Manage Your Risk

Don't Let

Actuarial Study for the Vermont Petroleum Cleanup Fund

Don’t Let Risk Manage You

Actuarial Study for the Vermont Petroleum Cleanup Fund

Some History

Vermont Petroleum Cleanup Fund – 30 years old

- Fund was relatively stable for 2/3rds of history.
- Covered qualifying motor fuel tanks only
- One-penny/gallon distributor licensing fee (primary funding mechanism)

New pressures mounting

- Legislative raids
  - $5.8M net transfers out by 2004
- New coverages added without sufficient revenue
  - 2004, heating oil coverage added for all tanks, commercial & residential
  - Half cent per gallon fee vs. penny per gallon for motor fuel
  - $750,000/yr transfer from MF to HF account until fee raised to one cent per gallon

First Actuarial Study - January 2006

Main Finding

- PCF technically insolvent (projected liabilities exceed assets) through 2015.

Benefits

- Bulwark against legislative raids (coupled with EPA Energy Act of 2005)
- Legislation - Guided and aided legislative action
    - Raise heating oil fee from half-penny to penny per gallon.
    - Authority to create regulations on ASTs to minimize releases and future liabilities.

Second Actuarial Study – December 2016

Trigger - Fiscal Concerns

- Tank removal deadline
  - 1/1/18 – all single-wall combination systems must be removed
- Heating oil account still unsustainable
- New Regulations - Added costs to cleanup sites
  - New Rule for Contaminated Sites Section
  - Revised and more stringent groundwater standards
  - Rules pending that dictate groundwater cleanup to property boundaries
- Sunset Dates - for PCF revenue and coverage
- Lack of Future Analyses
  - Decade since the last actuarial report on risk and solvency

Single-Wall UST Combination Systems

Single-Wall UST Systems – I.D. Risks

Loans

- ➢ 0% interest for tank replacement cost
- ➢ Statute directs loan expenditures up to ½ of annual PCF revenue
  - Annual liability - $2.3M, based on typical 4.6M revenue for motor fuel
  - Available balance - $2.2M at end of FY16
    - Includes $1M financial assurance

New Release Discovery and Higher Cleanup Costs

- ➢ 175 USTs to be closed in 2016 and 2017, several new sites anticipated
- ➢ Single wall systems costlier to cleanup
  - Estimated severity of >$100K/release vs. <$70,000/release for entire population

Single-Wall UST Systems – Risk Reality

Loans

- 175 unlined tanks at over 50 facilities (Dec. 2015)
- Capped loans at $150,000 per facility ($7.5M for 50 facilities)
- Surveys – Polled tank owner loan interest in 2016 and 2017
  - Survey response rates were both low, and most were uncertain
  - Owners waited until the last minute, with several still unresolved

Cleanup Costs

- 1.2M in additional claims estimated
  - 12 new claims projected based on past UST removal claim rates
  - Estimated severity per claim of $100,000

Actuary Study 2016

Actuarial Study – Timeline

- Early 2016 - Authorization to proceed
    - PCF Advisory Committee & business office engagement
- Spring/Early Summer - Request for Proposal (RFP) Developed
    - Assistance from Department of Financial Regulation
- RFP Released 7/19/16 with Deadline 8/15/16
    - Two proposals
        - Kerper and Bowron, LLC
        - Taylor & Mulder, Inc.
- 8/29/16 - Contractor Selected
- 9/26/16 - Contract Signed
- 11/17/16 - First Draft Due
- 12/2/16 - Contractor Presentation
- 12/9/16 - Final Report

Actuarial Study – Methods

- Reviewed historic claims data through June 2016
- Analyzed fund reserves
- Projections made on a calendar year cash flow basis from 2006 to 2026.
    - Anticipated revenue included:
        - Distributor licensing fees
        - Interest on account
        - Tank Payment Fees
        - Loan Payments
        - Cost Recovery
    - Anticipated expenses included:
        - Claims payments (first and third party)
        - UST/AST Financial Assistance
        - Loans
        - Administrative Costs
    - Claim payments projected for both existing claims and new claims in future.

Actuarial Study – Findings

- Scenario 1 - No Sunset Projection
  - Fund balance <$1M in FY18 and only $71,000 at close of FY 19.
  - Slow rebound after FY19, but technically insolvent through FY26.

- Scenario 2 - Sunset: new claims FY19, and revenue FY21
  - Fund insolvent by FY22 or shortly after revenue collection stops

Projections vs. Actuals

- Loans
  - Projected $3.6M ($1.2M/yr, 900K over norm) for FY17-FY19
  - Actual ~$1.9M ($900K in FY17, $670K in FY18 and <$400K FY19)
- Increased cleanup cost from single-walled system releases
  - Projected $1.2M from 12 new releases with $100k avg. severity
  - Actual to date – 10 new releases with no new claims to date
- New regulatory costs projected at +$500K per year, but yet to be borne out due to delay in new groundwater standards and rule.

Actuarial Study – Responses

Loans

- ➢ Loan policy revised and approved by PCF Advisory Committee
  - No new loans to facility owners with two or more loans
- ➢ Additional survey of tank owners to gauge loan demand

Expenditure Controls

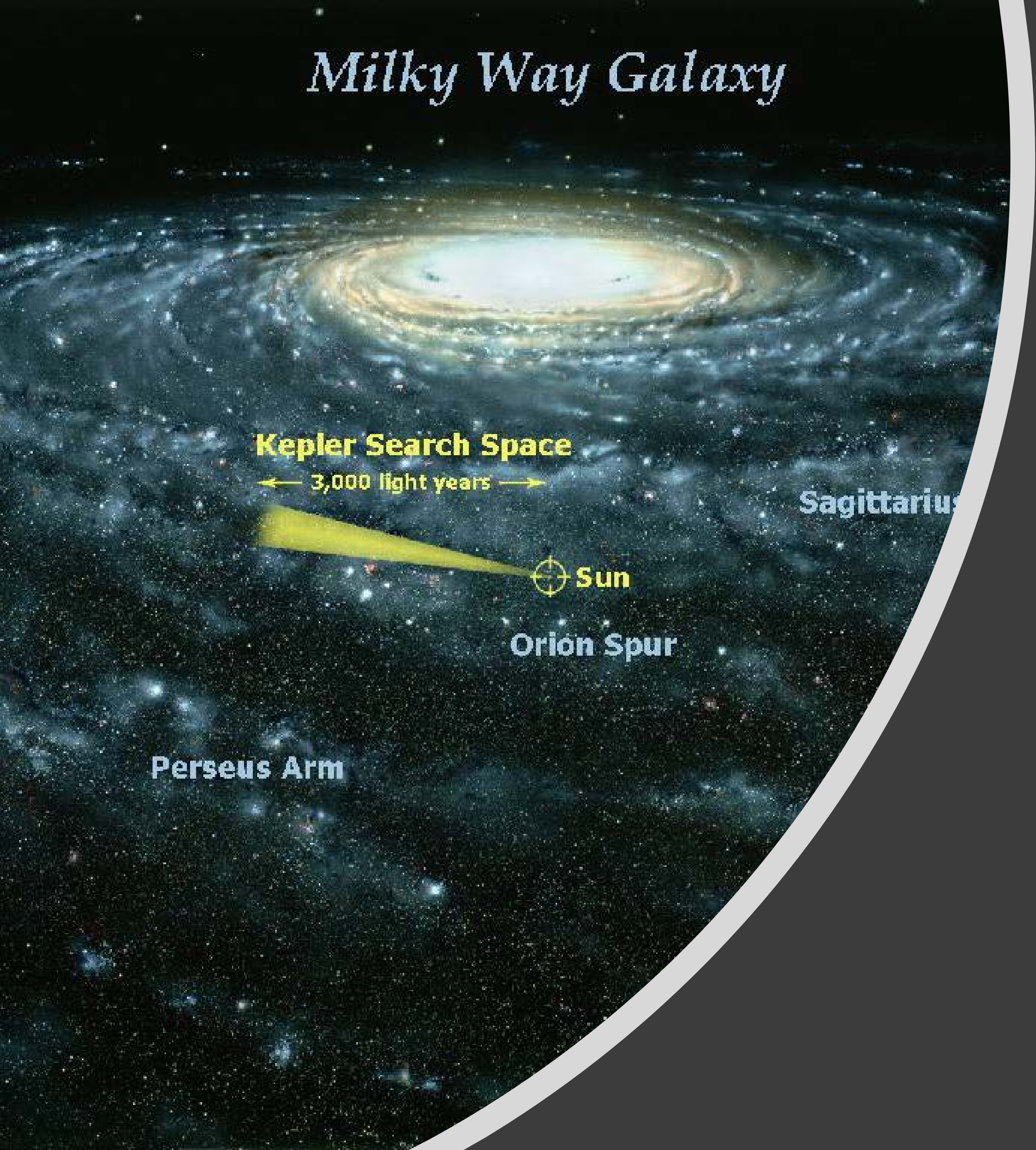
- ➢ No new “supplemental” active cleanups (typically $300K-$600K per year)

Address Heating Oil Account Solvency

- ➢ Biggest pressure from home heating oil ASTs
- ➢ End 2016 legislative session – requirement for Rule changes
- ➢ New AST Rules went into effect August 2017
  - All ASTs must be inspected by August 2020
  - High risk ASTs require red-tagging (delivery prohibition) until corrected

Reduce Additional Regulatory Cost of Cleanups

- ➢ Changes to pending rule to eliminate cleanup requirement of low risk sites



Where are we now?

PCF Today

Total Fund Balance - UP

- End FY18 - **$4.4M** (includes reduction for $1M federal financial requirement)
  - End FY15 - **$1.9M**, an increase of $2.5M.

Heating Oil Account – SUSTAINABLE?

- End FY18 - **$530,000 (Fiscal year total $470,000)**
  - End FY15 – **(-$30,000)**, increase of $560,000
  - 2nd time annual fiscal year total ended in black since inception 2004
    - 1st and only time when not weather related!

Loan Trends - FAVORABLE

- Loan demand decreasing: FY16 - $430K; $; FY17 - $900K; and FY18 - $670K
- Loan payments increasing: FY16 - $290K; and FY18 - $500K

Why do an Actuarial Study?

Fiduciary Duty

- ➢ Obligation to care for monies entrusted for the benefit of all tank owners and affected third parties, and for the protection of human health and the environment
- ➢ Important Planning tool – manage risks short and long term

Legislative Accountability

- ➢ Minimize risk of Fund raids
- ➢ Sound management engenders trust and support
  - Sunset deadlines extended 5 times (5 year increments)
  - End of 2018 session, PCF extended 10 years!

Know Your Data

- ➢ Average severity of claim: motor fuel $68K

Lessons Learned

- **Start Early**
  - Process can take up to a year
- **Maintain Fund Data**
  - Fiduciary tables can look back 10+ years
- **Identify Important Risks**
- **Request Multiple Scenarios**
  - Vermont requested a scenario with and without a sunset
  - Recommend scenarios for risks that are high with low predictability
    - EXAMPLE: Loan Demand – lack of good data despite surveys led to tank and fund manager using conservative approach that led to projected insolvency
    - Better frame possible outcomes (low risk, probable risk and high risk)
- **Beware sample bias**
  - Past tank removal release rates biased due to tendency to remove failing systems.

THANK YOU

"There must be some mistake. According to our actuary tables I'm going to live to 83."