ranges from $17 - $24.

Tables 56 to 58 present the costs associated with preparing for and undergoing audits and inspections.

Table 56. Cost of Audits/Inspections – Low Population Estimate

	AN Facilities	% Receiving Inspection	Hours of inspection	Loaded hourly wage - Transportation, storage, & dist mgr*	Loaded hourly wage - Office & administrative support services	Total Cost per Inspection	Total Cost of Audits/ Inspections
	A	B	C	D	E	Cx(D+E)	AxBxCx (D+E)
AN fertilizer manuf.	26	25%	6	47	22	415	2,696
AN explosives manuf.	10	25%	6	52	24	455	1,138
Fertilizer mixers	400	25%	6	47	22	415	41,484
Explosives distributors	500	25%	6	52	22	446	55,703
Farm wholesalers/ co-ops	500	25%	6	48	18	397	49,673
Retail garden centers	500	25%	6	47	17	384	48,008
Fertilizer applicators	500	25%	6	45	17	372	46,538
Laboratory supply	50	25%	6	52	22	446	5,570
Total	**2,486**	**n/a**	**n/a**	n/a	n/a	n/a	**250,809**

* Wage rate information is fully explained in Appendix B.

Table 57. Cost of Audits/Inspections – High Population Estimate

	AN Facilities	% Receiving Inspection	Hours of inspection	Loaded hourly wage - Transportation, storage, & dist mgr*	Loaded hourly wage - Office & administrative support services	Total Cost per Inspection	Total Cost of Audits/ Inspections
	A	B	C	D	E	Cx(D+E)	AxBxCx (D+E)
AN fertilizer manuf.	26	25%	6	47	22	415	2,696
AN explosives manuf.	10	25%	6	52	24	455	1,138
Fertilizer mixers	600	25%	6	47	22	415	62,226
Explosives distributors	1000	25%	6	52	22	446	111,405
Farm wholesalers/ co-ops	1000	25%	6	48	18	397	99,345
Retail garden centers	2500	25%	6	47	17	384	240,038
Fertilizer applicators	1000	25%	6	45	17	372	93,075
Laboratory supply	100	25%	6	52	22	446	11,141
Total	**6,236**	**n/a**	**n/a**	n/a	n/a	n/a	**621,064**

* Wage rate information is fully explained in Appendix B.

Table 58. Cost of Inspections/Audits

	Low Population Estimate	High Population Estimate
PY1	250,809	621,064
PY2	250,809	621,064
PY3	250,809	621,064
PY4	250,809	621,064
PY5	250,809	621,064
PY6	250,809	621,064
PY7	250,809	621,064
PY8	250,809	621,064
PY9	250,809	621,064
PY10	250,809	621,064
Total	**2,508,088**	**6,210,635**

12. Federal Costs

The federal government will incur cost to create, staff, and maintain the infrastructure the rule implementation will require. A number of the costs are fairly constant over time after initial startup and certain costs are dependent upon the number of vetting transactions

that occur in a year. The first group of costs relate to the web-portal, the purchaser verification portal, electronic records database, theft report support, inspection and audit, the help desk, and various TSA support costs. The various vetting costs vary with the annual vetting transactions. Tables 59-60 reflect these fixed level costs for 10 years of the program and are made up of the following types of costs:

Registration Web-Portal Costs
The annual registration web-portal costs include: (1) Operating and Maintenance (O&M) costs estimated at $750,000; and (2) the associated management and coordination costs for the web-portal activity estimated at $165,900. (i.e., the fully loaded cost of employing one government employee at the GS-14 level).

Purchaser Verification Portal Costs
The annual Purchaser Verification Portal costs include: (1) Operating and Maintenance (O&M) costs estimated at $750,000 and (2) the associated management and coordination costs for the web-portal activity estimated at $165,900 (i.e., the fully loaded cost of employing one government employee at the GS-14 level).

Electronic Recordkeeping Database Web-Portal
The annual Electronic Recordkeeping Database web-portal costs include: (1) Operating and Maintenance (O&M) costs estimated at $750,000 and (2) the associated management and coordination costs for the web-portal activity estimated at $165,900 (i.e., the fully loaded cost of employing one government employee at the GS-14 level).

Reporting Theft and Loss
Funds to support the ATF activities associated with theft and loss reporting are estimated to be $250,000.

Inspections & Audits
The associated management and coordination costs for the information collected due to Inspections & Audits are equivalent to the fully loaded cost of employing two government employees at the GS-14 level and are estimated to be $331,800.

Ammonium Nitrate Helpdesk Costs
Based upon historical experience, the annual cost to implement and manage a helpdesk is estimated to be $2,400,000.

TSA Support Costs

In addition to the vetting, TSA will charge the program for TSA program support, startup capital, O&M, and match resolution. These costs are $3.2 million for the first year and $$1.4 million for out years.

Table 59. Federal Costs System and Support, Fixed Level, All Populations

	Web Registration Portal		Purchaser Verification Portal		Electronic Records Database Portal	
	Startup and O&M (A)	Portal Manager (B)	Portal Manager (C)	O&M (D)	Portal Manager (E)	O&M (F)
PY1	1,500,000	165,900	165,900	750,000	165,900	750,000
PY2	750,000	165,900	165,900	750,000	165,900	750,000
PY3	750,000	165,900	165,900	750,000	165,900	750,000
PY4	750,000	165,900	165,900	750,000	165,900	750,000
PY5	750,000	165,900	165,900	750,000	165,900	750,000
PY6	750,000	165,900	165,900	750,000	165,900	750,000
PY7	750,000	165,900	165,900	750,000	165,900	750,000
PY8	750,000	165,900	165,900	750,000	165,900	750,000
PY9	750,000	165,900	165,900	750,000	165,900	750,000
PY10	750,000	165,900	165,900	750,000	165,900	750,000
Total	**8,250,000**	**1,659,000**	**1,659,000**	**7,500,000**	**1,659,000**	**7,500,000**

Table 60. Federal Costs System and Support, Fixed Level, All Populations (cont'd)

	Theft Report Processing (G)	Inspection and Audits (H)	Help Desk (I)	TSA Support Costs (J)	SubTotal System and Support Costs (Sum of Table 58 and 59 A-K)
PY1	250,000	331,800	2,400,000	3,167,689	9,647,189
PY2	250,000	331,800	2,400,000	1,418,235	7,147,735
PY3	250,000	331,800	2,400,000	1,418,235	7,147,735
PY4	250,000	331,800	2,400,000	1,418,235	7,147,735
PY5	250,000	331,800	2,400,000	1,418,235	7,147,735
PY6	250,000	331,800	2,400,000	1,418,235	7,147,735
PY7	250,000	331,800	2,400,000	1,418,235	7,147,735
PY8	250,000	331,800	2,400,000	1,418,235	7,147,735
PY9	250,000	331,800	2,400,000	1,418,235	7,147,735
PY10	250,000	331,800	2,400,000	1,418,235	7,147,735
Total	**2,500,000**	**3,318,000**	**24,000,000**	**15,931,804**	**73,976,804**

Tables 61-63 show the annual transactions times the cost/transaction for the annual vetting cost for low, high, and mean population scenarios.

Table 61.Federal Vetting and Total Costs, Low Population Scenario

	New Vetting Transactions	Cost / Transaction	Vetting Cost	Subtotal from Detailed Federal Tables	Total Federal Costs
PY1	144,210	3.97	572,514	9,647,189	10,219,703
PY2	36,053	3.97	143,128	7,147,735	7,290,863
PY3	37,855	3.97	150,285	7,147,735	7,298,020
PY4	39,748	3.97	157,799	7,147,735	7,305,534
PY5	41,735	3.97	165,689	7,147,735	7,313,424
PY6	94,798	3.97	376,346	7,147,735	7,524,081
PY7	77,906	3.97	309,287	7,147,735	7,457,022
PY8	81,801	3.97	324,751	7,147,735	7,472,486
PY9	85,891	3.97	340,988	7,147,735	7,488,723
PY10	90,186	3.97	358,038	7,147,735	7,505,773
Total	**730,183**	**3.97**	**2,898,825**	**73,976,804**	**76,875,629**

Table 62. Federal Vetting and Total Costs, High Population Scenario

	New Vetting Transactions	Cost / Transaction	Vetting Cost	Subtotal from Detailed Federal Tables	Total Federal Costs
PY1	248,460	3.97	986,386	9,647,189	10,633,575
PY2	62,115	3.97	246,597	7,147,735	7,394,332
PY3	65,221	3.97	258,926	7,147,735	7,406,661
PY4	68,482	3.97	271,873	7,147,735	7,419,608
PY5	71,906	3.97	285,466	7,147,735	7,433,201
PY6	163,327	3.97	648,409	7,147,735	7,796,144
PY7	134,224	3.97	532,871	7,147,735	7,680,606
PY8	140,936	3.97	559,515	7,147,735	7,707,250
PY9	147,982	3.97	587,490	7,147,735	7,735,225
PY10	155,382	3.97	616,865	7,147,735	7,764,600
Total	**1,258,035**	**3.97**	**4,994,398**	**73,976,804**	**78,971,202**

Table 63.Federal Vetting and Total Costs, Mean Population Scenario

	New Vetting Transactions	Cost / Transaction	Vetting Cost	Subtotal from Detailed Federal Tables	Total Federal Costs
PY1	196,335	3.97	779,450	9,647,189	10,426,639
PY2	49,084	3.97	194,862	7,147,735	7,342,597
PY3	51,538	3.97	204,606	7,147,735	7,352,341
PY4	54,115	3.97	214,836	7,147,735	7,362,571
PY5	56,821	3.97	225,578	7,147,735	7,373,313
PY6	129,062	3.97	512,378	7,147,735	7,660,113
PY7	106,065	3.97	421,079	7,147,735	7,568,814
PY8	111,368	3.97	442,133	7,147,735	7,589,868
PY9	116,937	3.97	464,239	7,147,735	7,611,974
PY10	122,784	3.97	487,451	7,147,735	7,635,186
Total	**994,109**	**3.97**	**3,946,612**	**73,976,804**	**77,923,416**

13. Total Costs

Tables 64 to 72 detail the total costs by program year of this proposed rule. The undiscounted 10 year costs range from $433 million for the low population/low transactions scenario to $1.5 billion for the high population/high transactions scenario. Similarly, we have provided estimates of the total costs for the proposed rule at discount rates of 7% and 3%. The average costs by type of AN Facility and program element for this proposed rule are presented in Section 14 – Initial Regulatory Flexibility Analysis in Tables 79 through 83.

Table 64. . Summary of Costs (Undiscounted $ millions) – Low Population/Low Transactions Estimate*

	Registration	Appeals	Point of Sale	Record-keeping	Reporting Theft/Loss	Audits/ Inspections	Federal Costs	Total Cost
PY1	15.9	0.1	23.9	3.8	0.0	0.3	10.2	54.2
PY2	4.0	0.0	23.6	2.9	0.0	0.3	7.3	38.1
PY3	4.2	0.0	23.6	2.9	0.0	0.3	7.3	38.3
PY4	4.4	0.0	23.6	2.9	0.0	0.3	7.3	38.5
PY5	4.6	0.0	23.6	2.9	0.0	0.3	7.3	38.7
PY6	10.5	0.0	23.9	2.9	0.0	0.3	7.5	45.1
PY7	8.6	0.0	23.6	2.9	0.0	0.3	7.5	42.9
PY8	9.0	0.0	23.6	2.9	0.0	0.3	7.5	43.3
PY9	9.5	0.0	23.6	2.9	0.0	0.3	7.5	43.8
PY10	10.0	0.0	23.6	2.9	0.0	0.3	7.5	44.3
Total	**80.7**	**0.1**	**236.6**	**29.9**	**0.0**	**3.0**	**76.9**	**427.2**

*Totals may not sum due to rounding

Table 65. Summary of Costs (Undiscounted $ millions) – Primary Estimate (mean of High and Low)*

	Registration	Appeals	Point of Sale	Record-keeping	Reporting Theft/Loss	Audits/ Inspections	Federal Costs	Total Cost
PY1	20.2	0.1	72.2	6.6	0.0	0.5	10.4	109.9
PY2	5.1	0.0	71.6	5.0	0.0	0.5	7.4	89.5
PY3	5.3	0.0	71.6	5.0	0.0	0.5	7.4	89.7
PY4	5.6	0.0	71.6	5.0	0.0	0.5	7.4	90.0
PY5	5.9	0.0	71.6	5.0	0.0	0.5	7.4	90.3
PY6	13.3	0.1	72.2	5.0	0.0	0.5	7.7	98.7
PY7	10.9	0.1	71.6	5.0	0.0	0.5	7.6	95.6
PY8	11.5	0.1	71.6	5.0	0.0	0.5	7.6	96.2
PY9	12.1	0.1	71.6	5.0	0.0	0.5	7.6	96.8
PY10	12.7	0.1	71.6	5.0	0.0	0.5	7.7	97.4
Total	102.3	0.4	717.2	51.6	0.0	4.5	77.9	953.8

*Totals may not sum due to rounding

Table 66. Summary of Costs (Undiscounted $ millions) – High Population/High Transactions Estimate*

	Registration	Appeals	Point of Sale	Record-keeping	Reporting Theft/Loss	Audits/ Inspections	Federal Costs	Total Cost
PY1	24.4	0.1	120.5	9.3	0.0	0.6	10.6	165.5
PY2	6.1	0.0	119.6	7.1	0.0	0.6	7.4	140.8
PY3	6.4	0.0	119.6	7.1	0.0	0.6	7.4	141.1
PY4	6.7	0.0	119.6	7.1	0.0	0.6	7.4	141.4
PY5	7.1	0.0	119.6	7.1	0.0	0.6	7.4	141.8
PY6	16.1	0.1	120.5	7.1	0.0	0.6	7.8	152.2
PY7	13.2	0.1	119.6	7.1	0.0	0.6	7.7	148.3
PY8	13.9	0.1	119.6	7.1	0.0	0.6	7.7	149.0
PY9	14.6	0.1	119.6	7.1	0.0	0.6	7.7	149.7
PY10	15.3	0.1	119.6	7.1	0.0	0.6	7.8	150.5
Total	**123.8**	**0.6**	**1,197.8**	**73.2**	**0.0**	**6.0**	**78.9**	**1,480.3**

*Totals may not sum due to rounding

Table 67. Summary of Costs (7 percent discount rate, $ millions) – Low Population/Low Transactions Estimate*

	Registration	Appeals	Point of Sale	Record-keeping	Reporting Theft/Loss	Audits/ Inspections	Federal Costs	Total Cost
PY1	14.9	0.1	22.3	3.6	0.0	0.2	9.6	50.7
PY2	3.5	0.0	20.6	2.6	0.0	0.2	6.4	33.3
PY3	3.4	0.0	19.2	2.4	0.0	0.2	6.0	31.2
PY4	3.3	0.0	18.0	2.2	0.0	0.2	5.6	29.3
PY5	3.3	0.0	16.8	2.1	0.0	0.2	5.2	27.6
PY6	7.0	0.0	15.9	2.0	0.0	0.2	5.0	30.1
PY7	5.4	0.0	14.7	1.8	0.0	0.2	4.6	26.7
PY8	5.3	0.0	13.7	1.7	0.0	0.1	4.3	25.1
PY9	5.2	0.0	12.8	1.6	0.0	0.1	4.1	23.8
PY10	5.1	0.0	12.0	1.5	0.0	0.1	3.8	22.5
Total	**56.2**	**0.2**	**166**	**21.4**	**0.1**	**1.8**	**54.6**	**300.2**

*Totals may not sum due to rounding

Table 68. Summary of Costs (7 percent discount rate, $ millions) – Primary Estimate (mean of High and Low)*

	Registration	Appeals	Point of Sale	Record-keeping	Reporting Theft/Loss	Audits/ Inspections	Federal Costs	Total Cost
PY1	18.9	0.1	67.5	6.2	0.0	0.4	9.8	102.7
PY2	4.4	0.0	62.6	4.4	0.0	0.4	6.5	78.2
PY3	4.3	0.0	58.4	4.1	0.0	0.4	6.0	73.2
PY4	4.2	0.0	54.7	3.8	0.0	0.4	5.7	68.7
PY5	4.2	0.0	51.1	3.6	0.0	0.3	5.3	64.4
PY6	8.9	0.0	48.1	3.4	0.0	0.3	5.1	65.8
PY7	6.8	0.0	44.6	3.1	0.0	0.3	4.7	59.5

PY8	6.7	0.0	41.7	3.0	0.0	0.3	4.4	56.0
PY9	6.6	0.0	39.0	2.8	0.0	0.2	4.2	52.6
PY10	6.5	0.0	36.4	2.6	0.0	0.2	3.9	49.5
Total	71.3	0.1	503.8	36.8	0.0	3.0	55.3	670.6

*Totals may not sum due to rounding

Table 69. Summary of Costs (7 percent discount rate, $ millions) – High Population/High Transactions Estimate

	Registration	Appeals	Point of Sale	Record-keeping	Reporting Theft/Loss	Audits/ Inspections	Federal Costs	Total Cost
PY1	22.8	0.1	112.6	8.7	0.0	0.6	9.9	154.7
PY2	5.3	0.0	104.5	6.2	0.0	0.5	6.5	123.0
PY3	5.2	0.0	97.6	5.8	0.0	0.5	6.0	115.1
PY4	5.1	0.0	91.3	5.4	0.0	0.5	5.7	108.0
PY5	5.0	0.0	85.3	5.1	0.0	0.4	5.3	101.1
PY6	10.7	0.0	80.3	4.8	0.0	0.4	5.2	101.4
PY7	8.2	0.0	74.5	4.4	0.0	0.4	4.8	92.3
PY8	8.1	0.0	69.6	4.2	0.0	0.4	4.5	86.8
PY9	7.9	0.0	65.1	3.9	0.0	0.3	4.2	81.4
PY10	7.8	0.0	60.8	3.6	0.0	0.3	3.9	76.4
Total	**86.3**	**0.4**	**841.6**	**52.2**	**0.1**	**4.4**	**56**	**1,041.0**

*Totals may not sum due to rounding

Table 70. Summary of Costs (3 percent discount rate, $ millions) – Low Population/Low Transactions Estimate*

	Registration	Appeals	Point of Sale	Record-keeping	Reporting Theft/Loss	Audits/ Inspections	Federal Costs	Total Cost
PY1	15.5	0.1	23.2	3.7	0.0	0.2	9.9	52.6
PY2	3.8	0.0	22.2	2.8	0.0	0.2	6.9	35.9
PY3	3.8	0.0	21.6	2.7	0.0	0.2	6.7	35
PY4	3.9	0.0	20.9	2.6	0.0	0.2	6.5	34.1
PY5	4.0	0.0	20.3	2.5	0.0	0.2	6.3	33.3
PY6	8.8	0.0	20.0	2.5	0.0	0.2	6.3	37.8
PY7	7.0	0.0	19.2	2.4	0.0	0.2	6.1	34.9
PY8	7.1	0.0	18.6	2.3	0.0	0.2	5.9	34.1
PY9	7.3	0.0	18.1	2.2	0.0	0.2	5.7	33.5
PY10	7.4	0.0	17.5	2.2	0.0	0.2	5.6	32.9
Total	**68.5**	**0.3**	**201.5**	**25.9**	**0.1**	**2.1**	**65.9**	**364.2**

*Totals may not sum due to rounding

Table 71. Summary of Costs (3 percent discount rate, $ millions) – Primary Estimate (mean of High and Low)*

	Registration	Appeals	Point of Sale	Record-keeping	Reporting Theft/Loss	Audits/ Inspections	Federal Costs	Total Cost
PY1	19.6	0.1	70.1	6.4	0.0	0.4	10.1	106.7
PY2	4.8	0.0	67.5	4.8	0.0	0.4	7.0	84.4

PY3	4.9	0.0	65.6	4.6	0.0	0.4	6.8	82.2
PY4	5.0	0.0	63.6	4.5	0.0	0.4	6.6	80.0
PY5	5.1	0.0	61.8	4.4	0.0	0.4	6.4	77.9
PY6	11.2	0.1	60.5	4.3	0.0	0.4	6.4	82.7
PY7	8.9	0.0	58.3	4.1	0.0	0.4	6.2	77.7
PY8	9.0	0.0	56.5	4.0	0.0	0.4	6.0	75.8
PY9	9.3	0.0	54.9	3.9	0.0	0.4	5.8	74.2
PY10	9.4	0.0	53.3	3.8	0.0	0.4	5.7	72.5
Total	86.9	0.2	611.9	44.5	0.0	3.7	66.8	814.0

*Totals may not sum due to rounding

Table 72. Summary of Costs (3 percent discount rate, $ millions) – High Population/High Transactions Estimate*

	Registration	Appeals	Point of Sale	Record-keeping	Reporting Theft/Loss	Audits/ Inspections	Federal Costs	Total Cost
PY1	23.7	0.1	117.0	9.1	0.0	0.6	10.3	160.8
PY2	5.8	0.0	112.8	6.7	0.0	0.6	7.0	132.9
PY3	5.9	0.0	109.5	6.5	0.0	0.6	6.8	129.3
PY4	6.0	0.0	106.3	6.3	0.0	0.6	6.6	125.8
PY5	6.1	0.0	103.2	6.2	0.0	0.5	6.4	122.4
PY6	13.5	0.1	100.9	6.0	0.0	0.5	6.5	127.5
PY7	10.7	0.0	97.3	5.8	0.0	0.5	6.2	120.5
PY8	10.9	0.0	94.4	5.6	0.0	0.5	6.1	117.5
PY9	11.2	0.0	91.7	5.5	0.0	0.5	5.9	114.8
PY10	11.4	0.0	89.0	5.3	0.0	0.5	5.8	112
Total	**105.1**	**0.5**	**1,022.0**	**63.1**	**0.2**	**5.3**	**67.6**	**1,263.7**

*Totals may not sum due to rounding

14. Initial Regulatory Flexibility Analysis

The Regulatory Flexibility Act of 1980 (RFA) establishes "as a principle of regulatory issuance that agencies shall endeavor, consistent with the objective of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the business, organizations, and governmental jurisdictions subject to regulation.'' To achieve that principle, the RFA requires agencies to consider the potential impacts of their rules on small entities. The RFA covers a wide range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Although the Department does not believe the proposed rule will have a significant economic impact on a substantial number of small entities, the agency has prepared an Initial Regulatory Flexibility Analysis (IRFA) for public review and comment. The

Department requests comments on this IRFA and the potential impacts of the proposed rule on small entities.

Section 1: Reasons for and Objectives of the Proposed Rule

Reason for the Proposed Rule

The FY 2008 Department of Homeland Security Appropriations Act (P.L. 110-161) amends the Homeland Security Act of 2002 and provides the Department with the authority to "regulate the sale and transfer of ammonium nitrate by an ammonium nitrate facility . . . to prevent the misappropriation or use of ammonium nitrate in an act of terrorism." For additional information on the security hazards presented by the use of ammonium nitrate, see Sections II.D.1 & 2 of the preamble. For additional information on the benefits of this rule, please refer to Section 3 above.

Objective of the Proposed Rule

This proposed rule aims to prohibit a known or suspected terrorist from purchasing or legally acquiring ammonium nitrate from an ammonium nitrate facility; additionally, only individuals favorably vetted by the Department will be able to legally acquire ammonium nitrate.

Section 2: Affected Small Business Population and Estimated Impact of Compliance

At this time, the Department's preliminary estimate of the number of establishments that either sell, purchase, or sell/transfer and purchase ammonium nitrate that will be covered by this proposed rule range from 64,986 to 106,236 AN Facilities. This estimate is the Department's best estimate based on listening sessions with industry representatives and plant food control officials, consultation with other Federal agencies and departments (e.g., USDA), and research across available information provided by industry and governmental sources. Some of the business types identified in the analysis of purchasers are similar to activities that could be conducted by nonprofits or small jurisdiction. The Department believes impacts on nonprofits or small jurisdictions would be the same as any other purchaser in this analysis. During the advanced notice of proposed rulemaking, the Department did not receive any information on nonprofits or small jurisdictions that might be impacted and invites comments from these entities. After AN Sellers and AN Purchasers register with the Department there will be a better understanding of how many and which specific AN facilities will be subject to the requirements under this proposed rule. Consequently, without the benefit of having the AN Registered User Number results, it is very difficult to know which AN Facilities will have to undergo the burden of verifying AN Registered User Numbers, and maintaining records of ammonium nitrate transactions. In

addition, the Department has offered some degree of flexibility when choosing the method of verifying AN Registered User Numbers and maintaining records. The Department expects that AN Facilities will take full advantage of this flexibility in order to minimize the cost of this rule to their operations. These uncertainties make it very difficult to estimate the extent of the economic impact of this rule on small entities.

Number of Small Entities that may be AN Purchasers

The Small Business Administration (SBA) classifies farms as a small business if it has receipts less than $750,000. The USDA Census of Agriculture provides data on the number of farms by economic class based on the market value of agricultural products sold (excluding government payments). Table 64 shows that 94.5% of farms had receipts of $0.5 million or less; 97.4% of farms had receipts less than $1.0 million. Thus, it is clear that the majority of farms are small entities.

Table 73. Number of U.S. Farms by the Market Value of Agricultural Products Sold (2007)

Market value of agricultural products sold ($)	Number of Farms	% of Total
less than $1000	499,880	22.7%
$1000-$2,499	270,712	12.3%
$2500-$5,000	246,309	11.2%
$5,000-$9,999	254,834	11.6%
$10,000-$24,999	274,274	12.4%
$25,000-49,999	163,500	7.4%
$50,000-$99,999	129,124	5.9%
$100,000-$249,000	149,049	6.8%
$250,000-$499,999	96,251	4.4%
$500,000-$999,999	63,567	2.9%
more than $1,000,000	57,292	2.6%
Total Farms	2,204,792	100.0%

Source: 2007 Census of Agriculture, USDA (Table 3 - page 10)

Tables 74 and 75 show the primary North American Industrial Classification System (NAICS) codes, descriptions and SBA definitions for small entities that are AN Purchasers. This comparison shows that the majority of businesses likely to be AN Purchasers are small entities.

Table 74. Primary NAICS Codes, Descriptions and Definitions for Small Entities that May Be AN Purchasers (Employee Size)*

		Establishments by Employee Size						
NAICS	**Description**	**0-4**	**5-9**	**10-19**	**20-99**	**100-499**	**(Subtotal) <499**	**500+**
2121	Coal Mining	194	96	100	233	149	772	375
	% of total	17%	8%	9%	20%	13%	67%	33%
2122	Metal Mining	131	39	18	26	21	235	72
	% of total	43%	13%	6%	8%	7%	77%	23%
2123	Nonmetallic Mineral Mining and Quarrying	1,434	666	603	877	501	4,081	1,743
	% of total	25%	11%	10%	15%	9%	70%	30%
325314	Fertilizer (Mixing Only) Manufacturing	111	64	56	89	62	382	94
	% of total	23%	13%	12%	19%	13%	80%	20%

42491	Farm Supplies Merchant Wholesalers	2,473	983	673	948	765	5,842	1,901
	% of total	32%	13%	9%	12%	10%	76%	25%
42469	Other Chemical & Allied Products Merchant Wholesalers	3,352	1,155	846	1,082	648	7,083	2,405
	% of total	35%	12%	9%	11%	7%	74%	25%

* Totals may be affected by rounding.

Table 75. Primary NAICS Codes, Descriptions and Definitions for Small Entities that May Be AN Purchasers (Sales Size)*

		Establishments by Sales Size						
NAICS	Description	< $0.1 mill	$.1-0.5 mill	$0.5-1 mill	$1-5 mill	$5-10 mill	(Subtotal) <$10 mill	>$10 mill
213113	Support services for Coal Mining	47	98	38	101	16	300	46
	% of total	14%	28%	11%	29%	5%	87%	13%
213114	Support services for Metal Mining	19	26	14	20	-	79	104
	% of total	10%	14%	8%	11%	0%	43%	57%
213115	Support services for Nonmetallic Mining	24	47	17	40	8	136	15
	% of total	16%	31%	11%	26%	5%	89%	10%
44422	Nursery, Garden Center, and Farm Supply Stores	1,872	5,004	2,675	3,941	830	14,322	3,461
	% of total	11%	28%	15%	22%	5%	81%	20%
56173	Landscaping Services	23,993	36,446	6,935	5,095	490	72,959	1,249
	% of total	32%	49%	9%	7%	1%	98%	1%
71391	Golf Courses & Country Clubs	1,172	3,802	2,041	3,333	588	10,936	906
	% of total	10%	32%	17%	28%	5%	92%	7%

* Totals may be affected by rounding.

Number of Small Entities that may be AN Sellers

In addition to regulating purchasers of ammonium nitrate, the proposed rule places additional burdens on AN Sellers. These additional burdens include application for AN Registered User Number, verifying AN Purchasers' AN Registered User Numbers and photo ID at the point of sale, maintaining records of point of sale transactions for two years and reporting theft and loss of ammonium nitrate. AN Facilities that are in the middle of the supply chain from manufacturer to end-use consumer are both AN Sellers and AN Purchasers. Data for each side of the transaction is included in the appropriate seller or purchaser analysis. Costs to business that are both are likely to be something slightly less than the sum of the two corresponding amounts for their business. It is likely that some of the individuals needing registration numbers will conduct both sales and purchase transactions. To the degree that this happens, the costs presented here are overstated by

the number of individuals who only have to go through the registration process once (subject to renewal and updates), rather than having two separate individuals.

Tables 76 and 76 show the primary NAICS codes, descriptions and definitions (both employee size and revenues) for small entities that are AN Sellers. The majority of these AN Facilities are classified as small entities by the Small Business Administration.

Table 76. Primary NAICS Codes, Descriptions and Definitions for Small Entities that May Be AN Sellers (Employee Size)*

		Establishments by Employee Size						
NAICS	Description	**0-4**	**5-9**	**10-19**	**20-99**	**100-499**	**(Subtotal) <499**	**500+**
325311	Nitrogenous Fertilizer Manufacturing	46	19	23	15	11	114	31
	% of total	32%	13%	16%	10%	8%	79%	21%
325314	Fertilizer (Mixing Only) Manufacturing	111	64	56	89	62	382	94
	% of total	23%	13%	12%	19%	13%	80%	20%
32592	Explosives Manufacturing	8	4	10	16	13	51	31
	% of total	10%	5%	12%	20%	16%	63%	38%
42291	Farm Supplies Merchant Wholesalers	2,473	983	673	948	765	5,842	1,901
	% of total	32%	13%	9%	12%	10%	76%	25%
42269	Other Chemical and Allied Products Merchant Wholesalers	3,352	1,155	846	1,082	648	7,083	2,405
	% of total	35%	12%	9%	11%	7%	74%	25%

* Totals may be affected by rounding.

Table 77. Primary NAICS Codes, Descriptions and Definitions for Small Entities that May Be AN Sellers (Sales Size)*

		Establishments by Sales Size						
NAICS	Description	< $0.1 mill	$.1-0.5 mill	$0.5-1 mill	$1-5 mill	$5-10 mill	(Subtotal) <$10 mill	>$10 mill
115112	Soil Preparation, Planting, and Cultivating	509	992	413	395	30	2,339	86
	% of total	21%	41%	17%	16%	1%	96%	4%
44422	Nursery, Garden Center, and Farm Supply Stores	1,872	5,004	2,675	3,941	830	14,322	3,461
	% of total	11%	28%	15%	22%	5%	81%	20%

* Totals may be affected by rounding.

Alternatives Considered

The Department considered several alternatives when developing this proposed rule. The alternatives considered were: (1) register individuals applying for an AN Registered User Number using a paper application (via facsimile or the US mail); through a web-based portal, or a telephone application process; (2) verify AN Purchasers through both an Internet-based verification portal and call center rather than only a verification portal or call center; (3) communicate with applicants for an AN Registered User Number through US Mail rather than only through e-mail or a secure web-portal; (4) establish a specific capability within the Department to receive, process, and respond to reports of theft or loss rather than leverage a similar capability which already exists with the ATF; (5) require AN Sellers and AN Facilities to maintain records electronically in a central database provided by the Department rather than providing flexibility to the AN Seller and AN Facility to maintain their own records either in paper or electronically; (6) require agents to register with the Department prior to the sale or transfer of ammonium nitrate involving an agent rather than allow oral confirmation of the agent with the AN Purchaser on whose behalf the agent is working; and (7) exempt explosives from this regulation rather than not exempting them. Each of these alternatives is discussed below.

A. Registration
B. Verification
C. Communication with Applicants
D. Reporting Theft or Loss
E. Recordkeeping
F. Agents
G. Exemption of Explosives Regulated by ATF

A. Registration

The Department considered using one or more of three potential approaches for AN Seller and AN Purchaser registration: paper applications submitted via facsimile or US Mail; electronic applications via a web-based portal; or telephone application for a limted number of applicants. The Department is proposing the use of a web-based portal - the "AN User Registration Portal" – as the sole means for registering to be an AN Purchaser or AN Seller.

1. Registration through Facsimile or US Mail

Paper registration via facsimile or US Mail would require potential applicants to obtain and fill out an application form and fax it or mail it to the Department. The Department would then process the application and communicate the results back to the potential applicant via facsimile or US Mail.

Registration through facsimile or US Mail would have costs to both the industry and the Department. For the industry, each prospective AN Seller or AN Purchaser applying for an AN Registered User Number would have to spend approximately 45 minutes reading about the rule and procedures for registration before completing the registration application. If the application is paper-based, the Department assumes it will take each applicant about 15 minutes to complete a paper application, fax or mail it to the Department, and file it for his or her records. For the Department, supporting paper submission of application materials via facsimile or US Mail would require the hiring of staff to manually extract information from the submitted application form for performance of the TSDB check and submission into a registered user database maintained by the Department. The paper application process was not pursued or developed as the Department believes that it would result in unacceptably lengthy application processing times, and unacceptable delays between submission of applications and receipt of AN Registered User Numbers.

2. Registration through USDA Extension Service Office

During the ANPRM DHS received the suggestion to consider the USDA extension offices. As an application method. The USDA provided explanations why this was not feasible; DHS did not develop the idea beyond the intial concept.

3. Registration through the AN User Registration Portal

Through a Department developed website, potential applicants could apply for an AN Registered User Number online. With the wide spread availability of the Internet, applicants could apply from home, a public library, or place of employment, for instance. Potential applicants would go to the Department's website and access the AN User Registration Portal. There, potential applicants would apply online for an AN Registered User Number and submit their application directly to the Department. The Department would receive the information, process it, and communicate back to the applicant via e-mail.

Online registration through a Department developed, operated, and maintained website would have costs to both the industry and the Department. Each prospective AN Seller or AN Purchaser applying for an AN Registration User Number will spend approximately 45 minutes reading about the rule and procedures for registration before completing the registration application. If the application is online, the Department assumes it will take the applicant approximately 15 minutes to find the website, enter information, submit it to the Department, and print and file a copy for his or her records. Both the individual applicant and government costs are developed in the relavent sections of the evaluation If the Department is able to leverage CSAT or another existing secure web-portal, both the initial development costs and the annual operating and maintenance costs likely would be significantly lowered.

The Department is proposing that registering be done through an online web portal (see Section B 9). While not every potential applicant may have personal access to the Internet, the Internet is widely available, and the Department believes that there are significant benefits to using an online approach. The benefits to both the applicant and the Department of an online approach include: (1) substantially quicker response from the Department thereby minimizing the time during which the applicant would not be able to purchase or sell/transfer ammonium nitrate; (2) ability for an applicant or registered user to access, view, update, and manage their personally identifiable information; (3) and greater control over managing their participation, such as ease in renewing their AN Registered User Number. The Department proposes that neither paper registration applications no in person applications at USDA Extension Service Offices be offered.

4. Registration via a telephone application process.

The applicant would contact the AN helpdesk and the helpdesk operator would collect all the information necessary to complete an application for an AN Registered User Number. The IT system would then route the application as if it were an application through the web portal. The evaluation of the vetting against the TSDB would be the same.

Once a decision had been made as to whether or not to approve or deny an application the system would identify the response to be mailed to the applicant. The system would route the information to a vendor to process the letter. The vendor would print and mail the letter. The letter would require tracking, signature, certification (i.e., verification of identity), and next day delivery. DHS would also require evidence of delivery from the vendor. These are required to ensure delivery and receipt of the AN Registered User Number to the correct individual.

DHS is not recommending the telephone option but invites public comment on the concept. The following tables provide information on the costs that vary between the recommended web-portal approach and the phone approach.

Table 78. Differences between alternatives costs
($ millions, 10-year total costs, 7% Discount)

	Web-portal	Phone Option	Difference
Registration Costs	71.3	20.3	51.0
Federal Costs	55.3	81.5	-26.2
All Other Costs	544.0	540.7	3.3
Total Costs	670.6	642.5	28.1

B. Verification

The Department considered three potential approaches to verify a prospective AN Purchaser; establishing a web-based portal (i.e., Purchaser Verification Portal), establishing a call center, and establishing both capabilities. The Department is proposing to establish both a web-based portal and call center.

1. Purchaser Verification Portal

Verifying AN Purchaser status through a web-portal will have costs to both industry and the Department. The Department will bear the cost of developing and maintaining the verification portal and related guidance on its use and proper verification processes. The cost to industry of this activity is having a computer and access to the Internet. Beyond that, cost to the industry is the incremental time spent during an ammonium nitrate

transaction to verify the identity and AN Registered User Number of the prospective AN Purchaser. Accordingly, the overall cost would depend on the number of ammonium nitrate transactions that occur and the time it takes to perform a simple identity check and enter basic AN Purchaser information into the web-portal. Based upon the detailed data in the evaluation, the following table summarizes the average costs per transaction.

Table 79. Point of Sale Average Cost Summary*

	Low Total Estimate	High Total Estimate	Mean
Total Pos Annual Costs ($)	23,886,565	120,516,567	72,201,566
Purchaser POS Costs ($)	3,488,523	18,112,934	10,800,728
Seller POS Costs ($)	20,398,042	102,403,633	61,400,837
Transactions	5,486,000	29,340,000	17,413,000
Sellers	2,486	6,236	4,361
Purchasers	64,950	106,200	85,575
Transactions/Seller/Week	42.4	90.5	66.5
Transactions/Purchaser/Week	1.6	5.3	3.5
Seller Cost/Transaction ($)	3.7	3.5	3.5
Purchaser Cost/Transaction ($)	0.64	0.62	0.62

* Data is for all entities and comes from the detailed evaluation, particularly Tables 9,10,26-29,35-36

2. Purchaser Verification Call Center

The Department also considered a Purchaser Verification Call Center. Under this approach, AN Sellers would use a telephone to call a toll-free phone number established by the Department where they would either talk to a person or be led through a series of telephone tree menus. During the phone call, the AN Seller would be expected to provide information about the AN Purchaser. The operator or automated telephone system would enter the information provided into the Department's Registered User database system, wait for electronic confirmation, and then provide verbal confirmation to the caller along with a confirmation number for that specific transaction.

Verifying AN Purchaser status through a call center will have costs to both industry and the Department. The burden to the industry for the call center option rests upon having a telephone and the time spent relaying the relevant AN Purchaser information to the call center. The cost to the Department is the establishment of the call center and potentially employing staff to standby and field calls regarding ammonium nitrate purchases.

3. Purchaser Verification Portal and Call Center

The Department proposes to establish both a Purchaser Verification Portal and a Purchaser Verification Call Center (see Section C 6). This approach is identical to the Purchaser Verification Portal described above, integrated with the Purchaser Verification Call Center capability. This approach presumably would be the cheapest for the regulated community as each AN Facility likely would choose to employ the most cost-effective means of verification; however, it would be the most costly of the alternatives for the Department to establish and operate as it would bear the costs associated with the development and maintenance of both a web verification portal and call center.

When creating a manner in which AN Sellers can verify the required information on a potential ammonium nitrate purchase by an AN Purchaser, the Department found both advantages and disadvantages to each option considered. A call center may be preferable to a web-portal, as presumably all AN Sellers have telephones while not all AN Sellers have computers with Internet access, particularly at the point of sale. However, there are some potential disadvantages. For instance, the call center approach would take more time per transaction than the web portal approach, and that it would be significantly more costly for the Department to establish and operate a call center. The advantage of this alternative is that all AN Facilities would be accommodated – those with telephone access only and those with both telephone and Internet access who find the verification web portal option more efficient. As a result, the Department proposes to offer both online and call center options despite the higher costs to the Department.

C. Communication with Applicants

The Department must communicate with applicants throughout the registration process. The Department considered two alternatives to communicating with applicants: (1) communication by US Mail, and (2) communication by electronic means. The Department proposes to communicate with applicants by electronic means.

1. US Mail

The US Mail could act as the communication medium between the Department and the regulated community. If the US Mail was chosen as the communication mechanism the Ammonium Nitrate Security Program would be paper-based. While there would be some minimal cost to the industry (e.g. postage). The time to complete paperwork would be equivalent to the submission of information electronically. The costs to the Department, however, would be more substantial. The Department would have to hire or devote staff to process incoming correspondence.

2. Electronic Means

The other option for communication could be by electronic means. Program communication would occur through e-mail and secure web portals. The cost to the industry can be broken down to computer and Internet access. The cost to the Department hinges on developing web portals and databases to securely store information.

The Department assumes that most applicants have Internet access with one exception. Based upon the USDA, approximately 60% of farms have Internet access. Thus, DHS assumes that in the agricultural sector, approximately 60% of farms have computers with Internet access. The Department therefore estimated that these individuals will have to travel a short distance to an agricultural extension office, public library, or other location where access to the Internet is available to apply for an AN Registered User Number. Further, DHS assumes that for applicants without Internet access, two trips will be required; one to complete the AN Registered User Number application, and a second trip after 72 hours to retrieve the e-mail containing the AN Registered User Number. In the vast majority of cases, the e-mail containing the AN User Registration will be sent within an hour, but to be conservative, the Department has assumed farmers without Internet access will make two trips. The Department assumes that the round trip distance is 50 miles per trip and has used the standard IRS mileage rate of $0.55 per mile. The Department assumes the total extra time for each trip will average approximately one hour each way plus 1 hour for Internet access and registration for a total of 6 hours per farm registration. By multiplying 50 miles times two trips times $0.55 per mile totals $55 per individual for the mileage for the two trips associated with applying for and receiving an AN Registered User Number. Additionally, DHS included approximately $1.9 million for farmers who attempt to make a purchase without knowing about the regulation and must then make one extra trip. These calculations are detailed in Tables 11 and 12 in Section 7 of this evaluation. Because of the minimal time and effort it takes to apply for and receive an AN Registered User Number, the Department believes this approach to be a cost-effective way to prevent misappropriation of ammonium nitrate.

The Department considered using the US Mail as the primary medium for communication; however, the Department ultimately rejected this approach due to the additional time it would take to notify applicants of their AN Registered User Number. The Department also cited the significant availability of the Internet. Therefore, the Department is proposing to use electronic means as the primary medium for communication. Additionally, the Department believes that electronic communication is more secure and faster than US Mail.

D. Reporting Theft or Loss

The Department considered two alternatives for reporting theft or loss to Federal law enforcement authorities within 24 hours of the time at which knowledge of theft or loss is acquired. The Department considered requiring an AN Facility Representative to report to either the Department or ATF. The Department proposes to require reporting of theft/loss to ATF.

Under either option there is a burden to the industry. The cost to industry of this activity will be the time to gather details and report the theft or loss of ammonium nitrate. Because of the seriousness of theft or loss of ammonium nitrate, the total time to report a theft or loss is assumed to include two hours each for an inventory manager, plus one hour for the general manager. This includes the time for the reporter to organize useful details for law enforcement and conduct a brief investigation. There will likely be additional time for a necessary follow-up investigation. Strictly for purposes of this analysis, the Department assumes that two percent of AN Facilities and AN Purchasers will report loss or theft once per year. Based on these assumptions, on average there will be 88 reports of theft or loss annually, at an average total annual cost to industry of $13,350.

1. ATF Reporting

One of the many responsibilities of ATF is regulating the use of explosives. While ATF does not consider ammonium nitrate an explosive, ammonium nitrate explosive mixtures and ammonium nitrate fuel oil explosives (ANFO) are included in ATF's list of explosive materials. ATF has an existing program for reporting the theft or loss of explosives. Individuals that discover the theft or unexplained loss of ammonium nitrate would contact ATF by phone or facsimile and provide the pertinent information. The costs to the industry for reporting to ATF the theft or unexplained loss of ammonium nitrate would be minimal. The costs to the Department would be minimal as well, unless the Department funded ATF efforts.

2. DHS Reporting

Similar to ATF's method for reporting theft or loss of explosives, individuals upon discovering the theft or unexplained loss of ammonium nitrate would contact DHS. The costs to the industry for reporting the theft or unexplained loss of ammonium nitrate to the Department would be minimal. The costs to the Department would be greater than when compared to the ATF reporting requirement. The Department would be required to create and establish the theft/loss reporting policies, procedures, and infrastructure.

The Department is proposing to require reporting of theft/loss to ATF (see Section E). ATF already possesses the unique experience in collecting and responding to the theft/loss of explosive related materials. Additionally, the Department wishes to avoid duplicative efforts at the Federal level.

E. Recordkeeping

The Department considered two alternatives for maintaining records: (1) mandatory the use of a central electronic database, and (2) the flexibility to maintain their records in paper format or in electronic format. The Department proposes allowing AN Facilities to select the method of records storage for themselves (see Section F).

The Department selected this alternative because the burden to submit and maintain electronic records in a central database would increase the burden on the industry without measurable benefit to the industry. The benefit would be limited to the confidence an AN Facility would have, that if it maintained its records in a central database, it would meet Department recordkeeping requirements.

The costs to industry associated with this alternative are the costs of the time spent during each transaction collecting and recording the information required under the regulations, the costs of the time spent on ongoing recordkeeping activities throughout the year, and any capital investment costs an AN Facility incurs in acquiring equipment to facilitate the safe storage of the ammonium nitrate transaction records.

F. Agents

The Department considered three options to minimize the likelihood that agents are used to circumvent the requirements of this proposed rule. Specifically, the Department believes it is imperative for AN Sellers to ensure that an agent is acting at the direction of a registered AN Purchaser before the AN Seller transfers possession of ammonium nitrate to that agent. To accomplish this, the Department is considering the following alternatives:

- Requiring AN Purchasers to submit the names of their agents to the Department via the AN User Registration Portal, and requiring the AN Seller to confirm with the Department, prior to transferring possession of the ammonium nitrate, that the prospective AN Purchaser has submitted the name of the agent to the Department;
- Requiring the AN Seller to orally confirm with the prospective AN Purchaser prior to each sale or transfer that the agent is acting on behalf of the AN Purchaser;

- A combination of the first two options, where an AN Seller first should checks with the Department to see if the prospective AN Purchaser has submitted the name of the agent to the Department and, if not, than the AN Seller must verbally confirms with the prospective AN Purchaser that the agent is acting on his/her behalf.

Under the first approach, each AN Purchaser would be required to provide to the Department the names of any agents that might act on his/her behalf at the point of sale. Agent names would be submitted by the AN Purchaser to the Department via the AN User Registration Portal. An AN Purchaser could submit an agent's name when he/she applies for an AN Registered User Number or at any other time prior to conducting a purchase involving that agent. Then, prior to transferring possession of ammonium nitrate to an agent, an AN Seller would need to verify with the Department that the prospective AN Purchaser has designated the agent as an approved agent to represent the AN Purchaser at the point of sale. This verification would occur through the same mechanism that is used for the other prospective AN Purchaser verification activities (i.e., the Purchaser Verification Portal or the Purchaser Verification Call Center). The agent's information provided to the Department by AN Purchasers and AN Sellers would not be vetted against the TSDB nor otherwise checked by the Department; rather, it would simply be maintained in the AN Registered User Database as a data field linked to the AN Purchaser for use in the agent verification process.

Under the second approach, the Department would require the AN Seller to verify with the prospective AN Purchaser that the agent is actually acting on behalf of the prospective AN Purchaser for each specific transaction. Much like the other verification activities, this could occur at the time the prospective AN Purchaser places the order, when the agent arrives to take possession of ammonium nitrate, or any other time, so long as it occurs prior to the AN Seller transferring possession of ammonium nitrate to the prospective AN Purchaser's agent. If this approach were adopted, the Department would propose requiring this confirmation to occur for each transaction/occurrence in which an agent is taking possession of ammonium nitrate; a blanket verification of an agent by an AN Purchaser would not be acceptable. Additionally, as an e-mail or letter can be easily forged, under this approach the Department would require that the AN Seller must receive this verification orally (e.g., in person; telephonically) from the prospective AN Purchaser.

The third approach – the option the Department is proposing in this NPRM – is a combination of the first two approaches. Specifically, AN Purchasers would provide the Department with the names of their agent(s), and an AN Seller would verify either through the Purchaser Verification Portal or Purchaser Verification Call Center that the agent information has been provided by the AN Purchaser to the Department. As opposed to the

first approach under which a sale or transfer cannot occur unless the agent's name has been provided to the Department by the prospective AN Purchaser, under this third option the AN Seller would be allowed to complete the sale or transfer after either (1) verifying the agent has been designated by the prospective AN Purchaser in the Purchaser Verification Portal or Purchaser Verification Call Center, or (2) orally confirming with the prospective AN Purchaser that the agent is acting on the prospective AN Purchaser's behalf for this individual sale or transfer. The Department expects that in the majority of cases this oral confirmation would occur telephonically. This third option has the benefit of minimizing the point of sale impact of the agent verification process, while allowing a means for a sale or transfer to be completed even if a prospective AN Purchaser forgets or is otherwise unable to provide the Department with the agent's name prior to using the agent at the point of sale. For these reasons, this third approach is the option proposed by the Department.

G. Exemption of Explosives Regulated by ATF

The Department has the discretion to exempt from regulation persons producing, selling/transferring, or purchasing ammonium nitrate exclusively for use in the production of explosives under a license or permit issued under the Federal explosives laws, 18 U.S.C. Chapter 40, and associated regulations. ATF is responsible for enforcing Federal explosives laws, and has established regulations for doing so. The Department is proposing to exempt from regulation ammonium nitrate mixtures that are "explosives" subject to ATF regulation (i.e., ANFO). The Department also considered two other approaches. The first approach is to apply these rules to individuals who purchase, sell, or transfer ammonium nitrate for use in the production of explosives. The second approach considered is to entirely exempt facilities and persons that purchase, sell, or transfer ammonium nitrate solely for use in the production of explosives, as they are already regulated by ATF.

1. *Exempt ammonium nitrate mixtures that are "explosives" subject to ATF regulation*

Under this approach, entities and individuals that purchase, sell, or transfer ANFO, but who do not produce ANFO or possess ammonium nitrate for other reasons, would be exempt from these requirements and would be subject solely to ATF regulation. This approach minimizes cost to the industry as well as the Department.

2. *Regulate individuals who purchase, sell, or transfer ammonium nitrate, whether that ammonium nitrate is incorporated into "explosives" or not*

Under this approach, such individuals would be subject to regulation by both the Department and ATF under the Federal explosives laws. By not exempting ammonium nitrate used in explosives, the Department would be treating all individuals who purchase, sell, or transfer ammonium nitrate – whether as part of ANFO mixtures or not – the same. This approach would ensure that there are no gaps in coverage of ammonium nitrate as it moves through the supply chain – ammonium nitrate would be captured under the Department's ammonium nitrate program both before and after being combined with fuel oil to create ANFO, and would be captured under ATF's regulations after being combined with fuel oil to create ANFO. There could potentially be heightened costs to the industry due to potentially duplicative regulation. The costs to the Department would hinge upon a greater number of AN Facilities to regulate.

3. *Entirely exempt facilities and persons that purchase, sell, or transfer ammonium nitrate solely for use in the production of explosives*

Under this approach facilities and persons that purchase, sell, or transfer ammonium nitrate solely for use in the production of explosives would be entirely exempt from these requirements, as they are already regulated by ATF. In this model, facilities and persons that are licensed by ATF to mix ammonium nitrate with fuel to create ANFO which do not purchase, sell, or transfer ammonium nitrate for other purposes would not be subject to these regulations. This approach, however, could create a considerable gap in regulatory coverage throughout the ammonium nitrate supply chain, as ATF regulations apply solely to ANFO and not the ammonium nitrate used to create it. The costs to the industry, as well as the Department, would be low because certain individuals and AN Facilities would not fall under the regulation.

The Department proposes to exempt entities and individuals that purchase, sell, or transfer ANFO, but who do not produce ANFO or possess ammonium nitrate for other reasons. These entities and individuals are regulated by ATF. This approach avoids duplicative regulation yet it does not create a potential regulatory gap in the ammonium nitrate supply chain.

Average Costs per Facility

The largest cost driver is activities related to the point of sale. While variation in cost by AN Facility is largely driven by the number of point of sale transactions that each AN Facility conducts, it is helpful to examine the average cost per AN Purchaser and AN Facility. The average costs per AN Purchaser are presented in tables 74 and 75. The average costs per AN Facility are presented in tables 76 and 77. Both the lower and upper bounds of the

estimate are provided. In either case, the highest cost will be for farms without Internet access. The cost of compliance to AN Purchasers is the time to apply for an AN Registered User Number with the Department of Homeland Security and additional time during the purchase. This registration cost averages $57 to $700 once every five years. The Department believes for even the smallest farms and other businesses that only purchase ammonium nitrate, this registration cost does not represent a significant economic impact. The Department invites comments on this impact.

Table 80. Average Cost per AN Purchaser - Low Population/Low Transactions *

	Purchaser Registration	Appeals	Purchase Opportunity Cost	Total Purchaser Cost	Number of Facilities	Average Cost per AN Purchaser
Farms with Internet access	2,079,500	28,100	1,674,500	3,782,100	30,000	126
Farms w/o Internet access	12,998,000	18,700	1,116,300	14,133,000	20,000	707
Golf courses	169,000	3,500	334,900	507,400	6,000	85
Landscaping services	144,000	2,900	251,200	398,100	4,500	88
Blasting services	16,000	200	14000	30,200	300	121
Mines	71,000	1,500	97,700	170,200	1,800	97
Total	15,477,500	54,900	3,488,500	19,020,900	62,500	304

*Totals may not add due to rounding.

Table 81. .Average Cost per AN Purchaser - High Population/High Transactions *

	Purchaser Registration	Appeals	Purchase Opportunity Cost	Total Purchaser Cost	Number of Facilities	Average Cost per AN Purchaser
Farms with Internet access	3,119,300	42,100	8,150,800	11,312,200	45,000	251
Farms w/o Internet access	19,497,500	28,100	5,433,900	24,959,500	30,000	832
Golf courses	339,000	6,900	2,173,600	2,519,500	12,000	210
Landscaping services	287,000	5,800	1,630,200	1,923,000	9,000	214
Blasting services	33,000	700	90600	124,300	500	249
Mines	142,000	2,800	634,000	778,800	3,500	223
Total	23,417,800	86,400	18,112,900	41,617,100	100,000	416

*Totals may not add due to rounding.

The average per AN Seller facility cost to comply with the proposed rule ranges from $6,400 for laboratory suppliers (low population/low transactions scenario) to $23,800 for an explosives distributor (high population/high transactions scenario).

Table 82. . Average Cost per AN Seller Facility - Low Population/Low Transactions Estimate*

	Reg. Activities	Appeals	Point of Sale (Web Portal)	Record-keeping	Reporting Theft/ Loss	Audits/ Inspections	Total Seller Cost	Number of AN Facilities	Average Cost
AN fert. Manuf.	8,000	0	125,800	43,100	100	2,700	179,700	0	6,900
AN expl. manuf.	3,000	0	50,800	17,400	0	1,100	72,400	0	7,200
Fertilizer mixers	83,000	1,700	1,935,500	663,200	1,100	41,500	2,726,000	400	6,800
Explosives dist.	102,000	2,100	5,494,500	834,200	1,500	51,600	6,486,000	500	13,000
Farm whol./co-ops	92,000	1,800	4,524,100	742,100	1,600	52,600	5,414,100	500	10,800
Retail garden ctrs.	72,000	1,300	3,791,900	703,400	1,600	49,200	4,619,400	500	9,200
Fertilizer app.	73,000	1,300	4,254,800	717,100	1,400	50,100	5,097,700	500	10,200
Lab. Supply	9,000	0	220,700	83,400	100	5,600	318,800	100	6,400
Total	**442,000**	**8,200**	**20,398,100**	**3,803,900**	**7,400**	**254,400**	**24,914,100**	**2,500**	**10,000**

Table 83. Average Cost per AN Facility - High Population/High Transactions Estimate

	Reg. Activities	Appeals	Point of Sale (Web Portal)	Record-keeping	Reporting Theft/ Loss	Audits/ Inspections	Total Seller Cost	Number of AN Facilities	Average Cost
AN fert. Manuf.	8,000	0	311,200	43,100	100	2,700	365,100	0	14,000
AN expl. manuf.	3,000	0	125,700	17,400	0	1,100	147,300	0	14,700
Fertilizer mixers	123,000	2,600	7,181,800	994,800	1,700	62,200	8,366,000	600	13,900
Explosives dist.	202,000	4,200	21,807,900	1,668,500	3,100	103,200	23,788,900	1,000	23,800
Farm whol./co-ops	184,000	3,400	17,841,300	1,484,200	3,200	105,100	19,621,100	1,000	19,600
Retail garden ctrs.	357,000	6,000	37,281,300	3,517,200	7,900	246,100	41,415,400	2,500	16,600
Fertilizer app.	146,000	2,800	16,764,200	1,434,200	2,900	100,100	18,450,200	1,000	18,500
Lab. Supply	19,000	500	1,090,400	166,800	300	11,100	1,288,200	100	12,900
Total	**1,042,000**	**19,500**	**102,403,800**	**9,326,200**	**19,200**	**631,600**	**113,442,200**	**6,200**	**18,200**

*Totals may not add due to rounding.

Identification of Duplication, Overlap and Conflict with Other Federal Rules

A thorough discussion of the relationship to other rules is provided earlier in Section II.D Research Efforts and Findings of the rule preamble.

15. International Trade Impact Assessment

The Trade Agreement Act of 1979 prohibits Federal agencies from activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as security, are not considered unnecessary obstacles. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. In addition, the general benefits and desirability of free trade influenced the development of this notice of proposed rulemaking to remove or diminish, to the extent feasible, barriers to international trade, including both barriers affecting the export of American goods and services to foreign countries and barriers affecting the import of foreign goods and services into the United States.

As entities that purchase or sell ammonium nitrate, or as individual AN Purchasers and AN Sellers, importers and exporters would be required to register with the Department and comply with the requirements of the NPRM in the same manner as their domestic

counterparts when ammonium nitrate physically changes possession, as a part of sales or transfers by ammonium nitrate facilities, within the jurisdiction of the United States. Thus, the Department has assessed the potential effect of this NPRM and has determined that it would not create barriers to international trade.

16. Unfunded Mandates Reform Act (UMRA)

The Unfunded Mandates Reform Act of 1995 (UMRA), enacted as Public Law 104-4 on March 22, 1995, is intended, among other things, to curb the practice of imposing unfunded Federal mandates on State, local, and tribal governments. Title II of UMRA requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in a $100 million or more expenditure (adjusted annually for inflation) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector. The primary (i.e., mean) estimate for this proposed rulemaking would not impose an unfunded mandate on State, local, or tribal governments, but the upper end of the estimate would show an unfunded mandate in the aggregate. The analysis required under Title II of UMRA is satisfied by this regulatory impact assessment.

The Department recognizes that some AN Sellers or AN Purchasers may be by State or local government entities. These AN Facilities would be required to comply with the provisions of this proposed rule.

Further, under Subtitle J, the Department may enter into cooperative agreements with the U.S. Department of Agriculture or any State department of agriculture to carry out the provisions of this subtitle. The statute further requires the Department, at the request of a Governor of a State, to delegate to that State authority to carry out the administration and enforcement if the Department determines that the State is capable of satisfactorily carrying out such functions. If the Department delegates any functions to a State, subject to the availability of appropriations, the Department must provide to the State sufficient funds to carry out those functions.
In regards to delegation of its authority to individual States, the Department proposes the following process: If a State is interested in performing the administration and enforcement activities, the Governor of the State must submit a written request to the Department asking for delegation of those authorities. Upon receipt of the request, the Department will initiate an evaluation to determine if the State is capable of satisfactorily performing those functions and, upon completion of the evaluation, will provide the State with a written response informing it of the Department's determination. In order to make a fair evaluation, the Department is likely to request information from the State and consult with the State before a final determination is made. Because the responsibility would be

transferred only at the request of the State, and then with funding, no unfunded mandate is created.

Appendix A – Population Estimates

This regulatory evaluation makes several assumptions regarding the number of businesses potentially impacted by this proposed rule. Below are the details of the sources and underlying assumptions for each category of the regulated population considered. The Department seeks comment on the number of businesses potentially affected by this proposed rule. Unless noted otherwise, NAICS specific business populations come directly from the U.S. Census Statistics of US Business, 2006, US All Industries, available at http://www2.census.gov/econ/susb/data/2006/us_6digitnaics_2006.xls.

AMMONIUM NITRATE FOR FERTILIZER

Farms: According to the U.S. Department of Agriculture, 1,022,036 farms incurred expenses for Commercial fertilizer, lime, and soil conditioners.[39] Only a fraction of the total use ammonium nitrate fertilizer. According to the 4/17/09 listening session with plant food control officials from several States, roughly 50,000 – 75,000 farms in Missouri and 3,000 farms in Texas were reported to use ammonium nitrate fertilizer. Estimating the average fertilizer consumption per farm in those States and applying to the national totals, DHS estimates roughly 100,000 to 150,000 farms using ammonium nitrate fertilizer. In a 4/17/09 listening session with plant food control officials from several States, the Department heard that nationally, about half of farms were thought to use applicator services and thus, never take custody of ammonium nitrate fertilizer, thus for this analysis, the Department assumes 50,000 to 75,000 farms could be impacted by this proposed rule.

Fertilizer applicator services: The Department assumes that about 25% to 50% of NAICS 115112 (soil preparation, planting and cultivating) provide applicator services for ammonium nitrate. Thus, 500 to 1,000 of these businesses could be impacted by this proposed rule.

Ammonium nitrate (for fertilizer): According to SRI Consulting, there were 26 manufacturers of ammonium nitrate fertilizer in 2008.

Fertilizer mixers: According to the Census Bureau,[40] there were 476 businesses engaged in mixing fertilizers, which is creating formulations of fertilizer materials for specific plant nutrition purposes. Thus, the Department has assumed a range of 400 to 600 fertilizer mixers that could be impacted by this proposed rule.

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39 U.S. Department of Agriculture, National Agricultural Statistics Services, 2007 Census of Agriculture (US data), Table 45.
40 NAICS 325314 at Statistics of US Business, 2006, US All Industries available at http://www2.census.gov/econ/susb/data/2006/us_6digitnaics_2006.xls

Farm wholesalers/co-ops: During the 4/17/09 listening session with plant food control officials, it was suggested that the number of farm wholesalers/co-ops selling/transferring ammonium nitrate fertilizer ranged from 500 to 1,000.

Retail garden centers: Because of the concern regarding the misappropriation of ammonium nitrate, State plant food control officials advised the Department that very few, if any, retail outlets are still in the business of selling straight ammonium nitrate fertilizer. None of the big home improvement/garden center chains carry pure ammonium nitrate. To include these businesses in the regulatory evaluation, the Department assumes that 500 to as many as 2,500 retail garden centers nationwide sell ammonium nitrate in its pure form.

Golf courses: According to the Census Bureau,[41] there were nearly 12,000 golf courses and country clubs (NAICS 71391). The Department assumes that many of these apply ammonium nitrate fertilizer, thus 6,000 to 12,000 golf courses and country clubs may be impacted by this proposed rule.

Landscaping services: According to the Census Bureau there were about 90,000 landscaping businesses (NAICS 56173).[42] Only a fraction of these services apply fertilizer, and a fraction of those apply ammonium nitrate fertilizer. As a result, the Department assumes that many of these apply ammonium nitrate fertilizer, thus 4,500 to 9,000 of these businesses may be impacted by this proposed rule.

Laboratory supply: The Department assumes that approximately 50 - 100 laboratory supply wholesalers may stock ammonium nitrate above the threshold.

AMMONIUM NITRATE FOR EXPLOSIVES

Ammonium nitrate (for explosives) manufactures: According to data from the 2002 Census of Manufacturers, there were approximately 10 manufacturers of low-density ammonium nitrate for use in explosives. This was confirmed by members of the Institute of Makers of Explosives (IME).

Explosives distributors: According to the IME, there are a relatively small number of explosives distributors that process transactions involving ammonium nitrate. DHS assumes that 500 to 1,000 explosives distributors could be affected by this proposed rule.

[41] Statistics of US Business, 2006
[42] Statistics of US Business, 2006

Blasting services: A specialized sub-segment of NAICS 213113-5 (Support Services for Mining, excluding oil and gas drilling), these businesses are engaged in coming to the mine site and preparing and detonating explosives, including making ammonium nitrate fuel oil (ANFO) mixtures. Members of the IME suggested that only a fraction of 750 businesses in NAICS 213113-5 was engaged in blasting activities. The Department assumes that 250-500 of these businesses could be affected by this proposed rule.

Mines: According to the Mine Safety and Health Administration's Part 50 data, there were about 7,000 mines. Members of the IME suggested that 50%-75% of these mines use blasting services and thus never take custody of ammonium nitrate. As a result, the Department assumes 1,750 to 3,500 mines could be impacted by this proposed rule.

Appendix B – Wage Rates

Wage rates for non-farm workers are readily available from the Bureau of Labor statistics and our methodology is explained below. Attributing a wage to farm owners or managers is much more difficult as these wages are specifically excluded from BLS data. The U.S Department of Agriculture, Economic Research Service (ERS), studies the economic issues of agriculture. One of the known characteristics of farm income, and therefore a wage proxy, is highly volatile over time. Additionally, much of the income may come from off farm activity. This volatility is explored in the ERS report, Income, Wealth, and the Economic Well-Being of Farm Households, Ashok K. Mishra, Hisham S. El-Osta, Mitchell J. Morehart, James D. Johnson, and Jeffrey W. Hopkins, Agricultural Economic Report No. (AER812) 77 pp, July 2002. It is available at http://www.ers.usda.gov/publications/aer812/aer812.pdf. Because there is no truly representative wage rate specifically for the farm owners or managers who will be applying for an AN Registered User Number, the Department is using an average of the loaded wage rates for all affected populations.

For non-farm wages, the wage rates used throughout this analysis reflect the 50th percentile (median) hourly wage rate for each occupational classification for each industry. The base hourly wages were pulled from the Bureau of Labor Statistics Occupational Employment Statistics Survey (May 2008). Wage rates can be retrieved from BLS several different ways. Detailed wage tables are available at various NAICS industry level. The Department used the files that matched the corresponding NAICS level of detail in the charts below. Those wage rates are available as complete tables at http://www.bls.gov/oes/oes_dl.htm, as follows:

National 3-digit NAICS Industry-Specific estimates (1,966 KB)	ftp://ftp.bls.gov/pub/special.requests/oes/oesm08in3.zip
National 4-digit NAICS Industry-Specific estimates (4,397 KB)	ftp://ftp.bls.gov/pub/special.requests/oes/oesm08in4.zip
National 5-digit NAICS Industry-Specific estimates (745 KB)	ftp://ftp.bls.gov/pub/special.requests/oes/oesm08in5.zip

Where exact data matches were unavailable, wage rates from a similar occupational classification or aggregate industry were substituted. To reflect a "loaded" wage (including employer-paid benefits), each base wage was multiplied by benefit multiplier. BLS reports employer costs by industry and broad occupational category which provides different multipliers for different wages. These multipliers are listed below and were retrieved on: March 30, 2010 from BLS at http://data.bls.gov/cgi-bin/surveymost for complete data tables and http://data.bls.gov:8080/PDQ/outside.jsp?survey=cm for menu driven query. The multiplier is derived for each intersection of occupation and NAICS by dividing total

compensation by wages and salaries. The values range from 1.32 to 1.54 and are multiplied times the corresponding wage rate to get a total compensation loaded wage rate. All labor pricing throughout the evaluation utilizes the corresponding industry and occupation loaded rate developed below.

Table 84 . Hourly Wage Rates at 50th Percentile (median) ($/hour)

Industry Category	NAICS Code	Purchasing agents, except wholesale, retail, and farm products 13-1023	Sales Manager 11-1022	Sales representatives, wholesale and manufacturing, technical and scientific products 41-4011	Transportation, storage, and distribution managers 11-3071	Office and administrative support 43-0000
Fertilizer applicator services	115100	$27.34	$65.01	$24.36	$30.21	$12.16
Mines	212000	$25.17	$44.33	$29.13	$38.36	$14.78
Blasting services	213000	$24.86	$43.78	$32.36	$38.41	$14.47
AN fertilizer manuf./Fertilizer mixers	325300	$25.51	$45.70	$33.71	$31.85	$15.42
AN explosives manuf.	325900	$24.70	$55.62	$35.40	$35.24	$16.63
Explosives distributors/Laboratory supply	424600	$25.12	$54.35	$33.11	$35.17	$15.58
Farm wholesalers/co-ops	424900	$22.17	$46.86	$26.91	$32.33	$12.89
Retail garden centers	444200	$12.30	$33.31	$24.13	$31.92	$11.76
Landscaping	561730	$21.44	$29.84	$23.09	$33.77	$13.29
Golf courses	713900	$18.96	$39.02	$16.19	$35.35	$11.44

Table 85. Total Compensation/Wage and Salary Multiplier

Industry Category	NAICS Code	Purchasing agents, except wholesale, retail, and farm products 13-1023	Sales Manager 11-1022	Sales representatives, wholesale and manufacturing, technical and scientific products 41-4011	Transportation, storage, and distribution managers 11-3071	Office and administrative support occupations 43-0000
Fertilizer applicator services	115100	1.48	1.33	1.48	1.48	1.43
Mines	212000	1.43	1.33	1.48	1.48	1.43
Blasting services	213000	1.54	1.33	1.54	1.48	1.43
AN fertilizer manuf./Fertilizer mixers	325300	1.54	1.33	1.54	1.48	1.43
AN explosives manuf.	325900	1.54	1.33	1.54	1.48	1.43
Explosives distributors/Laboratory supply	424600	1.54	1.33	1.43	1.48	1.43
Farm wholesalers/co-ops	424900	1.43	1.33	1.43	1.48	1.43
Retail garden centers	444200	1.33	1.33	1.33	1.48	1.43
Landscaping	561730	1.32	1.33	1.32	1.48	1.43
Golf courses	713900	1.32	1.33	1.32	1.48	1.43

Table 86. Loaded Wage Rates at 50th Percentile (Hourly wage rate * multiplier) ($/hour)

Industry Category	NAICS Code	Purchasing agents, except wholesale, retail, and farm products 13-1023	Sales Manager 11-1022	Sales representatives, wholesale and manufacturing, technical and scientific products 41-4011	Transportation, storage, and distribution managers 11-3071	Office and administrative support 43-0000
Fertilizer applicator services	115100	40.42	86.73	36.02	44.67	17.38
Mines	212000	36.10	59.14	43.07	56.73	21.12
Blasting services	213000	38.24	58.40	49.78	56.80	20.68
AN fertilizer manuf./Fertilizer mixers	325300	39.24	60.97	51.86	47.10	22.04
AN explosives manuf.	325900	38.00	74.20	54.46	52.11	23.76
Explosives distributors/Laboratory supply	424600	38.64	72.51	47.21	52.01	22.26
Farm wholesalers/co-ops	424900	31.61	62.51	38.37	47.81	18.42
Retail garden centers	444200	16.30	44.44	31.98	47.20	16.81
Landscaping	561730	28.37	39.81	30.55	49.94	18.99
Golf courses	713900	25.08	52.05	21.42	52.28	16.35

As discussed at the beginning of this section, the average of rates in Table 75, $41.04 is used for farm applicants.

Table 87, Calculation of Population Weighted Average Fully loaded Rate for Opportunity cost for purchasers; Low Population

Industry Category	Purchasing agents, except wholesale, retail, and farm products	Registration Population	Share of total	Contribution to weighted average
	13-1023			
Agricultural sector				
Fertilizer mixers	39.24	1,200	0.009	$ 0.36
Farm wholesalers/co-ops	31.61	1,500	0.011	$ 0.36
Retail garden centers	16.30	1,500	0.011	$ 0.18
Fertilizer applicators	40.42	1,500	0.011	$ 0.46
Farms	41.04	100,000	0.754	$ 30.95
Golf courses	25.08	12,000	0.090	$ 2.27
Landscaping services	28.37	9,000	0.068	$ 1.93
Explosives Sector				
Explosives distributors	38.64	1,500	0.011	$ 0.44
Blasting services	38.24	750	0.006	$ 0.22
Mines	36.10	3,500	0.026	$ 0.95
Other				
Laboratory supply	38.64	150	0.001	$ 0.04
Total		**132,600**	**1.00**	**$ 38.15**

Table 88, Calculation of Population Weighted Average Fully loaded Rate for Opportunity cost for purchasers; High Population

Industry Category	Purchasing agents, except wholesale, retail, and farm products	Registration Population	Share of total	Contribution to weighted average
	13-1023			
Agricultural sector				
Fertilizer mixers	39.24	1,800	0.008	$ 0.32
Farm wholesalers/co-ops	31.61	3,000	0.014	$ 0.43
Retail garden centers	16.30	7,500	0.034	$ 0.56
Fertilizer applicators	40.42	3,000	0.014	$ 0.55
Farms	41.04	150,000	0.685	$ 28.10
Golf courses	25.08	24,000	0.110	$ 2.75
Landscaping services	28.37	18,000	0.082	$ 2.33
Explosives Sector				
Explosives distributors				
Blasting services	38.64	3,000	0.014	$ 0.53
Mines	38.24	1,500	0.007	$ 0.26
	36.10	7,000	0.032	$ 1.15
Other				
Laboratory supply	38.64	300	0.001	$ 0.05
Total		**219,100**	**1.00**	**$ 37.04**

Appendix C – Computer and Internet Access on US Farms

The question has been raised of whether the potential regulated community for this proposed rule has sufficient access to the Internet for the purpose of conducting one-time online registration. The Department provides the following snapshot as information only. State specific data is not used in the evaluation. Data from USDA suggests that only slightly more than half of all farms in the States likely to be the most affected had access to the Internet in 2007. Using historical growth rates on the proliferation of Internet access on farms, about 58% of farms will have Internet access in 2009. For farms without direct Internet access, however, access to the Internet is generally available in these communities through other venues, such as State extension offices, public libraries, etc.

According to the 2007 Census of Agriculture (USDA) Volume 1, Table 46, nationwide, 63% of farms had computer access and 55% had Internet access. There was considerable variability between States with regard to Internet access. Wyoming was the most "connected" with 75% of farms having Internet access. The least connected State was Kentucky with 39% of farms with Internet access.

Looking at just the top 15 ammonium nitrate consuming States (direct application only), which combined account for 88.8% of direct application ammonium nitrate consumption, the median percentage of farms with Internet access was slightly more than half at 52% in 2007. Using data from 2003-2007, we project about 58% of these farms will have Internet access in 2009. The table below details computer and Internet access by the top 15 ammonium nitrate consuming States in 2007. Based upon a more recent USDA survey (http://usda.mannlib.cornell.edu/usda/current/FarmComp/FarmComp-08-14-2009.pdf) The Department has assumed that 60% of farms will have Internet access.

Table 89. Computer and Internet Access for Top 15 Ammonium Nitrate Consuming States, 2007

Rank	State	Percent of Farms with Computer Access	Percent of Farms with Internet access	Consumption of AN* (short tons material)	% Total US AN Consumption
1	Missouri	56%	50%	221,357	21.0%
2	Alabama	48%	40%	123,331	11.7%
3	Tennessee	60%	52%	105,246	10.0%
4	Texas	62%	57%	89,637	8.5%
5	Mississippi	51%	41%	73,150	6.9%
6	Kentucky	50%	39%	58,090	5.5%
7	Kansas	68%	57%	43,803	4.1%
8	Arkansas	59%	52%	37,714	3.6%
9	Georgia	46%	42%	35,553	3.4%
10	Oklahoma	55%	51%	29,870	2.8%
11	Louisiana	57%	55%	28,022	2.7%
12	North Carolina	61%	55%	27,384	2.6%
13	Wyoming	82%	75%	23,967	2.3%
14	Florida	61%	55%	20,611	2.0%
15	Nebraska	66%	55%	20,207	1.9%
	Top 15	**59%**	**52%**	**937,942**	**88.8%**
	Total US	**63%**	**55%**	**1,056,148**	**100.0%**

*Direct application only

Sources: Computer access is available in table 46, Volume 1, of the 2007 U.S. Census of Agriculture available at http://www.agcensus.usda.gov/Publications/2007/Full_Report/usv1.pdf, p. 619 or http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_US_State_Level/st99_2_046_046.pdf. Phone conversations with two State officials who are a part of Association of American Plant Food Control Officials provided the Department with their State information on direct application of ammonium nitrate. Using their information, application rates were then used to estimate State consumption. Additionally, "Commercial Fertilizers 2007", The Fertilizer Institute (report is not online but is available for order at http://www.tfi.org/publications/commercialorder.pdf) provided additional consumption information. The Department invites comments providing improved data sources.