Regulatory Analysis Form

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REVIEW COMMISSION

(1) Agency

Insurance Department

(2) I.D. Number (Governor's Office Use)

11-216

IRRC Number: 2312

(3) Short Title

Fees and Collection Procedures

(4) PA Code Cite	(5) Agency Contacts & Telephone Numbers
25 Pa. Code, Chapter 977, §§ 977.12 & 977.33	Primary Contact: Peter J. Salvatore, Regulatory Coordinator, 1326 Strawberry Square, Harrisburg, PA 17120, (717) 787-4429 Secondary Contact.

(6) Type of Rulemaking (check one)	(7) Is a 120 Emergency Certification Attached?
☐ Proposed Rulemaking ☐ Final Order Adopting Regulation ☒ Final Order, Proposed Rulemaking Omitted	☒ No ☐ Yes: By the Attorney General ☐ Yes: By the Governor

(8) Briefly explain the regulation in clear and nontechnical language.

The rulemaking will bring the regulation's fees to the appropriate levels as recommended by the Board following their extensive review and discussion of an actuarial report that was completed on September 12, 2002. After reviewing this report, the Board determined that this increase is necessary to maintain the solvency of the Fund for the public health and safety of this Commonwealth's citizens and their environment. The actuarial study, performed by MMC Enterprise Risk Consulting, Inc., determined that an increase in the gallon and capacity fees was necessary to maintain the actuarial soundness of the Fund in the future.

(9) State the statutory authority for the regulation and any relevant state or federal court decisions.

Sections 206, 506, 1501 and 1502 of The Administrative Code of 1929 (71 P.S. §§ 66, 186, 411, and 412) provide the Insurance Commissioner with the authority to promulgate regulations governing the enforcement of the laws relating to insurance. Section 705 of the Storage Tank and Spill Prevention Act of 1989 (35 P.S. §6021.705) authorizes the Board to promulgate regulations concerning the establishment of fees for participants in the Fund.

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(10) Is the regulation mandated by any federal or state law or court order, or federal regulation? If yes, cite the specific law, case or regulation, and any deadlines for action.

No.

(11) Explain the compelling public interest that justifies the regulation. What is the problem it addresses?

The Insurance Department and the Board seek to amend Chapter 977, §977.12 to bring the regulation's fees to the appropriate levels as recommended by the Board after an extensive review and discussion of an actuarial report that was completed on September 12, 2002. This will allow the Fund to remain solvent and be there for future claims against the Fund.

(12) State the public health, safety, environmental or general welfare risks associated with nonregulation.

If the recommended fee increases are not promulgated as recommended by the Board, the Fund will not have sufficient monies within two years to pay ongoing clean up costs associated with existing underground storage tank releases and new releases that occur following the September 12, 2002 actuarial report. This could result in the releases from underground storage tanks not being cleaned up and creates a public health, safety and environmental risk.

(13) Describe who will benefit from the regulation. (Quantify the benefits as completely as possible and approximate the number of people who will benefit.)

The public will benefit from the regulation to the extent that the Fund will be there to pay for the clean up of claims when necessary.

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(14) Describe who will be adversely affected by the regulation. (Quantify the adverse effects as completely as possible and approximate the number of people who will be adversely affected.)

There will be no adverse effects on any party as a result of the amendment of this regulation.

(15) List the persons, groups or entities that will be required to comply with the regulation. (Approximate the number of people who will be required to comply.)

The regulation applies to all owners or operators of USTs and HOTs in the Commonwealth.

(16) Describe the communications with and input from the public in the development and drafting of the regulation. List the persons and/or groups who were involved, if applicable.

Comments regarding the amendment of this regulation were not solicited from the various trade associations representing the insurance industry. However, the Underground Storage Tank Indemnification Board is comprised of members of the industry that are regulated under this rulemaking and voted at the September 12, 2002 Board meeting to increase the fees as proposed.

(17) Provide a specific estimate of the costs and/or savings to the regulated community associated with compliance, including any legal, accounting or consulting procedures, which may be required.

The amendment of the regulation will have an impact on costs associated with all owners or operators of USTs and HOTs in the Commonwealth. However, according to the Energy Information Administration, the average gasoline consumption per household in Pennsylvania is 973 gallons per year or 81 gallons per month. This increase will be $0.01 per gallon or $0.81 per month per household ($0.01 X 81 gallons = $0.81). As this increase is not significant, it may still be transferred to the average gasoline consumer, as determined by competition in the market place. The local municipalities will see an increase of approximately $482 per quarter or $1928 per year ($3,946,609 divided by 2045 municipalities, including school districts).

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(18) Provide a specific estimate of the costs and/or savings to local governments associated with compliance, including any legal, accounting or consulting procedures, which may be required.

There will be no legal or accounting costs associated with this rulemaking. However, the costs that the local governments are currently paying will increase by approximately $900,000 per quarter. State-owned tanks are exempt from all USTIF fees.

(19) Provide a specific estimate of the costs and/or savings to state government associated with the implementation of the regulation, including any legal, accounting, or consulting procedures, which may be required.

There are no costs or savings associated to state government associated with this rulemaking.

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(20) In the table below, provide an estimate of the fiscal savings and costs associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

	Current FY Year	FY +1 Year	FY +2 Year	FY +3 Year	FY +4 Year	FY +5 Year
SAVINGS:	$	$	$.	$	$	$
Regulated Community	$0	$0	$0	$0	$0	$0
Local Government	$0	$0	$0	$0	$0	$0
State Government	$0	$0	$0	$0	$0	$0
Total Savings	$0	$0	$0	$0	$0	$0
COSTS:						
Regulated Community	$ 20,166,627	$ 41,543,252	$ 42,789,550	$ 44,073,236	$ 45,395,433	46,757,296
Local Government	$ 1,915,830	3,946,609	4,065,007	4,186,957	4,312,566	4,441,943
State Government	$0	$0	$0	$0	$0	$0
Total Costs	$ 22,082,457	45,489,861	46,854,557	48,260,193	49,707,999	51,199,239
REVENUE LOSSES:						
Regulated Community	$0	$0	$0	$0	$0	$0
Local Government	$0	$0	$0	$0	$0	$0
State Government	$0	$0	$0	$0	$0	$0
Total Revenue Losses	$0	$0	$0	$0	$0	$0

(20a) Explain how the cost estimates listed above were derived.

According to our actuarial study, without a rate increase, USTIF would have an immediate unfunded liability and be unable to pay clean up costs for current and future underground storage tank releases within two (2) years. This increase will provide sufficient funding for the Fund to continue paying clean up costs for current and future claims through 2006 and provide a means for taking control of future unfunded liabilities. As we anticipate an inception date of January 1, 2003, the figures for the current fiscal year will only include six (6) months, whereas the subsequent fiscal years will include 12 months and an anticipated 3% increase in gasoline sales per year.

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(20b) Provide the past three-year expenditure history for programs affected by the regulation.

Program	FY –3	FY -2	FY -1	Current FY
USTIF	$30,920,034	$43,155,590	$49,971,701	$ $65,821,722

(21) Using the cost-benefit information provided above, explain how the benefits of the regulation outweigh the adverse effects and costs.

No adverse effects are anticipated as a result of this regulation, since the increase in costs are so minimal. The current fiscal year, as well as the prior three fiscal years, includes 12 months.

(22) Describe the nonregulatory alternatives considered and the costs associated with those alternatives. Provide the reasons for their dismissal.

Amending Chapter 977, §977.12 is the most efficient method to achieve consistency with the authorizing statute. No other alternatives were considered.

(23) Describe alternative regulatory schemes considered and the costs associated with those schemes. Provide the reasons for their dismissal.

No other regulatory schemes were considered. The amendment of the regulation is the most efficient method of updating the regulatory requirements.

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(24) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulation.

No.

(25) How does this regulation compare with those of other states? Will the regulation put Pennsylvania at a competitive disadvantage with other states?

The rulemaking will not put Pennsylvania at a competitive disadvantage with other states. It merely provides for consistency with the statute.

(26) Will the regulation affect existing or proposed regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

No.

(27) Will any public hearings or informational meetings be scheduled? Please provide the dates, times, and locations, if available.

No public hearings or informational meetings are anticipated.

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(28) Will the regulation change existing reporting, record keeping, or other paperwork requirements? Describe the changes and attach copies of forms or reports, which will be required as a result of implementation, if available.

The amendment of the regulation imposes no additional paperwork requirements on the Department, all owners or operators of USTs and HOTs in the Commonwealth, or the general public.

(29) Please list any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, elderly, small businesses, and farmers.

The rulemaking will have no effect on special needs of affected parties.

(30) What is the anticipated effective date of the regulation; the date by which compliance with the regulation will be required; and the date by which any required permits, licenses or other approvals must be obtained?

The rulemaking will take effect upon the approval of the final form regulation by the legislative standing committees, the Office of the Attorney General, and the Independent Regulatory Review Commission and upon publication in the *Pennsylvania Bulletin* with an effective date of January 1, 2003.

(31) Provide the schedule for continual review of the regulation.

The Department reviews each of its regulations for continued effectiveness on a triennial basis. Under the Storage Tank and Spill Prevention Act (act) (35 P. S. §§ 6021.101--6021.2104), the Board may also use an actuarial review to determine the soundness of the Fund and may promulgate regulations as necessary to maintain the Fund.

CDL-1

FACE SHEET FOR FILING DOCUMENTS WITH THE LEGISLATIVE REFERENCE BUREAU

(Pursuant to Commonwealth Documents Law)

#2312

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REVIEW COMMISSION

DO NOT WRITE IN THIS SPACE

Copy below is hereby approved as to form and legality. Attorney General

By _____
(Deputy Attorney General)

_____
Date of Approval

Check if applicable. Copy not approved. Objections attached.

Copy below is hereby certified to be a true and correct copy of a document issued, prescribed or promulgated by:

Insurance Department and Underground Storage Tank Indemnification Board
(AGENCY)

DOCUMENT/FISCAL NOTE NO. 11-216

DATE OF ADOPTION: _____

BY: M. Diane Koken

M. Diane Koken
Insurance Commissioner
and
E. Bruce Sheller
Chair

TITLE: _____
(EXECUTIVE OFFICER, CHAIRMAN OR SECRETARY)

Copy below is hereby approved as to form and legality. Executive or Independent Agencies

BY: John V. Cox

10/17/02
DATE OF APPROVAL

(DEPUTY GENERAL COUNSEL)
~~(CHIEF COUNSEL, INDEPENDENT AGENCY)~~
~~(STRIKE INAPPLICABLE TITLE)~~

Check if applicable. No Attorney General approval or objection within 30 days after submission.

NOTICE OF FINAL-OMITTED RULEMAKING

INSURANCE DEPARTMENT

25 Pa. Code, Chapter 977, §§977.12 and 977.33

Fees and Collection Procedures

PREAMBLE

By this notice the Insurance Department (Department), and the Underground Storage Tank Indemnification Board (Board), hereby amends 25 Pa. Code, Chapter 977, Subchapter B, Fees and Collection Procedures, §§ 977.12 and 977.33, to read as set forth in Annex A. Sections 206, 506, 1501 and 1502 of The Administrative Code of 1929 (71 P.S. §§ 66, 186, 411, and 412) provide the Insurance Commissioner with the authority to promulgate regulations governing the enforcement of the laws relating to insurance. Section 705 of the Storage Tank and Spill Prevention Act of 1989 (35 P.S. §6021.705) provides the Board with the authority to promulgate regulations concerning the establishment of fees to be paid by participants in the Underground Storage Tank Indemnification Fund ("Fund"). Public notice of this amendment is impractical and unnecessary because the proposed changes are needed to ensure the solvency of the Fund and any input from the public would not decrease the necessity to increase the fees collected.

Notice of the proposed rulemaking is omitted in accordance with section 204(3) of the act of July 31, 1968 (P.L. 769, No. 240) known as the Commonwealth Documents Law (CDL) (45 P.S. §1204(3)). In accordance with section 204(3) of the CDL, notice of proposed rulemaking may be omitted when the agency for good cause finds that public notice of its intention to amend an administrative regulation is, under the circumstances, impracticable and unnecessary.

Purpose

The amendments will bring the regulation's fees to the appropriate levels as recommended by an actuarial report that was completed on September 12, 2002. After reviewing this report, the Board determined that this increase is necessary to maintain the solvency of the Fund for the public health and safety of this Commonwealth's citizens and their environment. The actuarial study, performed by MMC Enterprise Risk Consulting, Inc., determined that an increase in the gallon and capacity fees was necessary to maintain the actuarial soundness of the Fund in the future.

Explanation of Regulatory Requirements

Section 977.12 is being changed to reflect the fees that the Board approved after extensive review and discussion of the report.

Section 977.33 is being changed to reflect the changes made to the Storage Tank and Spill Prevention Act by the amendments contained in Act 99 of 2001. These amendments increase the limits of liability for corrective action costs and bodily injury and property damage claims that may occur from an underground release.

Fiscal Impact

An owner or operator transacting business in this Commonwealth will be affected by the amendment to this regulation. The fee increases approved by the Board are significant, however, despite these increases, the fees are only half as much as they were when the program began in 1994.

The costs that the 2045 local governments/school districts are currently paying will increase by approximately $482 per quarter or $1928 per year for each municipality/school district.

State-owned tanks are exempt from all USTIF fees.

General Public

Because the public is a consumer of goods and services provided by owners and operators of a UST or a HOT, any increase to the fees could result in higher prices to consumers. However, it is expected that this increase in fees will result in an additional $.81 per month to motorists, in accordance with a survey on vehicle fuel consumption and expenditures by United States' households, conducted by the Energy Information Administration, Office of Energy Markets and End Use.

This increase is proposed to keep the Fund solvent after an actuarial study completed in September 2002 indicated the need for additional revenue, to maintain the Fund's actuarial soundness.

Effectiveness/Sunset Date

This rulemaking will become effective January 1, 2003.

Paperwork

Adoption of these regulations should not require any significant paperwork for the owners or operators of USTs or HOTs. The paperwork necessary after the increase is expected to be the same as before the increase was implemented.

Persons Regulated

This regulation applies to all owners or operators of USTs and HOTs in the Commonwealth.

Contact Person

Questions regarding the final omitted rulemaking may be addressed to Peter J. Salvatore, Regulatory Coordinator, Pennsylvania Insurance Department, 1326 Strawberry Square, Harrisburg, Pennsylvania 17120, phone number (717) 787-4429. Questions may also be e-mailed to psalvatore@state.pa.us or faxed to (717) 772-1969.

Regulatory Review

Under section 5(a) of the Regulatory Review Act, Act 24 of 1997, the agency submitted a copy of the regulations with the proposed rulemaking omitted on October 25, 2002 to the Independent Regulatory Review Commission (the Commission) and to the Chairpersons of the House

Committee on Insurance and the Senate Committee on Banking and Insurance. On the same date, the regulations were submitted to the Office of Attorney General for review and approval under the Commonwealth Attorneys Act (71 P.S. §§ 732-101 - 732-506).

In accordance with section 5 (c) of the Regulatory Review Act, the regulations were deemed approved by the Senate Banking and Insurance Committee on_____, and deemed approved by the House Insurance Committee on_____. The Attorney General approved the regulation on_____. IRRC met on _____and approved the regulation.

Findings

The Insurance Commissioner finds that:

(1) There is good cause to amend Chapter 977, Subchapter B, effective upon publication with the proposed rulemaking omitted. Deferral of the effective date of these regulations would be impractical and not serve the public interest. Under section 204(3) (45 P.S. §1204(3)) of the CDL there is no purpose to be served by deferring the effective date. An immediate effective date will best serve the public interest by ensuring that fees have the full potential that the actuarial study predicted.

(2) There is good cause to forego public notice of the intention to amend Chapter 977, Subchapter B, because notice of the amendment under the circumstances is unnecessary and impractical because the changes proposed are necessary to ensure the solvency of the Fund and any input from the public would not decrease the necessity to increase the fees collected.

Order

The Insurance Commissioner, acting under the authority in sections 206, 506, 1501 and 1502 of the Administrative Code of 1929, orders that:

(1) The Regulations of the Department at 25 Pa.Code, Chapter 977, Subchapter B, §§ 977.12 and 977.33, are amended as set forth in Annex A, with ellipses referring to the existing text of the regulations.

(2) The Department shall submit this order and Annex A to the Office of Attorney General and the Office of General Counsel for approval as to form and legality as required by law.

(3) The Department shall certify this order and Annex A and deposit them with the Legislative Reference Bureau as required by law.

(4) This order shall take effect January 1, 2003.

M. DIANE KOKEN, Insurance Commissioner

E. BRUCE SHELLER, Chair, Underground Storage Tank Indemnification Board

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION. PART VIII. UNDERGROUND STORAGE TANK INDEMNIFICATION BOARD. CHAPTER 977. UNDERGROUND STORAGE TANK INDEMNIFICATION FUND

Subchapter B. FEES AND COLLECTION PROCEDURES

Sec.

977.12. Owner and operator fees.

977.33 Fund coverage and exclusions.

§ 977.12. Owner and operator fees.

(a) * * * * *

(b) * * * * *

(2) *Gallon fee.* A gallon fee on all regulated substances entering a UST of ~~$.0010~~ $.01 per gallon. (For example, 10,000 gallons at ~~$.0010~~ $.01 per gallon equals ~~$10~~ $100).

(c) * * * * *

(d) *Capacity fee.* An owner or operator which stores regulated substances including diesel, heating oil, used motor oil, kerosene and unknown substances based on the tank registration information maintained by the DEP may be assessed a capacity fee of ~~$.02~~ $.075 per gallon of capacity, which amount is established in accordance with section 705(d)(2) of the act (35 P.S. § 6021.705(D)(2)). (For example, 10,000 gallons at ~~$.02~~ $.075 per gallon equals ~~$200~~ $750).

* * * * *

§ 977.33. Fund coverage and exclusions.

(a) *Fund coverage.*

* * * * *

(4) *Limits of liability.* Payment of corrective action costs and bodily injury and property damage claims (See section 704 of the act (35 P. S. § 6021.704)) are subject to the following limits of liability:

(i) Payments for reasonable and necessary corrective action costs, and bodily injury or property damage may not exceed a total of [$1 million] $1.5 million per tank per occurrence and may not exceed the annual aggregate limit.

(ii) Payments may not exceed:

(A) An annual aggregate of [$1 million] $1.5 million for each owner and operator of 100 or less USTs or an owner or operator of 100 or less HOTs.

(B) An annual aggregate of [$2 million] $3 million for each owner or operator of 101 or more USTs or an owner or operator of 101 or more HOTs.

* * * * *

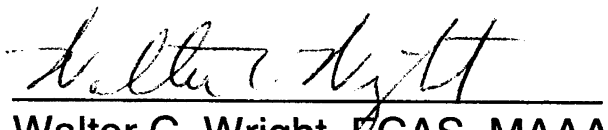
Underground Storage Tank Indemnification Fund; Actuarial Study as of June 30, 2002

Department of Insurance
Commonwealth of Pennsylvania

September 2002

Underground Storage Tank Indemnification Fund; Actuarial Study as of June 30, 2002

Department of Insurance
Commonwealth of Pennsylvania



Walter C. Wright, FCAS, MAAA
MMC Enterprise Risk Consulting, Inc.

September 2002

MMC Enterprise Risk Consulting, Inc.
1166 Avenue of the Americas
New York, NY 10036

212 345 8770

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SUMMARY OF FINDINGS, CONCLUSIONS, AND ASSUMPTIONS

Introduction

At the request of the Pennsylvania Department of Insurance, MMC Enterprise Risk Consulting, Inc. conducted this actuarial study of the Underground Storage Tank Indemnification Fund. This is our regular annual update of the actuarial studies that we have been providing since 1995. We also conducted an interim review as of March 31, 2002, the results of which were provided in our draft report dated June 10, 2002, which was issued as a final report on July 30, 2002.

The objectives of this study are:

1. To estimate the cash flow from January 1, 2002 to December 31, 2011.

2. To estimate the Fund's claim costs related to the clean-up costs and third party liability costs of leaking underground storage tanks (USTs) for calendar years 2002 through 2011.

3. To estimate the annual revenue for 2002 through 2011 under the current fee structure of: $0 per tank, $0.001 per gallon throughput for regulated substances other than diesel fuel and heating oil, and $0.020 per gallon capacity for heating oil and diesel fuel USTs, and to evaluate the adequacy of this fee structure.

4. To evaluate alternative fee structures.

Conclusions

1. During the period June 30, 2001 through June 30, 2002, there were significant increases in the value of the reported losses (paid losses, plus case reserves for reported claims that are still open) for claims reported on or before June 30, 2000. We have modified our assumptions to reflect these increases.

2. Exhibit 1 displays our projections of cash flows through fiscal year 2011, based on the current fee structure. Based on the current fee structure, and on our assumptions as discussed in this report, it appears that the Fund's revenue, including its initial unfunded liability (see definition, below) of approximately $102.7 million at June 30, 2002 (this is equal to the unfunded liability of $112.6 million, as published by USTIF, adjusted to reflect MMC ERC's most current estimate of the additional development on reported claims), will not be sufficient to pay the claims through June 30, 2011. Assuming no change in premiums, the unfunded liability is projected to continue to increase to $573.1 million by the end of June 2011 and the Fund's assets are expected to drop to *negative* $396.8 million. (*Negative* assets imply that the Fund would need to be borrowing money in order to pay claims.)

   The term "Unfunded Liability" is used in this report to replace the term "Net Worth" that was used in our prior reports. "Net Worth" represents the surplus of the Fund, meaning the excess of assets over liabilities. However, because we estimate that the Fund has, and may continue to have, a *negative* net worth, it is clearer to substitute the phrase "Unfunded Liability" for negative "Net Worth." In other words, a Net Worth of *negative* $100 million corresponds to an Unfunded Liability of $100 million, and this Unfunded Liability would be shown on our exhibits as ($100) million.

The Fund's "Assets" represent the total amount of its assets, including the value of the loan to the General Fund. In prior reports we have referred to these amounts as the Fund's "Cash Balance," consistent with terminology used in the Fund's Claims and Revenue Summary, but "Assets" is the more correct terminology.

As discussed later in this report, the Fund's projected financial position is dependent on assumptions that are subject to a very high degree of uncertainty. Given this uncertainty, we believe it is appropriate that the Fund be managed conservatively.

3. Based on our analysis, we estimate ultimate losses, allocated loss adjustment expense (ALAE) and third party administrator costs by Fund year as shown on Exhibit 3, Page 1 (Total), Page 3 (non-heating oil tanks, excluding claims for leaks discovered upon removal of the tank) and Page 4 (heating oil tanks). As shown on Page 1, the total losses through 2011 are estimated to be approximately $471.1 million. This includes approximately $159.9 million from claims associated with leaks that are discovered through December 31, 2003 as bare steel tanks that are not in compliance with EPA standards are removed from the ground. Adjusting these figures to exclude the first six months of 2002, on a pro-rata basis, the total projected losses for the period July 1, 2002 through December 31, 2011 are approximately $431.8 million ($471.1 million less one-half of $78.7 million).

   Pages 2 and 3 of Exhibit 3 show the total estimated losses separately for non-heating oil tanks (excluding the claims for leaks discovered upon removal of the tank) and heating oil tanks.

   We use the term "total losses" to refer to the "Net Estimated Ultimate Third Party & Clean Up Loss & ALAE," which is shown in Column 14 of Exhibit 3, page 1 and Column 12 of Exhibit 3, pages 2 and 3. This includes the estimated ultimate value of: clean-up costs for all discovered leaks, including leaks discovered during the removal of bare steel tanks; the

estimated third party liability costs associated with leaks; and, the estimated costs for administering the Fund. The total estimated "gross" amounts are reduced to a "net basis" by subtracting the deductible ($5,000 per tank for first party claims; $5,000 per occurrence for third party claims).

4. From Exhibit 1, the total revenue from July 1, 2002 through June 30, 2012, resulting from the current fee structure and the projected number of tanks, is approximately $37.5 million for all years combined.

5. For non-heating oil tanks, the total projected losses, including claims resulting from leaks that are discovered when the tank is removed, are approximately $401.8 million for the full ten-year period. Excluding the projected losses for the first six months of 2002, the total projected losses for non-heating oil tanks are approximately $364.5 million. This compares to projected revenue of approximately $28.6 million, resulting in a projected ratio of losses to premium equal to 12.7. The corresponding ratio for heating oil tanks is 11.0, which indicates that the level of fee adequacy is about the same for non-heating oil tanks and heating oil tanks.

   "Non-heating oil tanks," as used in this report, include tanks identified by the DEP as containing gasoline, diesel fuel, new motor oil, hazardous material, aviation fuel, gasohol, "other," and "mixture." The gasoline and diesel fuel categories represent about 97 percent of the current number (24,347) of non-heating oil tanks.

6. For heating oil tanks, the total projected losses are approximately $69.0 million for the full ten-year period, or approximately $67 million when adjusted to exclude the first six months of 2002. This compares to projected revenue of approximately $6.1 million, resulting in a projected ratio of losses to premium equal to 11.0.

7. "Heating oil tanks," as used in this report, includes tanks identified by the DEP as containing heating oil, kerosene, used motor oil, and "unknown." About 48 percent of the current number (4,894) of tanks in this category contain heating oil; about 39 percent and 13 percent, respectively, contain kerosene and used motor oil.

8. We recommend that the Board consider increasing the current fees, which are $0.001 per gallon throughput for regulated substances other than diesel fuel and heating oil and $0.020 per gallon capacity for heating oil and diesel fuel UST's. We present 20-year forecasts of financial results for each of eight alternatives for adjusting the fees.

   Our recommendation is based on the following considerations:

   a. During the 12 months ended June 30, 2002 the Fund's open claims for all years developed adversely, leading to increases in our estimates of the losses. There is significant uncertainty regarding the number and average value of future claims, but the total cost of additional claims is expected to be significant and well in excess of the current premium levels of less than $4 million per year.

   b. The current cash flow projection indicates that the Fund's has an unfunded liabilty, and that this unfunded liabilty will increase to about $573.1 million at the end of June 2011 if the current fees are maintained.

   c. The Fund will lend $100 million to the General Fund on or before October 15, 2002, reducing the liquidity of the Fund's assets.

   d. In December 2001 the limit of liability per claim was increased to $1.5 million, which will increase future costs.

Changes from 2001 Report

Our current report reflects several changes in assumptions as compared to our 2001 report.

Further Development of Known Claims

We have assumed that the claims currently reported to USTIF will increase by approximately $201.4 million by the time that all such claims are settled. This assumption is based on review of the actual development of USTIF's reported claims, as contained in the USTIF's Claims and Revenue Summaries and as reported by ICF, USTIF's claims administrator. USTIF has only existed since 1994, and its historical claims experience is somewhat limited because none of the claims are more than eight years old.

As discussed below, there has been adverse development of claims during the 12 months ended June 30, 2002, and more generally over the past several years. We have recognized the actual development of the losses that has occurred, but have generally tempered our forecast of future development patterns in recognition of what appears to have been case reserve strengthening for the more current years. In other words, we have not assumed that the actual development of the older years will be repeated for the more recent years. The development factors that we have selected, and our resulting estimates of ultimate losses, are generally consistent with and somewhat less than the development factors that we selected at the time of our March 31, 2002 interim report.

USTIF has operated on a "claims-made" basis rather than on an "occurrence" basis, in the sense that it has aggregated its losses by the year in which the claim was reported rather than the year(s) in which the leak occurred. *USTIF has not carried any provision for claims that have been incurred but are not yet reported (IBNR claims).* We believe that this is not an

inappropriate procedure for USTIF to follow. However, USTIF management should be aware of the fact that there is no provision in USTIF's estimated liabilities for existing leaks that have not been reported.

Discussion of adverse development through the 12 months ended June 30, 2002

- ***1994 through 1998*** Claims from these years have developed adversely.

  At the time of our last report, based on data through June 30, 2001, the reported losses for claims reported in years 1994 through 1998 were approximately $171.1 million. We estimated that the reported value would increase by about 9.5 percent, to about $187.3 million, by the time that all of these claims were closed.

  As of June 30, 2002 the reported value for this same group of claims had already increased by 12 percent, to about $191.6 million, and we now estimate that the ultimate value of these claims will be about $247 million. This represents an increase of almost 32 percent in our estimate of the ultimate value of these claims.

- ***1999*** Claims from this year have developed adversely.

  At the time of our last report, based on data through June 30, 2001, the reported losses for claims reported in year 1999 were approximately $51.6 million. We estimated that the reported value would increase by about 33 percent, to about $68.4 million, by the time that all of these claims were closed.

As of June 30, 2002 the reported value for this same group of claims had already increased by 26 percent, to about $64.8 million, and we now estimate that the ultimate value of these claims will be about $104 million. This represents an increase of almost 52 percent in our estimate of the ultimate value of these claims.

- ***2000*** Claims from this year have developed adversely.

  At the time of our last report, based on data through June 30, 2002, the reported losses for claims that were reported in year 2000 were approximately $31.1 million. We estimated that the reported value would increase by about 49 percent, to about $46.3 million, by the time that all of these claims were closed.

- As of June 30, 2002 the reported value for this same group of claims had already increased by 23 percent, to about $38.2 million, and we now estimate that the ultimate value of these claims will be about $71 million. This represents an increase of almost 54 percent in our estimate of the ultimate value of these claims.

- ***2001*** Claims from this year have developed adversely.

  At the time of our last report, based on data through June 30, 2001, the claims experience for the year 2001 was very immature, because we were only half way through the year. At that time the reported losses were approximately $15.8 million. We estimated that the reported value would increase to about $40.6 million, by the time that all of the claims for 2001 were reported and closed.

  As of June 30, 2002 the reported value for 2001 claims had increased to about $42.7 million (more than double the amount that had been reported half way through the year), and we now estimate that the ultimate value of these claims will be about $81.8 million.

This represents a increase of almost 100 percent in our estimate of the ultimate value of these claims.

- ***2002*** This year is still very immature, but it appears that, as compared to 2001, it will have more claims and larger claims.

  Through the first half of the year 195 claims, with a total value of about $26.1 million, were accepted. The number of accepted claims is 50 percent higher than the 133 claims that were accepted through the first half of 2001. However, the reported average value of these 2002 claims is about $134 thousand, which is about 12.3 percent higher than the average value of the claims accepted through the first half of 2001.

Annual Claims Inflation

We have maintained the assumed future annual rate of claims inflation at 7 percent. By this we mean, for example, that if the cleanup cost for a 2002 claim was $200,000, then the cleanup cost for a 2003 claim would be $214,000, all other things being equal.

The 7 percent claims inflation that we are forecasting is lower than the historical rate appears to have been. Based on discussion with management of USTIF, we understand that there are two factors that may have contributed to the relatively high rate of claims inflation in the past:

- Historically, the claims have been prorated so that USTIF has only been responsible for leakage that occurred after February 1, 1994, when USTIF first started. Over time, the exclusion of leakage that occurred prior to February 1, 1994 has become less significant, and virtually none of the claims reported in 2002 are prorated.

- In the mid-1990s tank owners began to install state-of-the-art piping and pumping equipment at their tank sites, and USTIF has begun to receive a number of claims involving failure of this

equipment. Failure of this equipment can result in the immediate leakage of a large volume of gasoline or other substance, leading to a relatively large claim. This tends to raise the average value of claims, which in the past were predominantly relatively small volume leaks that had occurred over a long period of time.

Other Changes in Assumptions

For third party liability claims, we have decreased the projected ratio of such claims to leaks and spills from .048 to .038, and we have retained the projected average value has remained the same at $80,000.

We revised the annual yield rate used to project USTIF's return on invested assets. In our 2001 report we estimated that the Fund would earn 8.5 percent on its invested assets. For this 2002 study, the Department of Insurance had advised that we use a rate of return of 4.0 percent for investments under USTIF's control. We understand that the Fund will loan $100 million to the General Fund on or before October 15, 2002. The terms of this loan have not been determined, but we expect that the loan will be repaid, with interest. For the purpose of this report we have assumed that the loan will be repaid in ten annual payments of $10 million of principal, with the first payment being made on July 1, 2004, and the last payment being made on July 1, 2013. Further, we have assumed that the loan will accrue interest at an annual rate of 2 percent, all of which will be paid on July 1, 2013.

We have revised our cash flow exhibits to reflect the increase to $12 million in the maximum annual allocation to the Department of Environmental Protection, which became effective on January 1, 2002.

We have revised the Third Party Administrator (TPA) fees, to use forecasted TPA fees provided by USTIF. USTIF provided forecasts for years 2002 through 2006. We projected the TPA fees

for the year 2007 based on the average TPA fees forecasted for prior years, adjusted to a 2007 cost level using an inflation rate of 7.0 percent per year. Beyond 2007, we forecast the TPA fees will increase 7.0 percent per year.

We have not changed the assumed loss payment pattern. At the time of last year's report we assumed that 45 percent of losses for an accident year would be paid within four years of the beginning of the accident year, with the remaining 55 percent paid over the next six years. The updated experience does not reflect any changes.

Reconciliation to Prior Report

Cash Balance

In our 2001 report, the projected June 30, 2002 cash balance (total assets available for investment) was $293.8 million. In our current report, the actual June 30, 2002 cash balance is $265.5 million, a decrease of $28.3 million. About $19 million of this difference results from the fact that the actual interest income was less than what had been forecast.

Unfunded Liability

In our 2001 report, the Fund was not projected to have an unfunded liability as of June 30, 2002, and in fact was projected to have a net worth of $45.9 million. In our current report, the actual estimated June 30, 2002 unfunded liability is $102.7 million, a decrease of $148.6 million. This is due to the fact that the cash balance decreased by $25.5 million, as explained above, and the estimate of liabilities for losses incurred but not yet paid increased by $120.5 million.

Major Assumptions

Claim Denial Rate

In our current study, as in prior studies, we assume that no claim will be denied on the grounds that the tank was not in compliance with Federal EPA guidelines for tank construction.

Percent Affected

The term "percent affected" represents the percent of tanks that either are now leaking, or will eventually leak. We estimate the percent affected separately for external tank corrosion, internal tank corrosion, external pipe corrosion, and faulty installation. The following table compares our current assumptions to our assumptions made in previous reports.

		ASSUMPTIONS			
Tank Category	Type of Leak	1998 - 2002 Reports	September 1997	November 1996	August 1995
Bare Steel:	External Tank Corrosion	8.6%	8.6%	9.5%	25.0%
	Internal Tank Corrosion	1.9%	1.9%	2.1%	2.1%
	External Pipe Corrosion	8.6%	8.6%	9.5%	30.0%
	Combined, All Corrosion	18.0%	18.0%	19.8%	48.6%
	Faulty Installation	4.5%	4.5%	5.0%	7.0%
Non-Bare Steel:	External Tank Corrosion	3.6%	3.6%	4.0%	5.0%
	Internal Tank Corrosion	0.6%	0.6%	0.7%	0.7%
	External Pipe Corrosion	3.6%	3.6%	4.0%	5.0%
	Combined, All Corrosion	7.6%	7.6%	8.5%	10.4%
	Faulty Installation	4.5%	4.5%	5.0%	7.0%
All Tanks:	Combined, All Corrosion	12.3%	13.4%	16.0%	32.4%
	Faulty Installation	4.5%	4.5%	5.0%	7.0%

The percent affected is not the equivalent of the percent of tanks expected to be leaking currently--it represents an estimate of the percent that is leaking now or will eventually leak. Our assumptions regarding the distribution of leaks by age, combined with the percent affected, results in the percent of tanks assumed to be leaking at any point in time. For example, for bare steel tanks, our assumptions regarding the percent affected, combined with our assumptions regarding the distribution of leaks by age, results in an estimate that approximately 10.0 percent of bare steel tanks are currently leaking.

The previous table includes the percent affected for "faulty installation." Faulty installations that occur after January 2002 will be the responsibility of the Tank Installers Indemnification Program.

We have not revised our estimates of the percent affected from what we used in our October 2001 report. This is based on the following considerations.

The numbers of claims increased significantly through 1998 and the first half of 1999, and have since decreased only to increase again in latter half of 2001 and the first half of 2002:

	Number of Reported Claims	Percent Change From Prior Year
1st Half 1995	136	
2nd Half 1995	218	
1st Half 1996	176	+29%
2nd Half 1996	218	0%
1st Half 1997	198	+12%
2nd Half 1997	205	-6%
1st Half 1998	296	+49%
2nd Half 1998	263	+28%
1st Half 1999	375	+27%
2nd Half 1999	200	-24%
1st Half 2000	223	-41%
2nd Half 2000	133	-34%
1st Half 2001	134	-40%
2nd Half 2001	199	+50%
1st Half 2002	198	+48%

- The numbers of claims for the second half of 2001 and the first half of 2002 are significantly overstated due to a new regulation that requires owners to report leaks within 60 days. We expect that this caused a significant increase in the numbers of reported claims, as major tank owners reported all known leaks.

- We were not able to obtain updated data as to the number of tanks closed or removed from the DEP. Comparing, by year of incident, the number of claims reported to the Fund to the

number of tanks closed or removed, we note that the ratio of claims to closures has been gradually increasing over time. The ratios, by year, are: 1994, 2.8 percent; 1995, 8.0 percent; 1996, 12.0 percent; 1997, 7.9 percent; 1998, 8.5 percent; 1999, 11.6 percent; 2000, 21.0 percent. We have not calculated this ratio for 2001 or for the first six months of 2002, due to the lack of information from the DEP.

We assume that the ratio of claims to closures will return to historical levels, and therefore we have held the percent affected at the same level as last year.

Average Claim Severity

Leaks and Spills

Excluding leaks discovered during the removal of the bare steel tanks, we estimate that the average cost of all 2002 first party claims (leaks and spills combined) will be approximately $200,100, much higher than last year's estimate of $127,700.

We continue to distinguish between leaks and spills as we did in our model last year. However, because the Fund does not make any such distinction, we have focused on the average value of leaks and spills combined.

The average value of a claim is a result of our model, rather than an input to the model. The cost of a leak of any given age depends on our assumptions regarding the average cost of cleaning up a leak that is one year old, two years old, three years old, etc. The distribution of claims by age of leak is dependent on the following: the distribution of tanks by year of installation; the assumptions regarding the distribution of claims by age of tank; and the success of monitoring systems. As we did last year, we assume that the cost of a leak increases the longer the leak occurs before it is discovered.

For non-heating oil leaks and for heating oil leaks, we have adjusted the cost table that we used in our October 2001 study, so that the forecasted average claim severities are reasonably consistent with the actual results to-date.

Our assumptions result in the following projected average values, for leaks and spills combined, for 2002 claims:

- non-heating oil claims, excluding leaks discovered during removal $180,500
- heating oil claims $175,000
- all, excluding leaks discovered during removal $179,700
- leaks discovered during removal $215,400
- total, all leaks $200,100

The actual experience of the Fund, through June 2002, indicates an average severity of approximately $122,400 for non-heating oil tanks and approximately $78,400 for heating oil tanks, and about $119,600 overall. This average is based on approximately $196.6 million of paid claims and approximately $166.8 million of case reserves on open claims.

Although the actual experience of the Fund indicates an average value of about $119,600, we believe the average value of the current claims will prove to be approximately $185,900 by the time that all of these claims have settled. This is based on a review of the Fund's historical data, which shows that the total reported losses (paid losses plus unpaid case reserves), by incident year, increases over time as the incident matures. Based on review of the historical development of the Fund's claims, we expect that the total reported losses for the first six months of 2002 will increase by about 134 percent by the time that all of these claims have settled, and that the total reported losses for 2001 and 2000 will increase by about 92 percent and 86 percent, respectively. For years 1999 and prior, we expect that the total reported losses will increase by about 37 percent, in aggregate.

The gradual increase in reported losses, as incident years mature, is typical of insurance companies and is not unexpected for the Fund. A claims adjuster, estimating the final settlement value of a reported claim, must base the estimate on the current information available. However, as more information becomes known about individual claims, that information generally is adverse, leading to increases in the estimated settlement costs.

Given the significant uncertainty regarding the number and average values of the claims, we believe it is appropriate to plan for an average severity that is higher than the Fund has been experiencing.

We do not distinguish between the average cost of a leaking pipe as compared to the average cost of a leaking tank, although we estimate the "percent affected" separately for tanks and their associated piping systems. In our view, the cost of cleaning up a leak from a leaking pipe will be the same as the cost of cleaning up a leak from a leaking tank, all other things being equal. In other words, our model assumes that the key determinants of the cost will be the age of the leak and the type of substance that was leaking, and that the source of the leak (the tank or the piping system) is not relevant. As more information is gathered on actual leaks, we will reexamine these assumptions and make changes, as appropriate.

Third Party Liability

As compared to our prior report, we have not changed our estimate of the average severity of third party liability claims of $80,000, and have estimated that the number of third party liability claims will equal about 3.8 percent of the number of leaks and spills, rather than 4.8 percent. Over the ten-year period from 2002 through 2011 third party liability claims are only estimated to be about $7.2 million, or about 1.5 percent of the total.

The Fund's actual payments and case reserves indicate that the actual average value of third party liability claims is approximately $65,500, and there have been 116 claims to date. MMC ERC recognizes that the average value of claims reported to date has been favorable, but we expect that this average value will increase as claims are settled and believe it is appropriate to plan for an average severity that is higher than that reported by the Fund through June 2002.

The actual number of third party claims is running about 3.8 percent of the number of leaks, and we have adjusted our frequency estimate accordingly.

Success of Tank Monitoring Systems

As shown in the following table, we have not changed our assumptions regarding the success rate of tank monitoring systems:

Type of Monitoring	Current Assumptions	September 1997 Assumptions
Monthly Monitoring	95.0%	95.0%
Other Methods	85.0%	85.0%
No Monitoring	5.0%	5.0%

These assumptions have a direct effect on the average age, and hence the average value, of leaks resulting in claims. As the success rate increases, the probability that a leak that has been undiscovered for many years decreases.

Tank Distribution

The following table displays our current tank distribution, by substance, and compares it to the distributions used in our prior studies at June 30.

NUMBER OF TANKS

MMC ERC Study From:

Substance	2002	2001	2000	1999	1998	1997	1996	1995
Gasoline	18,400	18,624	19,248	20,444	23,353	25,077	26,083	29,227
Diesel	5,339	5,382	5,499	5,867	7,201	8,428	8,892	10,628
Heating Oil	2,336	2,372	2,503	2,893	3,727	5,142	4,540	8,802
Kerosene	1,928	1,944	2,015	2,136	2,391	2,469	2,506	2,733
Used Motor Oil	615	663	754	1,006	1,694	1,927	2,517	1,472
Other	198	225	251	301	772	527	567	741
New Motor Oil	131	149	173	219	362	394	475	624
Gasohol	17	44	52	107	193	237	258	346
Aviation Fuel	150	149	158	187	237	267	284	337
Hazardous Sub.	112	122	130	153	246	279	297	336
Highly Hazard.	0	1	0	0	0	0	0	0
Mixture	0	0	1	4	128	139	158	206
Unknown	15	17	29	40	74	107	110	169
TOTAL	**29,241**	**29,692**	**30,813**	**33,357**	**40,156**	**44,760**	**46,097**	**56,306**

The numbers of tanks have declined for every category. (The tank distribution used in our 1998 study was slightly overstated, because it included all tanks being billed by USTIF, even though some of them had been removed.)

We estimate that all bare steel tanks used for non-heating oil (estimated to be 7,000 at the start of 2002) will be removed by the end of the year 2004 and replaced by non-bare steel tanks. We

estimate that these tanks will be removed at the rate of 2,333 per year over the three-year period 2002 through 2004. We estimate that one-half of these bare steel tanks will be replaced by non-bare steel tanks, and one-half will not be replaced. Further, we estimate that any other (in other words, heating oil) bare steel tanks that leak will be replaced by non-bare steel tanks.

BACKGROUND

EPA Regulations

In 1988, the United States Environmental Protection Agency (EPA) issued its final regulations regarding both technical requirements and financial responsibility for owners or operators of USTs.

The technical requirements, for both new and existing USTs, address corrosion protection, leak detection, and spill/overflow devices. For our analysis, the leak detection upgrades are most important. The corrective costs of a leak are dependent on the amount of time the leak has existed undetected. With leak detection equipment in place, we can expect the discovery of leaks to be accelerated, which will reduce the costs of corrective actions. The compliance date for leak detection equipment, for both tanks and piping, is a function of tank age.

The EPA's financial responsibility requirements took effect on January 24, 1989. The amount of financial responsibility shown by owners and operators of petroleum USTs is a function of the type of business, number of tanks, and monthly throughput. Owners and operators of USTs must demonstrate evidence of financial responsibility for the costs of corrective actions and any third party liability. Financial responsibility can be demonstrated by means of any one, or combination, of the following mechanisms:

- Financial test of self insurance
- Guarantee

- Insurance or risk retention group coverage
- Surety bond
- Letter of credit
- State required mechanism
- State fund or other state assurance
- Fully-funded trust fund

The final compliance date for having one of these mechanisms in place was December 31, 1993.

The requirements for owners and operators of hazardous material USTs are similar to that of petroleum USTs with two exceptions, which relate to (1) the leak detection and (2) spill/overflow reporting provisions. Due to concerns that current petroleum leak detection and corrective action technologies would not be appropriate, the EPA requires a secondary containment for hazardous materials. For spill/overflow of hazardous materials, if the amount of the spill is over a pre-determined limit, the spill/overflow must be reported to the implementing agency and to the National Response Center. If a spill/overflow is not over the pre-determined limit and has been both contained and cleaned up, it does not have to be reported.

Pennsylvania Fund

In July 1989, the General Assembly of the Commonwealth of Pennsylvania passed the Storage Tank and Spill Prevention Act (Act). The Act provides for the comprehensive regulation of both above ground and USTs. It also created the Fund to assist UST owners or operators in meeting the federally mandated financial responsibility requirements The Fund is required to be actuarially sound.

The eligibility requirements for tanks have changed over time, especially in regard to heating oil tanks. However, there are currently 29,241 covered USTs, of which 1,872 are exempt heating oil tanks whose owners have chosen to participate in the Fund.

The Fund is provided policy guidance and management oversight by an eleven member Board. The makeup of the Board is described in the Act and represents the population of tank owners or operators in both large and small companies and in both the public and private sector. The Board is required to meet quarterly.

The Fund became effective on February 1, 1994, and provides coverage for owners and operators of USTs located within Pennsylvania who incur liability due to a release from their USTs. Release is defined as "any spilling, leaking, emitting, discharging, escaping, leaching or disposing from a storage tank into surface waters and groundwaters of this Commonwealth or soils or subsurface soils in an amount equal to or greater than the reportable released quantity determined under Section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, and regulations promulgated thereunder, or an amount equal to or greater than a discharge as defined in Section 311 of the Federal Water Pollution Control Act (62 Stat. 1155, 33 U.S.C. 1321) and regulations promulgated thereunder."

Specifically, through December 31, 2001, the Fund provided $1 million of coverage above deductibles of $5 thousand for corrective action and $5 thousand for third party liability on a per tank per occurrence basis (the deductibles were $10,000 prior to 1995). Effective January 1, 2002, coverage was increased to $1.5 million per tank, per occurrence. Legal defense costs do not erode the established coverage limits.

Through 2001, claim payments were limited, in any one year, to $1 million for owners or operators with 100 or fewer USTs and $2 million for those with more than 100 USTs. Effective January 1, 2002 these limits were raised to $2 million and $3 million, respectively. In theory, these limits slow down the payment of claims in some instances; in practice, these limits have no real impact on the projections.

The program is financed through fees assessed to owners or operators of the USTs, and through interest earned by the Fund on its assets. When the Fund started, there was a "capacity fee" of $0.15 per gallon for heating oil tanks (including kerosene, used motor oil, and "unknown") and diesel fuel tanks, and a "gallon fee" of $0.02 per gallon of throughput plus an annual "tank fee" of $100 for other tanks. Effective January 1, 1996, the "gallon fee" was reduced to $.01 per gallon throughput and the annual "tank fee" of $100 was eliminated. Effective January 1, 1998, the "gallon fee" was reduced to $0.005 per gallon of throughput and the "capacity fee" was reduced to $0.10 per gallon of capacity. Effective January 1, 1999, the "gallon fee" was reduced to $0.001 per gallon of throughput and the "capacity fee" was reduced to $0.02 per gallon of capacity. Effective January 1, 2000, the "gallon fee" was reduced to $0.0005 per gallon of throughput and the "capacity fee" was reduced to $0.01 per gallon of capacity. Effective April 1, 2002, the "gallon fee" was increased to $0.001 per gallon of throughput and the "capacity fee" was increased to $0.02 per gallon of capacity.

By law, the fees are to be set "on an actuarial basis." Further, although some tanks are charged on a capacity basis, and others are charged on a throughput basis, in the past the capacity fees

were determined so that the total revenue generated by the capacity fees would equal the total revenue that would be generated by the same tanks if they were charged on a throughput basis. However, this provision of the statute was removed prior to August 1998.

ESTIMATED ULTIMATE LOSS AND ALAE FOR FUND YEARS 2002 TO 2011

Data

The USTIF registration information does not include tank construction for all tanks. We distributed tanks to type of construction based on the distribution contained in our prior study and the assumption that new tanks will be non-bare steel.

Methodology

The following paragraphs describe the methodology that MMC ERC developed for our 1994 report, and which we have continued each year since then. When this methodology was first developed, there was very little information regarding leaking underground storage tanks generally, and virtually no information regarding leaking underground storage tanks in Pennsylvania. There was no historical experience to use to develop a standard insurance model of the potential liabilities. Therefore the model that was developed was a theoretical model, based largely on engineering assumptions regarding underground storage tanks. Over the past six years, however, as the actual loss experience of USTIF has emerged, we have revised the assumptions in the model so that the projections produced by the model are reasonably consistent with USTIF's actual experience.

To estimate the cash flows for the Fund, we first estimated the net ultimate loss and ALAE by fund year for fund years 2002 through 2011. The estimated ultimate losses (gross of deductible)

incurred during a fund year equals the sum of the estimate of ultimate loss due to (1) tank failure, (2) spills and (3) third party liability. (In this report we use the term failure and leak interchangeably. Spills include spills, overflows and other causes.) The net estimated ultimate loss (net of deductible) equals the gross ultimate loss minus the product of the deductible amount and the estimated number of claims. Because heating oil tanks are not subject to EPA regulation, we divided the Fund tank population into heating oil and non-heating oil tanks.

In this report we have reviewed USTIF's actual loss emergence pattern and have estimated the additional development that we expect will occur on the open case reserves based on the historical data. In total, we expect that the case reserves will develop adversely by approximately $201.4 million, or about 121 percent. This percent ranges from 110 percent for the years 1999 and prior, to 163 percent for 2000, to 113 percent for 2001, to 135 percent for 2002.

These estimates are based on our review of paid losses and reported losses (paid losses plus case reserves on open claims), by claim year, as evaluated every quarter from the beginning of the claim year through June 30, 2002. This is the first analysis for which the claims data has been available in this level of detail for the older claim years. The data shows that significant adverse development of the losses has continued for the older years. The data also shows that the average case reserves on open claims has increased significantly over time, suggesting that the future adverse development of more recent years may not be as significant as it has been for the older years. We estimated the ultimate losses, for all claim years, using the following three methods:

(a) **Paid Loss Development Method**

This method is based on the assumption that the payment patterns for the older years can be used as reasonable predictors of the payment pattern for the more recent years. Based on review of the data and on discussions with USTIF's claims administrator, we are not aware

of any reasons why the payment patterns would change significantly. Therefore we have used this method and have given it a 30 percent weight in our final selections of the ultimate losses.

(b) **Reported Loss Development Method**

This method is based on the assumption that the reported loss emergence patterns for the older years can be used as reasonable predictors of the reported loss emergence pattern for the more recent years. Based on review of the data and on discussions with USTIF's claims administrator, there is evidence that the case reserves of the more recent years have been strengthened, and that the loss emergence patterns have changed significantly. To the extent that is true, then this method would lead to an overestimate of the ultimate losses for the more recent claim years. Therefore we have given this method only a 10 percent weight in our final selections of the ultimate losses.

(c) **Adjusted Reported Loss Development Method**

This method is based on the assumption that because of case reserve strengthening the reported loss emergence patterns for the older years before they can be used as reasonable predictors of the reported loss emergence pattern for the more recent years. Based on review of the data and on discussions with USTIF's claims administrator, we first adjusted the reported losses as of 6 months, 18 months, and 30 months after the end of each claim year, to reflect the fact that there appears to have been significant strengthening of case reserves during the early reporting periods. Second, for the older years, we adjusted the reported losses to smooth the progression of reported losses from the 30 month evaluation through to the most recent evaluation. We then assumed that the adjusted emergence pattern would apply to the more recent years. Although the adjustments made under this method are judgmental, we believe that they are reasonable and that the results of this method a more reasonable than the results of the Reported Loss Development Method. We also note that the results of this method are reasonably consistent with the results of the Paid Loss

Development Method. Therefore we have given this method a 60 percent weight in our final selections of the ultimate losses.

After estimating the ultimate losses by year, we forecast how these losses will be paid out over time. Until our 1999 report, the model used a loss payment pattern that was derived largely based on judgment. Now, however, we have revised the payment pattern to more closely approximate USTIF's actual payment pattern. Specifically, we expect:

- 5 percent of losses reported in a given year to be paid during that year;
- 10 percent of losses to be paid in the first year following the year in which they are reported;
- 15 percent of losses to be paid in the second year following the year in which they are reported;
- 10 percent of losses to be paid in the third year following the year in which they are reported
- 5 percent of losses to be paid in each of the fourth and fifth years following the year in which the losses are reported;
- 10 percent of the losses to be paid in the sixth and seventh years following the year in which the losses are reported;
- 15 percent of the losses to be paid in the eighth and ninth years following the year in which the losses are reported;

Because USTIF has only been in operation since February 1, 1994, the Fund does not have a history of payments over many years. The assumed payment pattern discussed above, which assumes that all of the payments will be made by the end of the ninth year following an accident year, may be conservative. In other words, all other things being equal, claim payments may actually stretch out beyond the ninth year and result in additional investment income for USTIF. However, if delayed claim payments are accompanied by increased claim costs, then USTIF financial position might be weakened.

Non-Heating Oil Tanks

For non-heating oil tanks, to estimate the ultimate loss and ALAE for a fund year, we divided the non-heating oil tank population into eight segments as follows:

- Bare steel tanks with a capacity of less than or equal to 10,000 gallons subject to monthly monitoring. (Bare steel tanks are tanks constructed of steel, which are not cathodically protected or double walled.)

- Bare steel tanks with a capacity of less than or equal to 10,000 gallons subject to monitoring other than monthly monitoring.

- Bare steel tanks with a capacity of greater than 10,000 gallons subject to monthly monitoring.

- Bare steel tanks with a capacity of greater than 10,000 gallons subject to other monitoring.

- Non-bare steel tanks with a capacity of less than or equal to 10,000 gallons subject to monthly monitoring. (In this report, non-bare steel tanks include steel tanks cathodically protected, double walled steel tanks and fiberglass tanks.)

- Non-bare steel tanks with a capacity of less than or equal to 10,000 gallons subject to other monitoring.
- Non-bare steel tanks with a capacity of greater than 10,000 gallons subject to monthly monitoring.

- Non-bare steel tanks with a capacity of greater than 10,000 gallons subject to other monitoring.

Further, for each of the eight segments, we assume tank failure follows a selected distribution and, based on the selected distribution and the parameters defining the distribution, determined the probability of failure in annual increments. The estimated ultimate losses due to tank failure equals the sum of the expected value of loss for tanks of all ages, capacities, constructions and monitoring types.

The expected value of loss for a specific tank, in 2002, equals the sum of the following:

(1) (The probability of a leak occurring in 2002 multiplied by the cost of a leak discovered within one year)

+

(2) (The probability a leak occurred in 2001 but was not discovered during the first year) times (the cost of a leak discovered between one year and two years)

+

(3) (The probability a leak occurred in 2000 but was not discovered during two years of monitoring) times (the cost of a leak discovered between two years and three years)

+

(4) (The probability a leak occurred in 1999 but was not discovered during three years of monitoring) times (the cost of a leak discovered between three years and four years)

+

(5) and so on, back to the probability that a leak occurred in 1940 but was not discovered until 2002.

To estimate the ultimate loss due to spills, we estimated the number of claims due to spills would equal 20 percent of the number of claims due to leaks. Further, we estimated that the average cost of a spill in 2002 would be $25,000, and that this value would increase at the rate of 7.0 percent per year.

Third Party Liability

To estimate the ultimate loss due to third party liability, we estimated the number of claims due to third party liability would equal 3.8 percent of the number of claims due to leaks and spills. We estimated that the average cost of a third party liability claim in 2001 would be $80,000, and that this value would increase at the rate of 7.0 percent per year. Further, we estimated that allocated loss adjustment expenses (legal fees) will equal 40 percent of the loss.

Heating Oil Tanks

Heating oil tanks are defined to include tanks containing heating oil, used motor oil, kerosene, and those tanks listed in DEP file whose contents are "unknown." We used the same methodology as described in the non-heating oil section.

Currently there are 4,894 tanks in the heating oil tank category. These are distributed as follows: heating oil, 2,366; used motor oil, 615; kerosene, 1,928; contents unknown, 15.

Assumptions

The model determines the probability of failure and the expected leak cost for USTs and their associated piping. (Throughout this report, we use the term "tank" to mean USTs and their associated piping.)

Major assumptions are discussed in the Executive Summary of this report. Other assumptions are discussed below.

Probability of Failure

The probability of failure is derived from the following equation:

$$\text{Life} = G\,A + 405\,W\,T^{2.7}\,R^{0.05}\exp(0.13\,pH - 0.42\,M - 0.26\,S) \quad (4)$$

Where:

Life = Expected time to first failure in years, with normal distribution having standard deviation of 2.5 years.

G = 10 for galvanized pipe, 0 for bare steel (default value = 5).

A = 0.4 for pH <= 4.5, 1 otherwise(default = 1.0).

W = 0.67 if pipe is wrapped, 1 otherwise(default = 1.0).

M = 1 for saturated soil, 0.5 for moist, 0 dry (default = 0.5).

S = 1 if sulfides are present in large quantities, 0 if not present (default = 0.5).

T = Wall thickness, inches (default = 0.154 in.).

R = Resistivity, ohm-cm (default = 7,500 ohm-cm for unsalted sites, 500 for regularly salted sites).

pH = Soil pH (default value = 7.0).

This formula comes from a model titled "QuickTanks--Underground Storage Tank Risk Manager Advisor," developed by Decision Focus, Inc. This formula has been the basis of our assumptions regarding the mean life of a tank, since 1994.

Distribution of Tank Failure

As we did in our previous studies, we assumed that the distribution of tank failure follows a normal distribution for each type of leak: external corrosion of the tank, internal corrosion of the tank, external corrosion of the pipes, and faulty installation.

Tank Construction

Tank construction is a significant factor in determining the propensity to leak. Tanks other than bare steel tanks have a relatively low propensity to leak. Bare steel tanks have a relatively high propensity to leak. The EPA ruled that after 1988 all newly installed tanks had to be non-bare steel.

For heating oil tanks, we assumed that leaking bare steel tank leaks will be replaced by non-bare steel tanks.

Based on these assumptions, there will be 20,127 non-heating oil tanks and 4,911 heating oil tanks by January 2005. At that time, only tanks containing heating oil will be bare steel tanks.

The Capacity of the Tank

The capacity of the tank is a proxy for wall thickness and impacts the mean and standard deviation of the distribution of tank failure due to corrosion. It appears that wall thickness does not significantly impact the mean age to failure. However, we divided tanks into two capacities as follows:

- Less than or equal to 10,000 gallons

- Greater than 10,000 gallons

We selected 10,000 gallons as the division point because there appears to be a discernible difference in the mean age to failure for tanks with capacities greater than 10,000 gallons as compared to tanks with less than 10,000 gallons.

Expected Cost of Leaks

As stated previously, we have adjusted the cost table that we used in our October 2001 study, to result in higher estimated claim severities. We assumed the following clean-up costs (in thousands) would apply to non-heating oil spills, depending on the length of time the tank had been leaking prior to discovery: year 1, $146; year 2, $247; year 3, $332; year 4, $404; year 5, $465; year 6, $520; year 7, $568; year 8, $612; year 9, $654; year 10, $694. These costs continue to increase each year, except that they are limited to no more than $1.5 million.

For heating oil costs, we used the costs listed above, but reduced by 72 percent.

Sensitivity Testing of Assumptions

As discussed above, our findings are based on numerous assumptions. To the extent that actual results differ from our assumptions, our findings may vary. The following paragraphs illustrate the sensitivity of the findings to some of the key assumptions.

For each of the items discussed below, we have shown the "baseline" assumption used to generate the cash flow exhibits, and have also shown an "optimistic" estimate and a "pessimistic" estimate. The optimistic and pessimistic estimates are presented to provide what we consider a reasonable range around our baseline estimate, but the actual results could fall outside of this range. Using the baseline assumptions, we have estimated that the Fund's unfunded liability would be $573.1 million as of June 30, 2011. As a measure of the sensitivity of our assumptions, we have shown how the estimated unfunded liability as of June 30, 2011 would vary under the optimistic assumptions and the pessimistic assumptions.

In the following tables, figures in parentheses represent negative values.

Loss Development Assumption

Our baseline assumption is that the current case reserves will develop adversely, by $201.4 million. Based on review of the historical data, we have selected about $144.8 million as a reasonable but optimistic assumption, and about $306.8 million as a reasonable but pessimistic assumption.

	Projected Unfunded Liability at 6/30/11
Optimistic: $144.8 million	($506.5) million
Baseline: $201.4 million	($573.1) million
Pessimistic: $306.8 million	($697.3) million

Payment Pattern Assumption

Our baseline assumption is that for any given year, 45 percent of the losses will be paid within four years of the beginning of the year, and the remaining 55 percent will be paid out over the next 6 years. Our optimistic assumption is that losses will be paid out 25 percent more slowly than the baseline assumption (but still assuming that all losses will be paid within ten years); our pessimistic assumption is that losses will be paid out 25 percent faster than the baseline assumption. If losses are paid faster, then the Fund has less of an opportunity to earn investment income. (By describing losses as being paid 25 percent faster, we mean that, for example, if the baseline assumption is that 20 percent of the unpaid losses will be paid in a given year then under the faster assumption 25 percent (1.25 times 20 percent) of the unpaid losses would be paid in that year.)

	Projected Unfunded Liability at 6/30/11
Optimistic: 25% slower	($563.1) million
Baseline: as described above	($573.1) million
Pessimistic: 25% faster	($580.1) million

Yield Assumption

Our baseline assumption is that the Fund will earn 3.0 percent per year on its assets. Our optimistic assumption is that the interest rate will be 4.0 percent per year; our pessimistic assumption is that the interest rate will be 2.0 percent per year. If the interest rate is less, then the Fund will earn less investment income.

		Projected Unfunded Liability at 6/30/11
Optimistic:	4.0%	($575.4) million
Baseline:	3.0%	($573.1) million
Pessimistic:	2.0%	($569.9) million

Percent Affected Assumption

Our baseline assumption regarding the percent affected by type of tank is shown in the table in the Major Assumptions section of this report. Our optimistic assumption is that the percent affected for each type of tank will be 10 percent less than the baseline assumption; our pessimistic assumption is that the percent affected will be 10 percent more than the baseline assumption. If the percent affected is higher, then there will be more leaks.

	Projected Unfunded Liability at 6/30/11
Optimistic: 10% less	($541.0) million
Baseline: as described above	($573.1) million
Pessimistic: 10% more	($605.1) million

Severity Assumption

Our baseline assumption is described in the Major Assumptions section of this report. Our optimistic assumption is that the severity will be 10 percent less than the baseline assumption; our pessimistic assumption is that the severity will be 10 percent more than the baseline assumption. If the severity is higher, then the cost per leak will be higher.

	Projected Unfunded Liability at 6/30/11
Optimistic: 10% less	($525.8) million
Baseline: as described above	($573.1) million
Pessimistic: 10% more	($610.2) million

Tank Removal Assumption

Our baseline assumption is that all non-heating oil bare steel tanks will be removed by the end of 2004. Our optimistic assumption is that they will be removed by the end of 2003; our pessimistic assumption is that they will be removed by the end of 2005. If they are removed later rather than sooner, then the tanks will have been leaking longer and the cost of the cleanup will be higher.

	Projected Unfunded Liability at 6/30/11
Optimistic: removed by end of 2003	($548.4) million
Baseline: removed by end of 2004	($573.1) million
Pessimistic: removed by end of 2005	($590.6) million

Annual Claims Inflation

Our baseline assumption is that the annual rate of inflation for claims will be seven percent, through 2011. Our optimistic assumption is that the annual rate of inflation will be three percent; our pessimistic assumption is the annual rate of inflation will be ten percent. The higher the rate of inflation, the higher the cost of future claims.

	Projected Unfunded Liability at 6/30/11
Optimistic: 3 percent per year	($511.1) million
Baseline: 7 percent per year	($573.1) million
Pessimistic: 10 percent per year	($627.9) million

Evaluation of Fee Structure

General Discussion

Exhibit 1, lines (1) though (10), show the projected cash flow for the Fund over the period 2002 through 2011, on a fiscal year basis.

Line(1), "Beginning Assets," shows our forecast of the Fund's assets at the beginning of each period. In our former reports we referred to this item as the "Beginning Cash Balance," but "Beginning Assets" is the more appropriate terminology. We have shown the assets divided between the loan to the General Fund (line a) and liquid assets (line b), which represent all other assets.

The assets that are in the form of the loan to the General Fund include outstanding principal and accrued interest on the loan. As stated previously, we have assumed that the loan principal will be repaid in ten annual installments beginning on July 1, 2004, and that the interest will be paid in one payment coinciding with the last payment of principal. (For clarity in these exhibits, we have treated the loan repayments as being made on June 30 of each year, rather than on July 1. In this way, for example, fiscal year 2004 will begin with a loan balance that has been reduced by the first payment of principal.)

Line (5), "DEP Allocation," reflects the maximum amount per year that USTIF can contribute to the DEP for various environmental programs. For fiscal year 2002/2003, we have reflected the $12 million allocation that the Board has already authorized. For subsequent years, we have

assumed that, for any given year, no payment will be made to the DEP if the Fund would have an unfunded liability.

Line (8), "Ending Assets," shows the projected assets at the end of each year, split between the assets in the form of the loan to the General Fund and liquid assets. The "Ending Assets" does not describe the overall financial position of the Fund because this item does not reflect the liability for losses incurred but not yet paid (unpaid case reserves plus provision for adverse development of the case reserves).

Line (9), "Liability for Losses Incurred But Not Yet Paid" is our estimate of the liability for claims that we project will have been reported, but not yet paid, as of each year end. *This does not include any provision for IBNR, which consists of liabilities for existing leaks that have not yet been discovered.*

Line (10), "Unfunded Liability," represents our estimate of the unfunded liability, or deficit, at the end of the year. This is the value that has traditionally been used to measure the solvency of the Fund. A value for this item that is enclosed in parentheses in our exhibits indicates that there are liabilities that exceed the assets of the Fund. A value for this item that is not enclosed within parentheses in our exhibits indicates that the Fund's assets exceed its liabilities, and that the Fund has a surplus.

Review of the unfunded liability on Exhibit 1 reveals that we expect the unfunded liabilty to increase to approximately $163.4 million by the end of June 2003, then increase to about $573.1 million by the end of 2011. This assumes that the fee structure remains the same, and that the Fund does not pay $12.0 million per year to the DEP after the payment for fiscal year 2002.

If the actual claims over the next several years exceed the projected claims, then the unfunded liability at the end of fiscal year 2011 may be significantly more than $573.1 million, if the fees are not increased.

If the actual claims over the next several years are less than the projected claims, then the unfunded liability at the end of June 2011 may not be as high as $573.1 million.

Discussion of Fees

Discussion

Following is a discussion of the financial implications of a number of alternatives for adjusting the fees. These are presented for illustration purposes, and some of these alternatives would not be appropriate for managing the financial results of the Fund. There are many alternatives for adjusting the fees over time, depending on the timing and magnitude of the fee adjustments, and the following list is not intended to be exhaustive.

Each of the alternatives is illustrated by its own exhibit that shows the forecasted financial results over a 20-year period, in 5-year intervals. These are labeled Exhibits 2A through 2G. Following these exhibits is Exhibit 2 Summary, which summarizes the forecasted results of each of the alternatives. It is important to review the following discussion, and review Exhibits 2A through 2G, before reviewing Exhibit 2 Summary.

For each alternative, the financial forecast is based on the assumptions underlying Exhibit 1, with the only variation being the magnitude and timing of fee adjustments.

Alternative 1: Maintain Current Fees

This is shown on Exhibit 2A.

Exhibit 2A is a forecast using the current fee structure. The current fee structure is $0.001 per gallon throughput for regulated substances other than diesel fuel and heating oil and $0.02 per

gallon capacity for heating oil and diesel fuel USTs. Exhibit 2A illustrates that under the current fee structure the forecasted unfunded liability will continue to grow through the end of fiscal year 2021.

Exhibit 2A provides a 20-year cash flow forecast, in 5-year intervals. For example, for the five years beginning July 1, 2007, the ending date is June 30, 2012. This date coincides with the ending date for fiscal year 2011, and the forecasted unfunded liability of approximately $573.1 million is the same as the forecasted unfunded liability shown for fiscal year 2011 on Exhibit 1.

Alternative2: Eliminate the unfunded liability by the end of fiscal year 2002

This is shown on Exhibit 2B.

Without any fee increase, we forecast that the unfunded liability will be approximately $163 million as of June 30, 2003 (the end of fiscal year 2002), as shown on Exhibit 1. Given that the current annual premium revenue is only approximately $4 million per year, an extremely large fee increase would be needed to generate an additional $163 million in order to eliminate the unfunded liability by June 30, 2003. This is compounded by the fact that a fee increase could not take place until January 1, 2003, meaning that the fee increase would need to be sufficient to generate an additional $163 million in only six months.

Exhibit 2B shows that in order to generate an additional $163 million of premium in six months, the current throughput fee would need to be increased from $0.001 per gallon to $0.082 per gallon, and the current capacity fee would need to be increased from $0.02 per gallon to $1.64 per gallon. (This is the equivalent of multiplying the current fees by a factor of 82.0)

Following the extremely high fees during calendar year 2003, the fees could be reduced to $0.004 per gallon (throughput) and $0.08 per gallon (capacity) on January 1, 2004. Based on the

forecast, this would enable the Fund to maintain a surplus (represented by a positive value of the unfunded liabilty) into fiscal year 2011. If the Fund increased the fees to $0.011 per gallon (throughput) and $0.22 per gallon (capacity) on January 1, 2011, the forecast is that the Fund would maintain a surplus through fiscal year 2021.

We present this alternative only in order to illustrate the action that the Board would need to take to eliminate the unfunded liability by the end of the current fiscal year. This alternative also illustrates that, because of the long-term impact of inflation on claim costs, the Fund will eventually need to increase fees even after it has eliminated the unfunded liability.

Alternative 3: Eliminate the unfunded liability by the end of fiscal year 2006.

This is shown on Exhibit 2C.

As compared to Alternative 2, this alternative would allow more time to eliminate the unfunded liability. The Fund would need to increase fees, on January 1, 2003, to $0.0207 per gallon (throughput) and to $0.414 per gallon (capacity). (This is the equivalent of multiplying the current fees by a factor of 20.7.)

On January 1, 2008 the Fund could then reduce the fees to $0.00965 per gallon (throughput) and to $0.1930 per gallon (capacity) and, based on the forecast, would maintain a positive surplus through fiscal year 2021.

Alternative 4: Eliminate the unfunded liability by the end of fiscal year 2011.

This is shown on Exhibit 2D.

As compared to Alternative 3, this alternative would allow more time to eliminate the unfunded liability. The Fund would need to increase fees, on January 1, 2003, to $0.0143 per gallon (throughput) and to $0.286 per gallon (capacity). (This is the equivalent of multiplying the current fees by a factor of 14.3.)

On January 1, 2013 the Fund could then reduce the fees to $0.012 per gallon (throughput) and to $0.24 per gallon (capacity) and, based on the forecast, would maintain a positive surplus through fiscal year 2016.

Alternative 5: Eliminate the unfunded liability by the end of fiscal year 2016.

This is shown on Exhibit 2E.

As compared to Alternative 3, this alternative would allow more time to eliminate the unfunded liability. The Fund would need to increase fees, on January 1, 2003, to $0.01315 per gallon (throughput) and to $0.263 per gallon (capacity). (This is the equivalent of multiplying the current fees by a factor of 13.15.)

On January 1, 2018 the Fund would then need to increase the fees to $0.0147 per gallon (throughput) and to $0.294 per gallon (capacity) and, based on the forecast, would maintain a positive surplus through fiscal year 2021.

Alternative 6: Eliminate the unfunded liability by the end of fiscal year 2021.

This is shown on Exhibit 2F.

As compared to Alternative 5, this alternative would allow more time to eliminate the unfunded liability. The Fund would need to increase fees, on January 1, 2003, to $0.01341 per gallon

(throughput) and to $0.2682 per gallon (capacity). (This is the equivalent of multiplying the current fees by a factor of 13.41.)

As compared to Alternative 5, the fees implemented on January 1, 2003 would be slightly higher but would remain in place through fiscal year 2021. Under Alternative 5, there would be a second fee increase, on January 1, 2018.

Alternative 7: Maintain positive value of liquid assets.

This is shown on Exhibit 2G.

The Fund would need to increase fees, on January 1, 2003, to $0.00625 per gallon (throughput) and to $0.125 per gallon (capacity). (This is the equivalent of multiplying the current fees by a factor of 6.25.)

Following the increase in fiscal year 2003, the fees could be increased to $0.018 per gallon (throughput) and to $0.36 per gallon (capacity). The fees could then be reduced on January 1, 2013 to $0.0078 per gallon (throughput) and to $0.156 per gallon (capacity).

This alternative would enable the Fund to maintain sufficient liquid assets to pay claims, which is the critical financial obligation of the Fund.

Alternative 8: Maintain positive value of liquid assets and gradually reduce unfunded liability.

This recommendation is illustrated on Exhibit 2H.

The Fund would increase fees, on January 1, 2003, to $0.010 per gallon (throughput) and to $0.20 per gallon (capacity). (This is the equivalent of multiplying the current fees by a factor of 10.) On January 1, 2008, the Fund would increase the fees by another 52 percent.

This would enable the Fund to maintain sufficient liquid assets to pay claims over the entire period of the forecast. Also, although the unfunded liability would increase over the first five years, it would then decrease and be eliminated in fiscal year 2017.

Exhibit 2 Summary provides a summary of the forecasted financial results for each of these alternatives. It is useful for comparing the eight alternatives. For each alternative it shows the fees as of January 1, 2003, and the liquid assets and unfunded liability at the end of each five-year interval.

Caveats and Limitations

1. This report was prepared for the use of the management of the Fund, but we recognize that it will become part of the public record in the Commonwealth of Pennsylvania. This report, which consists of the accompanying text, exhibits, and appendix, may only be distributed in its entirety. Please direct any questions regarding the report to the offices of MMC Enterprise Risk Consulting, Inc. at (212) 345-8770.

2. For this study, we used the following information:

   - The data and information included in our prior reports, as documented within those reports.

   - The USTIF database of UST registrations as of July 2002, as provided by USTIF.

   - Information regarding the Fund revenue and fees as of June 30, 2002 (and as of all prior months), as contained in the Claims and Revenue Summaries of the Fund.

   - A listing of third party claims that was provided to us on July 29, 2002, by representatives of USTIF.

3. For our study, we relied on the accuracy and completeness of this data and on the information conveyed to us during our telephone conversations without independent audit or verification. If the data or information is inaccurate or incomplete, our findings and conclusions may need to be revised.

4. The study's conclusions were based on an analysis of the available data and on the estimation of many contingent events. Future costs were developed from assumptions based on external sources of information, as well as historical claim experience and numbers of tanks. Our assumptions regarding the percent affected, the average life of tanks, and the average severities of environmental clean-ups are based on relatively limited data and are therefore quite speculative. As a result, the Fund's experience may differ significantly from our projections.

5. In addition to the assumptions stated in the report, numerous other assumptions underlie the calculations and results presented herein.

6. The conclusions are projections of the financial consequences of future contingent events and are subject to uncertainty. There may have been abnormal statistical fluctuations in the past numbers and amounts of claims, and there may be such fluctuations in the future. Because of the uncertainties inherent in the estimation of future costs, estimates set forth in this report may prove to be inadequate or excessive. Actual costs may vary significantly from the estimates. Because of the changing technological and judicial climates involving pollution liability as well as the lack of historical data on UST coverage, the suggested fees contained in this report are subject to greater uncertainty than would normally be associated with an insurance program addressing primary layers of coverage.

7. We have assumed that the Fund will cover losses only within its statutory limits. We have made no provision for an increase in the Fund's liability due to the failure of tank owners to pay either the deductibles or amounts over the limits.

8. This report addresses only coverage offered by the Fund to covered USTs in Pennsylvania. The costs developed in this report may not be appropriate for use by other state funds or providers of UST coverage.

9. The model assumes a particular level of compliance with the Federal UST technical requirements. Any deviation from the selections documented in our assumptions may have a significant impact on actual costs.

10. In order to simplify the review of the calculations, numbers in the exhibits may be shown with more significant digits than their accuracy suggests. In addition, our computer may retain more significant digits than are displayed in the exhibit and therefore, due to rounding, there may be differences in the actual values shown.

11. These caveats and limitations not withstanding, the conclusions set forth in this report represent our best estimate of the Fund's financial condition.

EXHIBITS

Exhibit 1

PENNSYLVANIA UNDERGROUND STORAGE TANKS INDEMNIFICATION FUND

Fiscal Year Cash Flow Estimates

Current Fee Structure

(000s Omitted)

		Six Months Beginning January 1, 2002	12 Months Beginning July 1, 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
(1)	Beginning Assets:											
(a)	Loan to General Fund		0	101,491	93,521	85,392	77,099	68,641	60,014	51,215	42,239	33,084
(b)	Liquid Assets		265,509	114,125	69,889	23,428	(33,095)	(99,069)	(177,315)	(246,883)	(305,034)	(364,374)
(c)	Total		265,509	215,616	163,410	108,820	44,005	(30,427)	(117,301)	(195,669)	(262,795)	(331,290)
(2)	Premiums Received:		3,999	3,921	3,847	3,772	3,698	3,660	3,660	3,660	3,660	3,660
(3)	Paid Losses and Third Party Expenses:		46,452	48,306	58,807	66,729	73,845	83,427	71,933	58,095	57,052	51,707
(4)	Administrative Costs:		3,396	3,459	3,527	3,573	3,431	3,256	3,175	3,090	3,019	2,960
(5)	DEP Allocation		12,000	0	0	0	0	0	0	0	0	0
(6)	Average Held Assets:											
(a)	Loan to General Fund		76,119	97,506	89,456	81,246	72,870	64,328	55,614	46,727	37,661	28,414
(b)	Liquid Assets		161,585	90,203	50,646	163	(59,884)	(130,580)	(203,038)	(265,646)	(323,239)	(379,877)
(c)	Total		237,704	187,709	140,102	81,409	12,986	(66,252)	(147,424)	(218,919)	(285,578)	(351,462)
(7)	Interest Earned on Average Held Balance:											
(a)	Loan to General Fund		1,491	2,030	1,870	1,708	1,542	1,373	1,200	1,024	845	662
(b)	Liquid Assets		6,463	3,608	2,026	7	(2,395)	(5,223)	(8,122)	(10,626)	(12,930)	(15,195)
(c)	Total		7,955	5,638	3,896	1,714	(853)	(3,850)	(6,921)	(9,602)	(12,085)	(14,533)
(8)	Ending Assets:											
(a)	Loan to General Fund		101,491	93,521	85,392	77,099	68,641	60,014	51,215	42,239	33,084	23,745
(b)	Liquid Assets		114,125	69,889	23,428	(33,095)	(99,069)	(177,315)	(246,883)	(305,034)	(364,374)	(420,575)
(c)	Total	265,509	215,616	163,410	108,820	44,005	(30,427)	(117,301)	(195,669)	(262,795)	(331,290)	(396,830)
(9)	Liability for Losses Incurred But Not Yet Paid	368,195	379,021	417,303	419,305	383,953	339,693	285,180	243,045	216,267	192,494	176,320
(10)	Unfunded Liability	(102,686)	(163,404)	(253,893)	(310,485)	(339,948)	(370,120)	(402,481)	(438,714)	(479,061)	(523,784)	(573,150)

Notes:

1(a) Previous period's ending assets for loan to General Fund.
1(b) Previous period's ending liquid assets.
1(c) 1(a) + 1(b)
(2) Calculated using tank fee equal to $0, throughput fee equal to $0.0010 per gallon and capacity fee equal to $0.020 per gallon.
(3) Calculated using an assumed payment pattern based on USTIF historical loss experience and judgment.
(4) Calculated using an annual inflation rate of 7.0%.
(5) Maximum amount of funds allocated by statute to the Department of Environmental Protection. Payment is assumed only in years for which there are sufficient assets to avoid ending the year with an unfunded liability (line 10).
6(a) This reflects the Fund's assets that are in the form of a loan to the General Fund, inclusive of accrued interest.
6(b) This reflects all of the Fund's assets other than 6(a).
6(c) 6(a) + 6(b)
7(a) This reflects the interest earned on the loan to the General Fund, although the interest may not be collected until the loan is repaid.
7(b) This reflects the investment yield on the Fund's liquid assets
7(c) 7(a) + 7(b)
8(a) This reflects the value of the loan to the General Fund, including outstanding principal and accrued interest.
8(b) This reflects the value of the Fund's liquid assets.
8(c) 8(a) + 8(b)
(9) Includes the case reserves as provided by USTIF plus estimated adverse development of $201.4 million on the case reserves. No IBNR is included.
(10) (8) - (9)

Exhibit 2A

PENNSYLVANIA UNDERGROUND STORAGE TANK INDEMNIFICATION FUND

Fiscal Year Cash Flow Estimates

Alternative 1: Maintain Current Fees

(000s Omitted)

		Six Months Beginning January 1, 2002	5 Years Beginning July 1, 2002	2007	2012	2017
(1)	Beginning Assets:					
(a)	Loan to General Fund		0	68,641	23,745	0
(b)	Other		265,509	(99,069)	(420,575)	(673,971)
(c)	Total		265,509	(30,427)	(396,830)	(673,971)
(2)	Premiums Received:		19,236	18,300	18,300	18,300
(3)	Paid Losses and Third Party Expenses:		294,138	322,213	187,295	223,383
(4)	Administrative Costs:		17,385	15,499	13,759	11,528
(5)	DEP Allocation		12,000	0	0	0
(6)	Average Held Assets:					
(a)	Loan to General Fund		83,439	46,549	3,797	0
(b)	Other		48,543	(260,476)	(524,311)	(837,526)
(c)	Total		131,982	(213,927)	(520,515)	(837,526)
(7)	Interest Earned on Average Held Balance:					
(a)	Loan to General Fund, o/s principal		8,641	5,104	475	0
(b)	Other		9,709	(52,095)	(104,862)	(167,505)
(c)	Total		18,350	(46,991)	(104,387)	(167,505)
(8)	Ending Assets:					
(a)	Loan to General Fund		68,641	23,745	0	0
(b)	Other		(99,069)	(420,575)	(673,971)	(1,058,086)
(c)	Total	265,509	(30,427)	(396,830)	(673,971)	(1,058,086)
(9)	Liability for Losses Incurred But Not Yet Paid	368,195	339,693	176,320	207,665	290,936
(10)	Unfunded Liability	(102,686)	(370,120)	(573,150)	(881,636)	(1,349,022)

PENNSYLVANIA UNDERGROUND STORAGE TANK INDEMNIFICATION FUND

Fiscal Year Cash Flow Estimates

Alternative 2: Eliminate the Unfunded Liability by the end of FY02

(Increase on 1/1/03; decrease on 1/1/04; increase on 1/1/11; see footnote)

(000s Omitted)

		Six Months Beginning January 1, 2002	5 Years Beginning July 1, 2002	2007	2012	2017
(1)	Beginning Assets:					
(a)	Loan to General Fund		0	68,641	23,745	0
(b)	Other		265,509	318,864	188,285	269,003
(c)	Total		265,509	387,505	212,031	269,003
(2)	Premiums Received:		379,608	111,630	201,300	201,300
(3)	Paid Losses and Third Party Expenses:		294,138	322,213	187,295	223,383
(4)	Administrative Costs:		17,385	15,499	13,759	11,528
(5)	DEP Allocation		12,000	0	0	0
(6)	Average Held Assets:					
(a)	Loan to General Fund		83,439	46,549	3,797	0
(b)	Other		336,344	227,515	231,256	279,975
(c)	Total		419,783	274,064	235,053	279,975
(7)	Interest Earned on Average Held Balance:					
(a)	Loan to General Fund, o/s principal		8,641	5,104	475	0
(b)	Other		67,269	45,503	46,251	55,995
(c)	Total		75,910	50,607	46,726	55,995
(8)	Ending Assets:					
(a)	Loan to General Fund		68,641	23,745	0	0
(b)	Other		318,864	188,285	269,003	291,388
(c)	Total	265,509	387,505	212,031	269,003	291,388
(9)	Liability for Losses Incurred But Not Yet Paid	368,195	339,693	176,320	207,665	290,936
(10)	Unfunded Liability	(102,686)	47,812	35,711	61,338	452

Note: 1/1/03: throughput fee increased to $0.0820; capacity fee increased to $1.64.
1/1/04: throughput fee increased to $0.0040; capacity fee increased to $0.080.
1/1/11: throughput fee increased to $0.0110; capacity fee increased to $0.220.

PENNSYLVANIA UNDERGROUND STORAGE TANK INDEMNIFICATION FUND

Fiscal Year Cash Flow Estimates

Alternative 3: Eliminate the Unfunded Liability by the end of FY06

(Increase on 1/1/03, Decrease on 1/1/08; see footnote)

(000s Omitted)

		Six Months Beginning	5 Years Beginning July 1,			
		January 1, 2002	2002	2007	2012	2017
(1)	Beginning Assets:					
(a)	Loan to General Fund		0	68,641	23,745	0
(b)	Liquid Assets		265,509	272,801	230,896	293,548
(c)	Total		265,509	341,442	254,641	293,548
(2)	Premiums Received:		358,391	196,817	176,595	176,595
(3)	Paid Losses and Third Party Expenses:		294,138	322,213	187,295	223,383
(4)	Administrative Costs:		17,385	15,499	13,759	11,528
(5)	DEP Allocation		12,000	0	0	0
(6)	Average Held Assets:					
(a)	Loan to General Fund		83,439	46,549	3,797	0
(b)	Liquid Assets		212,114	244,946	264,453	293,602
(c)	Total		295,554	291,495	268,249	293,602
(7)	Interest Earned on Average Held Balance:					
(a)	Loan to General Fund, o/s principal		8,641	5,104	475	0
(b)	Liquid Assets		42,423	48,989	52,891	58,720
(c)	Total		51,064	54,093	53,365	58,720
(8)	Ending Assets:					
(a)	Loan to General Fund		68,641	23,745	0	0
(b)	Liquid Assets		272,801	230,896	293,548	293,952
(c)	Total	265,509	341,442	254,641	293,548	293,952
(9)	Liability for Losses Incurred But Not Yet Paid	368,195	339,693	176,320	207,665	290,936
(10)	Unfunded Liability	(102,686)	1,750	78,321	85,883	3,017

Note: 1/1/03: throughput fee increased to $0.02070;
capacity fee increased to $0.4140.
1/1/08: throughput fee decreased to $0.00965;
capacity fee decreased to $0.1930.

PENNSYLVANIA UNDERGROUND STORAGE TANK INDEMNIFICATION FUND

Fiscal Year Cash Flow Estimates

Alternative 4: Eliminate the Unfunded Liability by the end of FY11

(Increase on 1/1/03, Decrease on 1/1/13; see footnote)

(000s Omitted)

		Six Months Beginning January 1, 2002	5 Years Beginning July 1, 2002	2007	2012	2017
(1)	Beginning Assets:					
(a)	Loan to General Fund		0	68,641	23,745	0
(b)	Liquid Assets		265,509	151,990	153,806	252,296
(c)	Total		265,509	220,632	177,551	252,296
(2)	Premiums Received:		248,209	261,690	223,809	219,600
(3)	Paid Losses and Third Party Expenses:		294,138	322,213	187,295	223,383
(4)	Administrative Costs:		17,385	15,499	13,759	11,528
(5)	DEP Allocation		12,000	0	0	0
(6)	Average Held Assets:					
(a)	Loan to General Fund		83,439	46,549	3,797	0
(b)	Liquid Assets		158,974	139,182	207,574	271,478
(c)	Total		242,414	185,731	211,370	271,478
(7)	Interest Earned on Average Held Balance:					
(a)	Loan to General Fund, o/s principal		8,641	5,104	475	0
(b)	Liquid Assets		31,795	27,836	41,515	54,296
(c)	Total		40,436	32,940	41,990	54,296
(8)	Ending Assets:					
(a)	Loan to General Fund		68,641	23,745	0	0
(b)	Liquid Assets		151,990	153,806	252,296	291,281
(c)	Total	265,509	220,632	177,551	252,296	291,281
(9)	Liability for Losses Incurred But Not Yet Paid	368,195	339,693	176,320	207,665	290,936
(10)	Unfunded Liability	(102,686)	(119,061)	1,231	44,631	346

Note: 1/1/03: throughput fee increased to $0.01430;
capacity fee increased to $0.2860.
1/1/13: throughput fee decreased to $0.0120;
capacity fee decreased to $0.2400.

PENNSYLVANIA UNDERGROUND STORAGE TANK INDEMNIFICATION FUND

Fiscal Year Cash Flow Estimates

Alternative 5: Eliminate the Unfunded Liability by the end of FY16

(Increase on 1/1/03, Increase on 1/1/18; see footnote)

(000s Omitted)

		Six Months Beginning January 1, 2002	5 Years Beginning July 1, 2002	2007	2012	2017
(1)	Beginning Assets:					
(a)	Loan to General Fund		0	68,641	23,745	0
(b)	Liquid Assets		265,509	130,282	104,141	210,102
(c)	Total		265,509	198,924	127,887	210,102
(2)	Premiums Received:		228,410	240,645	240,645	266,174
(3)	Paid Losses and Third Party Expenses:		294,138	322,213	187,295	223,383
(4)	Administrative Costs:		17,385	15,499	13,759	11,528
(5)	DEP Allocation		12,000	0	0	0
(6)	Average Held Assets:					
(a)	Loan to General Fund		83,439	46,549	3,797	0
(b)	Liquid Assets		149,426	104,625	160,748	248,953
(c)	Total		232,865	151,174	164,545	248,953
(7)	Interest Earned on Average Held Balance:					
(a)	Loan to General Fund, o/s principal		8,641	5,104	475	0
(b)	Liquid Assets		29,885	20,925	32,150	49,791
(c)	Total		38,527	26,029	32,625	49,791
(8)	Ending Assets:					
(a)	Loan to General Fund		68,641	23,745	0	0
(b)	Liquid Assets		130,282	104,141	210,102	291,156
(c)	Total	265,509	198,924	127,887	210,102	291,156
(9)	Liability for Losses Incurred But Not Yet Paid	368,195	339,693	176,320	207,665	290,936
(10)	Unfunded Liability	(102,686)	(140,769)	(48,433)	2,437	221

Note: 1/1/03: throughput fee increased to $0.01315;
capacity fee increased to $0.2630.
1/1/18: throughput fee increased to $0.01470;
capacity fee increased to $0.2940.

PENNSYLVANIA UNDERGROUND STORAGE TANK INDEMNIFICATION FUND

Fiscal Year Cash Flow Estimates

Alternative 6: Eliminate the Unfunded Liability by the end of FY21

(Increase on 1/1/03; see footnote)

(000s Omitted)

		Six Months Beginning January 1, 2002	5 Years Beginning July 1, 2002	2007	2012	2017
(1)	Beginning Assets:					
(a)	Loan to General Fund		0	68,641	23,745	0
(b)	Liquid Assets		265,509	135,190	115,370	229,021
(c)	Total		265,509	203,832	139,115	229,021
(2)	Premiums Received:		232,887	245,403	245,403	245,403
(3)	Paid Losses and Third Party Expenses:		294,138	322,213	187,295	223,383
(4)	Administrative Costs:		17,385	15,499	13,759	11,528
(5)	DEP Allocation		12,000	0	0	0
(6)	Average Held Assets:					
(a)	Loan to General Fund		83,439	46,549	3,797	0
(b)	Liquid Assets		151,584	112,438	175,408	259,802
(c)	Total		235,024	158,987	179,204	259,802
(7)	Interest Earned on Average Held Balance:					
(a)	Loan to General Fund, o/s principal		8,641	5,104	475	0
(b)	Liquid Assets		30,317	22,488	35,082	51,960
(c)	Total		38,958	27,591	35,556	51,960
(8)	Ending Assets:					
(a)	Loan to General Fund		68,641	23,745	0	0
(b)	Liquid Assets		135,190	115,370	229,021	291,474
(c)	Total	265,509	203,832	139,115	229,021	291,474
(9)	Liability for Losses Incurred But Not Yet Paid	368,195	339,693	176,320	207,665	290,936
(10)	Unfunded Liability	(102,686)	(135,861)	(37,205)	21,356	538

Note: 1/1/03: throughput fee increased to $0.01341;
capacity fee increased to $0.2682.

PENNSYLVANIA UNDERGROUND STORAGE TANKS INDEMNIFICATION FUND

Fiscal Year Cash Flow Estimates

Alternative 7: Maintain Positive Value of Liquid Assets

(Increases on 1/1/03, 1/1/07; decrease on 1/1/13; see footnote)

(000s Omitted)

		Six Months Beginning January 1, 2002	5 Years Beginning July 1, 2002	2007	2012	2017
(1)	Beginning Assets:					
(a)	Loan to General Fund		0	68,641	23,745	0
(b)	Liquid Assets		265,509	21,966	70,426	83,178
(c)	Total		265,509	90,608	94,171	83,178
(2)	Premiums Received:		131,123	329,400	161,406	142,740
(3)	Paid Losses and Third Party Expenses:		294,138	322,213	187,295	223,383
(4)	Administrative Costs:		17,385	15,499	13,759	11,528
(5)	DEP Allocation		12,000	0	0	0
(6)	Average Held Assets:					
(a)	Loan to General Fund		83,439	46,549	3,797	0
(b)	Liquid Assets		94,284	33,855	90,896	47,954
(c)	Total		177,724	80,404	94,693	47,954
(7)	Interest Earned on Average Held Balance:					
(a)	Loan to General Fund, o/s principal		8,641	5,104	475	0
(b)	Liquid Assets		18,857	6,771	18,179	9,591
(c)	Total		27,498	11,875	18,654	9,591
(8)	Ending Assets:					
(a)	Loan to General Fund		68,641	23,745	0	0
(b)	Liquid Assets		21,966	70,426	83,178	598
(c)	Total	265,509	90,608	94,171	83,178	598
(9)	Liability for Losses Incurred But Not Yet Paid	368,195	339,693	176,320	207,665	290,936
(10)	Unfunded Liability	(102,686)	(249,085)	(82,149)	(124,487)	(290,337)

Note: 1/1/03: throughput fee increased to $0.00625;
capacity fee increased to $0.1250.
1/1/07: throughput fee increased to $0.0180;
capacity fee increased to $0.360.
1/1/13: throughput fee decreased to $0.00780;
capacity fee decreased to $0.1560.

PENNSYLVANIA UNDERGROUND STORAGE TANKS INDEMNIFICATION FUND

Fiscal Year Cash Flow Estimates

Alternative 8: Maintain Positive Value of Liquid Assets and Reduce Unfunded Liability

(Increases on 1/1/03, 1/1/08; see footnote)

(000s Omitted)

		Six Months Beginning January 1, 2002	5 Years Beginning July 1, 2002	2007	2012	2017
(1)	Beginning Assets:					
(a)	Loan to General Fund		0	68,641	23,745	0
(b)	Liquid Assets		265,509	70,821	61,894	200,153
(c)	Total		265,509	139,462	85,639	200,153
(2)	Premiums Received:		174,180	268,644	278,160	278,160
(3)	Paid Losses and Third Party Expenses:		294,138	322,213	187,295	223,383
(4)	Administrative Costs:		17,385	15,499	13,759	11,528
(5)	DEP Allocation		12,000	0	0	0
(6)	Average Held Assets:					
(a)	Loan to General Fund		83,439	46,549	3,797	0
(b)	Liquid Assets		123,271	50,700	134,665	245,717
(c)	Total		206,710	97,249	138,462	245,717
(7)	Interest Earned on Average Held Balance:					
(a)	Loan to General Fund, o/s principal		8,641	5,104	475	0
(b)	Liquid Assets		24,654	10,140	26,933	49,143
(c)	Total		33,296	15,244	27,408	49,143
(8)	Ending Assets:					
(a)	Loan to General Fund		68,641	23,745	0	0
(b)	Liquid Assets		70,821	61,894	200,153	292,546
(c)	Total	265,509	139,462	85,639	200,153	292,546
(9)	Liability for Losses Incurred But Not Yet Paid	368,195	339,693	176,320	207,665	290,936
(10)	Unfunded Liability	(102,686)	(200,230)	(90,681)	(7,512)	1,611

Note: 1/1/03: throughput fee increased to $0.01;
capacity fee increased to $0.20.
1/1/08: throughput fee increased to $0.01520;
capacity fee increased to $0.3040.

PENNSYLVANIA UNDERGROUND STORAGE TANK INDEMNIFICATION FUND

Summary of Fiscal Year Cash Flow Estimates For Eight Alternatives

(000s Omitted)

	Effective January 1, 2003 Fees per gallon of		Reference	5 Years Beginning July 1,			
	Throughput	Capacity	Exhibits	2002	2007	2012	2017
Alternative 1: Maintain Current Fees	$0.0010	$0.0200	Exhibit 2A				
Ending Liquid Assets				(99,069)	(420,575)	(673,971)	(1,058,086)
Ending Unfunded Liability				(370,120)	(573,150)	(881,636)	(1,349,922)
Alternative 2: Eliminate unfunded liability in FY02	$0.0820	$1.6400	Exhibit 2B				
Ending Liquid Assets				318,864	188,285	269,003	291,388
Ending Unfunded Liability				47,812	35,711	61,338	452
Alternative 3: Eliminate unfunded liability in FY06	$0.0207	$0.4140	Exhibit 2C				
Ending Liquid Assets				272,801	230,896	293,548	293,952
Ending Unfunded Liability				1,750	78,321	85,883	3,017
Alternative 4: Eliminate unfunded liability in FY11	$0.0143	$0.2860	Exhibit 2D				
Ending Liquid Assets				151,990	153,806	252,296	291,281
Ending Unfunded Liability				(119,061)	1,231	44,631	346
Alternative 5: Eliminate unfunded liability in FY16	$0.0132	$0.2630	Exhibit 2E				
Ending Liquid Assets				130,282	104,141	210,102	291,156
Ending Unfunded Liability				(140,769)	(48,433)	2,437	221
Alternative 6: Eliminate unfunded liability in FY21	$0.0134	$0.2682	Exhibit 2F				
Ending Liquid Assets				135,190	115,370	229,021	291,474
Ending Unfunded Liability				(135,861)	(37,205)	21,356	538
Alternative 7: Maintain positive liquid assets	**$0.0063**	**$0.1250**	**Exhibit 2G**				
(see note) Ending Liquid Assets				**21,966**	**70,426**	**83,178**	**598**
Ending Unfunded Liability				**(249,085)**	**(82,149)**	**(124,487)**	**(290,337)**
Alternative 8: Maintain positive value of liquid assets and reduce unfunded liability	$0.0100	$0.2000	Exhibit 2H				
Ending Liquid Assets				70,821	61,894	200,153	292,546
Ending Unfunded Liability				(200,230)	(90,681)	(7,512)	1,611

Note: Alternative 7 is shown in bold to emphasize that this alternative represents minimum fee adjustments needed to maintain positive liquid assets.

These various options include the following fee adjustments after 1/1/03:
Alternative 1 - No further fee adjustments through FY2021
Alternative 2 - Decrease of 95% on 1/1/04; increase of 175% on 1/1/11
Alternative 3 - Decrease of 53% on 1/1/08
Alternative 4 - Decrease of 16% on 1/1/13
Alternative 5 - Increase of 12% on 1/1/18
Alternative 6- No further adjustments through FY2021
Alternative 7 - Increase of 188% on 1/1/07; decrease of 57% on 1/1/13
Alternative 8 - Increase of 52% on 1/1/08

These forecasts do not include provision for IBNR.

PENNSYLVANIA UNDERGROUND STORAGE TANK INDEMNIFICATION FUND

ESTIMATE OF ULTIMATE FUND COSTS FOR FUND YEARS 2002 THROUGH 2011

DEDUCTIBLE EQUALS $5,000
(000s)

Total - All Tanks

FUND YEAR	(1) NUMBER OF TANKS	(2) EXPECTED NUMBER OF LEAKING TANKS	(3) EXPECTED NUMBER OF LEAKING TANKS DISCOVERED (EXCLUDING REMOVALS)	(4) ESTIMATED NUMBER OF CLAIMS DUE TO SPILLS	(5) TOTAL ESTIMATED NUMBER OF LEAKS AND SPILLS (EXCLUDING REMOVALS) (3)+(4)	(6) ESTIMATED NUMBER OF LEAKS DISCOVERED DURING REMOVAL	(7) ESTIMATED NUMBER OF CLAIMS INVOLVING A THIRD PARTY LIABILITY (5) x .048
2002	29,366	1,830	135	27	161	228	6
2003	27,920	1,644	137	27	165	230	6
2004	26,474	1,439	134	27	160	232	6
2005	25,038	1,172	126	25	151	N/A	6
2006	25,038	1,211	102	20	122	N/A	5
2007	25,038	1,239	89	18	107	N/A	4
2008	25,038	1,327	85	17	101	N/A	4
2009	25,038	1,410	83	17	100	N/A	4
2010	25,038	1,490	82	16	99	N/A	4
2011	25,038	1,564	81	16	98	N/A	4
TOTAL	N/A	14,327	1,053	211	1,263	690	48

FUND YEAR	(8) TOTAL ESTIMATED ULTIMATE LOSS FOR CLEANUP (EXCLUDING REMOVALS)	(9) ESTIMATED LOSS DUE TO LEAKS DISCOVERED DURING REMOVAL	(10) TOTAL ESTIMATED ULTIMATE LOSS FOR CLEAN UP (8) + (9)	(11) ESTIMATED ULTIMATE THIRD PARTY LOSS AND ALAE	(12) ESTIMATED TPA FEES	(13) GROSS ESTIMATED ULTIMATE THIRD PARTY & CLEAN UP LOSS & LAE (10)+(11)+(12)	(14) POLICY HOLDER DEDUCTIBLE [(5)+(7)] x $5,000	(15) NET ESTIMATED ULTIMATE THIRD PARTY & CLEAN UP LOSS & ALAE (13) - (14)
2002	28,939	49,107	78,045	690	812	79,547	838	78,709
2003	30,010	53,195	83,205	753	680	84,639	855	83,784
2004	31,213	57,607	88,821	785	619	90,225	833	89,392
2005	31,737	N/A	31,737	789	479	33,005	782	32,223
2006	30,054	N/A	30,054	683	426	31,164	633	30,531
2007	28,552	N/A	28,552	640	664	29,856	554	29,302
2008	28,596	N/A	28,596	651	710	29,957	527	29,430
2009	29,732	N/A	29,732	684	760	31,176	517	30,659
2010	31,476	N/A	31,476	725	813	33,013	512	32,501
2011	33,493	N/A	33,493	767	870	35,130	507	34,623
TOTAL	303,803	159,909	463,712	7,167	6,833	477,712	6,557	471,155

Notes:

- All estimates in all columns except columns (5), (10), and columns (12) through (15) are based on the results of MMC Enterprise Risk Consulting, Inc.'s model.
- Column (12), Estimated TPA Fees: Fees for the years 2002 through 2006 are forecast based on estimates provided by USTIF. The fees for the year 2007 are forecast based on the average TPA fees forecasted for prior years, adjusted to a 2007 cost level using an inflation rate of 7.0 percent per year. Beyond 2007, the TPA fees are forecast to increase at 7.0 percent per year.

PENNSYLVANIA UNDERGROUND STORAGE INDEMNIFICATION FUND

ESTIMATE OF ULTIMATE FUND COSTS FOR FUND YEARS 2002 THROUGH 2011

DEDUCTIBLE EQUALS $5,000
(000's)

Non-Heating Oil Tanks - Excludes Leaks Discovered During Removal

FUND YEAR	(1) NUMBER OF TANKS	(2) EXPECTED NUMBER OF LEAKING TANKS	(3) EXPECTED NUMBER OF LEAKING TANKS DISCOVERED (EXCLUDING REMOVALS)	(4) ESTIMATED NUMBER OF CLAIMS DUE TO SPILLS	(5) TOTAL ESTIMATED NUMBER OF ACCEPTED CLAIMS (EXCLUDING REMOVALS) (3)+(4)	(6) ESTIMATED NUMBER OF CLAIMS INVOLVING A THIRD PARTY LIABILITY (5) x .048
2002	24,455	1,366	115	23	138	5
2003	23,009	1,155	117	23	141	5
2004	21,563	925	113	23	136	5
2005	20,127	631	105	21	126	5
2006	20,127	645	80	16	97	4
2007	20,127	653	67	13	81	3
2008	20,127	713	63	13	75	3
2009	20,127	772	61	12	73	3
2010	20,127	832	60	12	72	3
2011	20,127	891	59	12	71	3
TOTAL	N/A	8,582	842	168	1,010	39

FUND YEAR	(7) TOTAL ESTIMATED ULTIMATE LOSS FOR CLEAN UP	(8) ESTIMATED ULTIMATE THIRD PARTY LOSS AND ALAE	(9) ESTIMATED TPA FEES	(10) GROSS ESTIMATED ULTIMATE THIRD PARTY & CLEAN UP LOSS & ALAE (7)+(8)+(9)	(11) POLICY HOLDER DEDUCTIBLE [(5) +(6)]x $5000	(12) NET ESTIMATED ULTIMATE THIRD PARTY & CLEAN UP LOSS & ALAE (10) - (11)
2002	24,913	592	762	26,266	718	25,548
2003	25,497	645	638	26,780	732	26,048
2004	26,163	666	581	27,410	706	26,704
2005	26,101	658	449	27,208	652	26,556
2006	23,779	541	400	24,720	501	24,219
2007	21,585	485	623	22,693	420	22,273
2008	20,878	483	666	22,027	391	21,636
2009	21,204	503	713	22,420	380	22,040
2010	22,074	530	763	23,367	374	22,992
2011	23,166	559	816	24,540	369	24,171
TOTAL	235,360	5,661	6,410	247,430	5,244	242,186

Notes:

- All estimates in all columns except column (5) and columns (9) through (12) are based on the results of MMC Enterprise Risk Consulting, Inc.'s model.
- Column (9), Estimated TPA Fees: Fees for the years 2002 through 2006 are forecast based on estimates provided by USTIF. The fees for the year 2007 are forecast based on the average TPA fees forecasted for prior years, adjusted to a 2007 cost level using an inflation rate of 7.0 percent per year. Beyond 2007, the TPA fees are forecast to increase at 7.0 percent per year.

PENNSYLVANIA UNDERGROUND STORAGE INDEMNIFICATION FUND

ESTIMATE OF ULTIMATE FUND COSTS FOR FUND YEARS 2002 THROUGH 2011

DEDUCTIBLE EQUALS $5,000
(000s)

Heating Oil Tanks

FUND YEAR	(1) NUMBER OF TANKS	(2) EXPECTED NUMBER OF LEAKING TANKS	(3) EXPECTED NUMBER OF LEAKING TANKS DISCOVERED (EXCLUDING REMOVALS)	(4) ESTIMATED NUMBER OF CLAIMS DUE TO SPILLS	(5) TOTAL ESTIMATED NUMBER OF ACCEPTED CLAIMS (EXCLUDING REMOVALS) (3)+(4)	(6) ESTIMATED NUMBER OF CLAIMS INVOLVING A THIRD PARTY LIABILITY (5) x .048
2002	4,911	464	19	4	23	1
2003	4,911	489	20	4	24	1
2004	4,911	514	20	4	24	1
2005	4,911	541	21	4	25	1
2006	4,911	566	21	4	25	1
2007	4,911	586	22	4	26	1
2008	4,911	615	22	4	26	1
2009	4,911	637	22	4	26	1
2010	4,911	659	22	4	26	1
2011	4,911	673	22	4	27	1
TOTAL	N/A	5,745	211	42	253	10

FUND YEAR	(7) TOTAL ESTIMATED ULTIMATE LOSS FOR CLEAN UP	(8) ESTIMATED ULTIMATE THIRD PARTY LOSS AND ALAE	(9) ESTIMATED TPA FEES	(10) GROSS ESTIMATED ULTIMATE THIRD PARTY & CLEAN UP LOSS & ALAE (7)+(8)+(9)	(11) POLICY HOLDER DEDUCTIBLE [(5) +(6)]x $5000	(12) NET ESTIMATED ULTIMATE THIRD PARTY & CLEAN UP LOSS & ALAE (10) - (11)
2002	4,026	99	50	4,175	120	4,055
2003	4,514	109	42	4,664	123	4,541
2004	5,050	119	38	5,208	127	5,081
2005	5,637	131	30	5,797	129	5,668
2006	6,275	143	26	6,444	132	6,312
2007	6,967	155	41	7,163	134	7,029
2008	7,718	168	44	7,930	136	7,794
2009	8,528	181	47	8,756	137	8,619
2010	9,402	195	50	9,647	138	9,509
2011	10,327	208	54	10,589	138	10,452
TOTAL	68,443	1,506	424	70,373	1,313	69,060

Notes:

- All estimates in all columns except column (5) and columns (9) through (12) are based on the results of MMC Enterprise Risk Consulting, Inc.'s model.
- Column (9), Estimated TPA Fees: Fees for the years 2002 through 2006 are forecast based on estimates provided by USTIF. The fees for the year 2007 are forecast based on the average TPA fees forecasted for prior years, adjusted to a 2007 cost level using an inflation rate of 7.0 percent per year. Beyond 2007, the TPA fees are forecast to increase at 7.0 percent per year.
provided by USTIF. The fees for the year 2007 are forecast based on the average TPA fees forecasted for prior years, adjusted to a 2007 cost level using an inflation rate of 7.0 percent per year. Beyond 2007, the TPA fees are forecast to increase at 7.0 percent per year.

COMMONWEALTH OF PENNSYLVANIA
INSURANCE DEPARTMENT
OFFICE OF SPECIAL PROJECTS
1326 Strawberry Square
Harrisburg, PA 17120

Phone: (717) 787-4429
Fax: (717) 772-1969
E-Mail: psalvatore@state.pa.us

October 25, 2002

Mr. Robert Nyce
Executive Director
Independent Regulatory Review Comm.
333 Market Street
Harrisburg, PA 17101

Re: Insurance Department Final- Omitted Regulation No. 11-216, Fees and Collection Procedures

Dear Mr. Nyce:

Pursuant to Section 5a(c) of the Regulatory Review Act, enclosed for your information and review is final-omitted regulation 25 Pa. Code, Chapter 977, Fees and Collection Procedures.

The amendments will bring the regulation's fees to the appropriate levels as recommended by an actuarial report that was completed on September 12, 2002. After reviewing this report, the Board determined that this increase is necessary to maintain the solvency of the Fund for the public health and safety of this Commonwealth's citizens and their environment. The actuarial study, performed by MMC Enterprise Risk Consulting, Inc., determined that an increase in the gallon and capacity fees was necessary to maintain the actuarial soundness of the Fund in the future. A copy of the actuarial report is attached.

If you have any questions regarding this matter, please contact me at (717) 787-4429.

Sincerely yours,

Peter J. Salvatore
Regulatory Coordinator

TRANSMITTAL SHEET FOR REGULATIONS SUBJECT TO THE REGULATORY REVIEW ACT

I.D. NUMBER:	011-216
SUBJECT:	Fees and Collection Procedures
AGENCY:	DEPARTMENT OF INSURANCE

TYPE OF REGULATION

Proposed Regulation

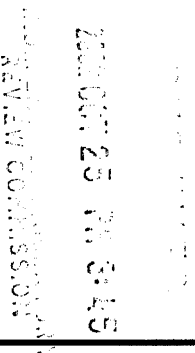
Final Regulation

X Final Regulation with Notice of Proposed Rulemaking Omitted

120-day Emergency Certification of the Attorney General

120-day Emergency Certification of the Governor

Delivery of Tolled Regulation
a. With Revisions b. Without Revisions



FILING OF REGULATION

DATE	SIGNATURE	DESIGNATION
10-25-02	B. Vaughan	HOUSE COMMITTEE ON INSURANCE
10/25/02		
10-25-02	Donna Hetman	SENATE COMMITTEE ON BANKING & INSURANCE
10-25-02	Ron Colbert	
10-25-02	Elena Pagán	INDEPENDENT REGULATORY REVIEW COMMISSION
10-25-02	Mary Mummert	ATTORNEY GENERAL
		LEGISLATIVE REFERENCE BUREAU

October 17, 2002