



**THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL
PROTECTION SPECIAL RECLAMATION FUND AND
SPECIAL RECLAMATION WATER TRUST FUND**

PROPOSAL FOR ACTUARIAL SERVICES

RFQ # DEP15120

Prepared for:

Chuck Bowman
State of West Virginia
Purchasing Division

Prepared by:
Milliman, Inc.

Peter G. Wick, FCAS, MAAA
Principal and Consulting Actuary

Travis J. Grulkowski, FCAS, MAAA
Consulting Actuary

July 12, 2010

RECEIVED

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**PURCHASING DIVISION
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PURCHASING AFFIDAVIT

**THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL
PROTECTION SPECIAL RECLAMATION FUND AND
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PROPOSAL FOR ACTUARIAL SERVICES

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INTRODUCTION

Milliman, Inc. (Milliman) is pleased to submit this proposal to provide actuarial services for the West Virginia Department of Environmental Protection Special Reclamation Fund and Special Reclamation Water Trust Fund (the Funds), as outlined in the Request for Quotation # DEP15120. Milliman's experience in providing actuarial services to clients with significant environmental liability exposures, public entities, and mass tort exposures in general, gives us exceptional background and insight to assist in this important endeavor. The following sections discuss our understanding of the scope of the work and address the technical requirements. We will also provide information regarding Milliman's capabilities and our unique qualifications for this assignment.

BACKGROUND

In 1977, the State of West Virginia provided the Office of Special Reclamation (the Program) with the mandate to reclaim land and treat water on bond forfeited coal mining permits with the goal of protecting public health, safety and property. The Program administers two special revenue funds of the Department of Environmental Protection of the State of West Virginia: the Special Reclamation Fund and the Special Reclamation Water Trust Fund. The Funds receive revenue from several sources, including coal taxes, bond forfeitures, civil penalties and investment earnings. Upon notice of a forfeited coal mining permit, the Program determines the steps to be taken to restore the site to compliance and estimates the associated costs. The site is then scheduled for reclamation according to its priority level, as evaluated by the Program.

QUALIFICATIONS OF MILLIMAN

Milliman is a firm of consultants and actuaries serving the full spectrum of business, governmental, and financial organizations. Founded in 1947, the firm has 52 offices in principal cities in the United States and worldwide. Milliman is owned and managed by approximately 300 principals, who have been elected in recognition of their technical, professional, and business achievements.

Milliman is one of the largest actuarial consulting firms in the world. Our consultants achieve the highest credentials in their fields and are unmatched in the industry. We are dedicated to providing the best quality service to our clients. We pride ourselves on our responsiveness and customized solutions. Furthermore, the results of actuarial analyses are necessarily complex, and we pride ourselves on our ability to clearly communicate these results to our clients.

Milliman has a strong ethic of peer review that is employed in any project that is undertaken. This process requires a secondary review of the work performed, reports prepared, and overall project management. The reviewer is selected as someone familiar with the project, but who has not performed significant work on the specific project. This allows for impartial review and the opportunity for additional insights. The review is structured to identify any outstanding issues that were not addressed, to ensure that the information is presented in a logical and complete manner, and to ensure that the overall quality of the work meets Milliman's high standards. This process adds an additional level of security for our clients.

Among the top actuarial firms, it may be hard to distinguish one from the other. Each firm will have qualified actuaries, specialized software and informative communication materials. So what distinguishes Milliman from the other firms? We believe it is in the little things that can add up to a big difference. These are summarized below:

- Our unique corporate structure, which promotes individual responsibility for the integrity and quality of the work provided to clients. Clients benefit from our independence. We are beholden to no corporate parent or point of view;
- Our ability to communicate difficult concepts to diverse audiences, from Boards of Trustees to legislators to union representatives to the media and all other interested parties. We seek to inform, to be innovative, and to help others overcome any misconceptions;
- The high level of involvement and day-to-day interactions of the senior consultants with the staff preparing the client work;
- A stringent pre-release peer review process that provides assurance that the highest quality standards are being maintained. A second qualified Milliman consultant will review all work products;
- Flexibility and customization for each client's needs. We do not provide "cookie cutter" consulting services to our clients. Based on our mission to add value to our clients, we tailor each report and each consulting project to the client's specific needs;
- Most of the senior consultants in our firm have more than 15 years of service with Milliman. Many employees start and complete their entire careers with Milliman. We support the professional growth and development of all our employees and have very low turnover;
- We don't speak "actuary"; we explain situations and complexities so that our clients understand and can make informed decisions; and
- Milliman has built an international reputation for work of the highest standards. Technical excellence is Milliman's most outstanding characteristic. Senior consultants participate in the development of the work product. We see the bigger picture and provide knowledge beyond the numbers, bringing value to our clients for a reasonable fee.

CONSULTING OBJECTIVE AND SCOPE OF WORK

Our consulting objective for this assignment will be to provide actuarial support needed to evaluate the Fund's fiscal soundness. All work will be conducted in accordance with applicable actuarial standards of practice as promulgated by the Actuarial Standards Board of the American Academy of Actuaries. Specifically, our assignment will consist of the following:

- Participation in an on-site entrance conference involving interviews of each Special Reclamation Advisory Council Member and other significant staff;
- Provide a valuation of the liabilities of the Program versus its held assets as of June 30, 2010, in total and by category. Categories include underground mine permits, surface mine permits, small acreage permits, large acreage permits, and permits for tipples, preparation plants and impoundments. Land and water liabilities will be shown separately;
- Project future assets and liabilities of the Program for a period of at least twenty years, in total and by category. We will separately assess the funded status of the Special Reclamation Fund and Special Reclamation Water Trust Fund;
- Provide analysis and discussion of the Program's ability to support long-term and/or perpetual liabilities;
- Provide a one-page executive summary of analysis and conclusions;
- Provide physical and electronic copies of the report and workpapers;
- Provide three on-site consultations and an on-site exit conference; and
- Provide monthly status reports to the designated Department of Environmental Protection representative.

EXPERIENCE

Prior Engagements with the State of West Virginia

Milliman has not been engaged to provide actuarial services to the State of West Virginia or its agencies in the last five years. However, several consultants in other Milliman offices perform consulting services for a financial advisory group that advises the state's executive branch. If further information is desired, please contact us.

Environmental Liability Engagements

Examples of similar assignments Milliman has performed include the following:

The Illinois Drycleaner Environmental Response Trust Fund (IDERTF)

We conduct an actuarial analysis to assist in the development of rates for the insurance portion of the IDERTF. The Fund's insurance program assists drycleaners in meeting their financial responsibility to clean up any future pollution arising from spills and/or leaks from drycleaning machines and solvent storage units. The most recent analysis, completed in 2009, developed an experience modification to the original base rate developed by Milliman in its 2003 analysis.

Contact:

Mr. H.Pat Eriksen
Williams & Company Consultants
814 Pierce Street
Sioux City, IA 51101
(712) 252-4041
hpe@willconsult.com

Illinois Mine Subsidence Insurance Fund (IMSIF)

The Illinois Mine Subsidence Insurance Fund (IMSIF) began in 1979 by an act of the Illinois General Assembly. It provides reinsurance to companies writing property insurance for losses caused by mine subsidence. The Fund reinsures about 350,000 policies issued through over 250 insurance companies. Milliman reviews IMSIF's unpaid claim liabilities each December 31st and provides a Statement of Actuarial Opinion to the Illinois Department of Insurance regarding IMSIF's carried reserves. Milliman has also assisted IMSIF in analyzing the reinsurance limits it provides for its residential book of business and is currently assessing the adequacy of IMSIF's commercial rates.

Contact:

Ms. Heidi Weber
Chief Financial Officer
Illinois Mine Subsidence Insurance Fund
P.O. Box 812060
Chicago, IL 60681-2060
(312) 521-5152
hmweber@imsif.com

Rockwood Casualty Insurance Group (Rockwood)

We have provided annual estimates of Rockwood's unpaid claim liabilities for its workers' compensation, general liability, automobile liability, other property and surety exposures. Rockwood underwrites workers' compensation coverage for both underground and surface coal mining operations in Pennsylvania. Milliman has evaluated Rockwood's exposure relating to Black Lung claims by analyzing historical occupational disease data, industry trends, and recently promulgated regulations. Milliman provided these services to Rockwood from 2003 through 2009.

Contact:

Mr. David Hay, CPA
Vice President and CFO
Rockwood Casualty Group
654 Main Street
Rockwood, PA 15557
(814) 926-4661
david.hay@rockwoodcasualty.com

Zurich American Insurance Company (Zurich)

We have provided Zurich with independent estimates of its unpaid claim liabilities for various lines of business comprising the vast majority of Zurich's insurance exposure. Central to the analysis were studies of asbestos and environmental exposure that involved the use of Milliman's asbestos model to examine several of the largest accounts. Milliman has provided services to Zurich since 2004.

Contact:

Mr. Robb Luck
VP & Corporate Actuary
Zurich America Insurance Group
1400 American Lane
Schaumburg, IL 60196-1056
(847) 605-6000
robb.luck@zurichna.com

Allianz S.p.A. (Allianz)

We have evaluated the potential run-off liability exposure for a book of business underwritten several decades ago and currently held by a subsidiary of Allianz. The book is potentially subject to several mass tort related exposures including asbestos, environmental, lead, pharmaceutical, and chemical. The work has included an independent assessment of the potential for incurred-but-not-reported (IBNR) claims, a range of ultimate losses, and a distribution of outcomes at various confidence levels. Milliman has provided services to Allianz since 2006.

Contact:

Ms. Roberta Riva
Director
Allianz S.p.A.
Corso Italia 23
Milano, 20122 Italy
011- 3902-7216 3244
roberta.riva@allianz.it

Sample Report

Milliman reports contain sensitive client information which is kept confidential. We have attached a sample report from which certain identifying information has been removed. If additional samples or other information is required, please contact us.

STAFF QUALIFICATIONS

We propose that Peter G. Wick, FCAS, MAAA, will be the Consulting Actuary for this engagement. Mr. Wick has been with Milliman since 1985 and has specialized in providing actuarial services to self-insured pools and trusts, particularly those formed by public entity groups. He has been the consultant to self-insured pools and trusts in Wisconsin, Illinois, Kentucky, Nebraska and Missouri. Services provided include loss reserve evaluation for GASB 10, estimation of funding requirements, and evaluation of excess insurance costs.

Mr. Travis J. Grulkowski, FCAS, MAAA will be responsible for the technical aspects of our analysis. Travis is a Consulting Actuary with the Milwaukee office of Milliman. He joined the firm in 1996. Travis's area of expertise is ratemaking and loss reserving analyses for property and casualty insurance. He has experience in many lines of insurance, with a special emphasis on professional liability and commercial lines, including workers' compensation, general liability, and auto liability. He has also performed many independent actuarial reviews of asbestos and environmental liabilities for clients.

Mr. Wick and Mr. Grulkowski are members of the American Academy of Actuaries (AAA) and are members in good standing and Fellows of the Casualty Actuarial Society (CAS). They have met the continuing education requirements mandated by the AAA.

Mr. Robert K. Briscoe will be available to provide additional expertise for our analysis. Mr. Briscoe is a Principal and Senior Consultant with the New York office of Milliman. He has decades of consulting experience with the coal industry and is familiar with the unique issues surrounding mining reclamation. He has extensive experience in the valuation and cost determination of individual large and long-term workers' compensation claims, including occupational disease claims.

The Milwaukee office of Milliman has a staff of approximately 65 individuals that specialize in casualty insurance and are available to assist on this proposed project.

Complete biographies for the primary members of the project team are enclosed with this proposal. The project team will also include actuarial students and clerical staff, as needed, to provide technical and administrative support and reduce fees. Moreover, we can draw on the Milliman consultant base to provide additional expertise as necessary. Milliman consultants have done work for most of the major coal companies in the U.S. across the last several decades.

SPECIFIC WORK PLAN

We will begin the assignment by meeting with the members of the Special Reclamation Advisory Council and other staff to identify significant issues and develop a course of action. We expect to develop a more detailed work plan and data request subsequent to this meeting and review of the latest actuarial report and will make it available to the Council.

The following actuarial projection methods may be among those used in estimating ultimate costs:

- Paid Loss Development Method;
- Incurred Loss Development Method;
- Paid & Incurred Bornhuetter-Ferguson Methods;
- Pure Premium Projection Method; and
- Frequency-Severity Projection Method.

COST PROPOSAL

Milliman bills strictly for hourly charges plus reimbursement for out-of-pocket expenses. Fees are billed monthly as they are incurred, and are payable upon receipt. We estimate the fees for the proposed engagement to be approximately \$100,000 to \$125,000, including out-of-pocket expenses.

The attached schedule details our estimated fees for the proposed engagement:

BID SCHEDULE DEP15120

Name of Firm: Milliman, Inc.
--

Task	Hours (Avg. Rate)*	Total Bid Cost Estimate
Entrance Conference (3.7 a.)	15 @ \$400 avg. + Travel	\$10,000
Actuarial Report (3.7 b. 1-7)	20 @ \$500 avg. 90 @ \$300 avg. 100 @ \$250 avg. 60 @ \$200 avg. 5 @ \$100 avg.	74,500
Physical and electronic copies of work papers (3.7 c.)	2 @ \$100 avg.	200
Three (3) on-site consultations (3.7 d.)	15 @ \$400 avg. + Travel x 3	30,000
Exit Conference (3.7 e.)	15 @ \$400 avg. + Travel	10,000
Monthly Status Reports (3.7 f.)	5 @ \$300	1,500
Reduction for Conference Limit		(12,500)
Grand Total	N/A	\$113,700

Hourly Rates and Projected Work Distribution Assigned Staff:

	Hourly Rate	Projected Distribution of Hours
Partner	\$500	16%
Senior Actuary	\$300	37
Staff Actuary	\$250	28
Assistant Actuary	\$200	17
Administrative Staff	\$100	2
Total	N/A	100%

* We have estimated average 2010-2011 billing rates.

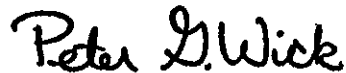
The hourly rates listed are considered firm for Fiscal Year 2010 and FY2011. Ancillary expenses (travel, meals, lodging, etc.) are to be included in Total Proposed Cost and proposed hourly rates.

We believe it is in our client's best interest that two Milliman consultants attend each on-site meeting. The value added is in the additional insight each consultant brings to the meeting along with enhanced communication. We realize this increases the overall cost and we are proposing to cap the cost of each on-site consultation at \$7,500. This results in an overall savings of \$12,500 as shown in the above Bid Schedule.

We have also attached our standard Consulting Services Agreement for your review. We would be happy to discuss any concerns or questions you may have.

If you have any questions with regard to this proposal or would like additional information, please do not hesitate to contact us. We appreciate the opportunity to present this proposal to the West Virginia Department of Environmental Protection.

Sincerely,



Peter G. Wick, FCAS, MAAA
Principal and Consulting Actuary



Travis J. Grulkowski, FCAS, MAAA
Consulting Actuary

PGW/TJG/bas

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CONSULTING SERVICES AGREEMENT

(Page 1 of 3)

This Agreement is entered into between Milliman, Inc. (Milliman) and the Funds (Company) as of July 12, 2010. Company has engaged Milliman to perform consulting services as described in the letter dated July 12, 2010 and attached hereto. Such services may be modified from time to time and may also include general actuarial consulting services. These terms and conditions will apply to all subsequent engagements of Milliman by Company unless specifically disclaimed in writing by both parties prior to the beginning of the engagement. In consideration for Milliman agreeing to perform these services, Company agrees as follows:

- 1) **BILLING TERMS.** Company acknowledges the obligation to pay Milliman for services rendered, whether arising from Company's request or otherwise necessary as a result of this engagement, for the personnel utilized plus all out-of-pocket expenses incurred. Milliman will bill Company periodically for services rendered and expenses incurred. All invoices are payable upon receipt. Milliman reserves the right to stop all work if any bill goes unpaid for 60 days. In the event of such termination, Milliman shall be entitled to collect the outstanding balance, as well as charges for all services and expenses incurred up to the date of termination.
- 2) **LIMITATION OF LIABILITY.** Milliman will perform all services in accordance with applicable professional standards. The parties agree that Milliman, its officers, directors, agents and employees, shall not be liable to Company, under any theory of law including negligence, tort, breach of contract or otherwise, for any damages in excess of 3 times the professional fees paid to Milliman with respect to the work in question. In no event shall Milliman be liable for lost profits of Company or any other type of incidental or consequential damages. The foregoing limitations shall not apply in the event of the intentional fraud or willful misconduct of Milliman.
- 3) **DISPUTES.** In the event of any dispute arising out of or relating to the engagement of Milliman by Company, the parties agree that the dispute will be resolved by final and binding arbitration under the Commercial Arbitration Rules of the American Arbitration Association. The arbitration shall take place before a panel of three arbitrators. Within 30 days of the commencement of the arbitration, each party shall designate in writing a single neutral and independent arbitrator. The two arbitrators designated by the parties shall then select a third arbitrator. The arbitrators shall have a background in either insurance, actuarial science or law. The arbitrators shall have the authority to permit limited discovery, including depositions, prior to the arbitration hearing, and such discovery shall be conducted consistent with the Federal Rules of Civil Procedure. The arbitrators shall have no power or authority to award punitive or exemplary damages. The arbitrators may, in their discretion, award the cost of the arbitration, including reasonable attorney fees, to the prevailing party. Any award made may be confirmed in any court having jurisdiction. Any arbitration shall be confidential, and except as required by law, neither party may disclose the content or results of any arbitration hereunder without the prior written consent of the other parties, except that disclosure is permitted to a party's auditors and legal advisors.
- 4) **CHOICE OF LAW.** The construction, interpretation, and enforcement of this Agreement shall be governed by the substantive contract law of the State of New York without regard to its conflict of laws provisions. In the event any provision of this agreement is unenforceable as a matter of law, the remaining provisions will stay in full force and effect.

CONSULTING SERVICES AGREEMENT

(Page 2 of 3)

- 5) **NO THIRD PARTY DISTRIBUTION.** Milliman's work will be prepared solely for the internal use of the Company. No portion of Milliman's work may be provided to any other party without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work, and may include a legend on its reports so stating. Milliman's work may not be filed with the SEC or other securities regulatory bodies. In addition, references to Milliman or its estimates in securities filings, analyst meetings and press releases are not authorized. Should the Company make reference to the engagement of an independent actuary (without specifically identifying Milliman) in any SEC filing, the SEC may require disclosure of the name of the actuary. Such disclosure is prohibited without Milliman's prior written consent. If Milliman does consent, additional work may be required at additional expense.

Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Third Party Release Agreement, subject to the following exceptions:

- (a) Company may provide a copy of Milliman's work to its accounting auditor to be used solely for audit purposes.
- (b) Company may provide a copy of Milliman's work, in its entirety, to governmental entities, as required by law.
- (c) Company may provide a copy of Milliman's work to its Attorney, provided they agree not to use Milliman's work for any purpose other than to provide services to the Company and agree not to distribute the work to any other person or entity.

In the event Milliman consents to release its work product, it must be provided in its entirety. We recommend that any such party have its own actuary or other qualified professional review the work product to ensure that the party understands the assumptions and uncertainties inherent in our estimates. No third party recipient of Milliman's work product should rely upon Milliman's work product.

- 6) **CONFIDENTIALITY.** Any information received from Company will be considered "Confidential Information". However, information received from Company will not be considered Confidential Information if (a) the information is or comes to be generally available to the public during the course of Milliman's work, (b) the information was independently developed by Milliman without resort to information from the Company, or (c) Milliman appropriately receives the information from another source who is not under an obligation of confidentiality to Company. Milliman agrees that Confidential Information shall not be disclosed to any third party.

CONSULTING SERVICES AGREEMENT

(Page 3 of 3)

7. **USE OF NAME.** Company agrees that it shall not use Milliman's name, trademarks or service marks, or refer to Milliman directly or indirectly in any media release, public announcement or public disclosure, including in any promotional or marketing materials, customer lists, referral lists, websites or business presentations without Milliman's prior written consent for each such use or release, which consent shall be given in Milliman's sole discretion.

Milliman, Inc.		Company	
By:	<u><i>Peter G. Wick</i></u>	By:	_____
Name:	<u>Peter G. Wick, FCAS, MAAA</u>	Name:	_____
Title:	<u>Principal and Consulting Actuary</u>	Title:	_____
Date:	<u>July 12, 2010</u>	Date:	_____

Peter G. Wick

FCAS, MAAA

Principal, Consulting Actuary



CURRENT RESPONSIBILITY

Pete is a principal and consulting actuary with the Milwaukee office of Milliman. He joined the firm in 1985.

EXPERIENCE

Pete's area of expertise is property and casualty insurance, particularly ratemaking, loss reserve analysis, and financial planning. Pete has extensive experience in commercial lines, including professional liability, workers' compensation, reinsurance, and other long-tail lines. He has assisted a number of clients in developing and analyzing association-sponsored and self-insured programs.

PROFESSIONAL DESIGNATIONS

- Fellow, Casualty Actuarial Society
- Member, American Academy of Actuaries

EDUCATION

- BS, Business Administration, University of Wisconsin



Travis J. Grulkowski

FCAS, MAAA
Consulting Actuary



CURRENT RESPONSIBILITY

Travis is a consulting actuary with the Milwaukee office of Milliman. He joined the firm in 1996.

EXPERIENCE

Travis's area of expertise is ratemaking and loss reserving analyses for property and casualty insurance. He has experience in many lines of insurance, with a special emphasis on professional liability and commercial lines, including workers' compensation, general liability, and auto liability. He has also supported actuarial appraisals for mergers and acquisitions.

PROFESSIONAL DESIGNATIONS

- Fellow, Casualty Actuarial Society
- Member, American Academy of Actuaries

EDUCATION

- Bachelor of Business Administration (1993)
- Double Major - Actuarial Science
Risk Management and Insurance
University of Wisconsin, Madison



Robert K. Briscoe

Principal, Senior Consultant



CURRENT RESPONSIBILITY

Robert is a principal and senior consultant with the New York office of Milliman.

EXPERIENCE

Bob has worked on a variety of consulting assignments in life, health, and casualty matters, with emphasis on workers' compensation assignments. Within the workers' compensation area, he has specialized in the valuation and cost determination of individual large and long-term worker' compensation claims, including occupational disease claims and claim handling practices with respect to high-cost workers' compensation claims. Bob has worked extensively on loss-sensitive workers' compensation insurance arrangements, such as large deductible and retrospectively rated plans where long-term claim costs are adjusted over time between two or more parties. He has extensive experience working with captive insurance arrangements, individual self-insurance programs, and group self-insurance programs. Bob has worked on assignments involving most of the U.S. workers' compensation 2nd Injury Funds, many of the state Workers' Compensation Insurance Funds, and other workers' compensation special funds. He has extensive experience in evaluating the effects of law changes on future workers' compensation costs.

Bob and his staff conduct claim reviews for a large variety of clients to assess case reserve adequacy and claim handling in light of best practices and industry standards. In such assignments, they provide consulting advice as to achieving optimum results within the context of specific claims operations. Bob and his staff have conducted claim reviews in all U.S. workers' compensation claim jurisdictions and under the various Federal workers' compensation programs. In a typical assignment, Bob and his staff will build models of the expected payout of sets of specific claims which can be discounted and organized within the layers of specific excess insurance. Bob and his staff work closely with other Milliman actuaries in formulating assumptions as to future loss development based on reviews of individual claims.

Bob has been a primary figure in the development of innovative alternative methods to cost and document large and/or long-term workers' compensation claims in heavy industry settings and in quantifying comparable costs for large and long-term claims across different workers' compensation systems. He has developed commercial software to manage and case reserve workers' compensation claims. Bob has been engaged in a continuous analysis of compensation for occupational lung disease in the U.S. coal mining industry since the early 1970s.

Bob has spoken at meetings and served on committees at the National Council on Compensation Insurance, the Casualty Loss Reserve Seminars, the International Association of Industrial Accident Boards and Commissions, the American Bar Association, the Kentucky Legislative Research Commission, and the Defense Research Institute and has provided extensive testimony before state and federal legislative and regulatory bodies.





SAMPLE REPORT

**ABC COMPANY
DEVELOPMENT OF RATES AND RATING PLAN FOR
POLLUTION LIABILITY POLICY
EFFECTIVE JANUARY 1, 2010**

Prepared by:
Milliman, Inc.

April 28, 2009

15800 W. Bluemound Road, Suite 400
Brookfield, WI 53005-6089
TEL +1 262 784 2250
FAX +1 262 923-3686
Milliman.com

SAMPLE REPORT

**ABC COMPANY
DEVELOPMENT OF RATES AND RATING PLAN FOR
POLLUTION LIABILITY POLICY
EFFECTIVE JANUARY 1, 2010**

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SAMPLE REPORT

ABC COMPANY DEVELOPMENT OF RATES AND RATING PLAN FOR POLLUTION LIABILITY POLICY EFFECTIVE JANUARY 1, 2010

INTRODUCTION

Milliman, Inc. (Milliman) has been approached by the ABC Company to assist with the Company's funding requirements.

[Company specific information removed]

SAMPLE REPORT

BACKGROUND

[Company specific information removed]

The insurance program provides up to \$500,000 in claims-made pollution liability insurance to pay for the cleanup of soil and groundwater contamination caused by a spill or leak of solvent at the insured's facilities which occurs after the retroactive date (inception date of the insureds original policy with the Company) and during the policy period. A \$10,000 deductible applies to each incident. The program only provides funds for the cleanup of the pollution, and excludes any third party liability such as business interruption for neighboring businesses due to the pollution. Further, in order to qualify for the insurance program, the Company must have a site evaluation completed prior to obtaining insurance to determine if there is any existing pollution at the site. Any pollution cleanup will be funded by the remediation program if it occurred prior to the insurance program. Thus, the insurance program will only provide coverage for clean-up of soil and groundwater contamination that occurs and is discovered after the effective date of the insurance policy.

Our analysis of an actuarial sound rate incorporates only the experience of the Company's insurance program designed to assist the Company in its responsibility for future pollution clean-up. We have not evaluated the Company's remediation program claims, which assist in cleaning up existing pollution. It is our understanding that these two programs are separately funded.

SAMPLE REPORT

LIMITATIONS ON DISTRIBUTION

Milliman's work has been prepared solely for the internal use of the Company. No portion of Milliman's work may be provided to any other party without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work. Milliman's work may not be filed with the SEC or other securities regulatory bodies. In addition, references to Milliman or its estimates in securities filings, analyst meetings and press releases are not authorized. Should the Company make reference to the engagement of an independent actuary (without specifically identifying Milliman) in any SEC filing, the SEC may require disclosure of the name of the actuary. Such disclosure is prohibited without Milliman's prior written consent.

Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Third Party Release Agreement, subject to the following exceptions:

- (a) Company may provide a copy of Milliman's work to its auditor to be used solely for audit purposes. In the event the audit reveals any error or inaccuracy in the data underlying Milliman's work, Milliman requests the auditor or the Company notify Milliman as soon as possible.
- (b) Company may provide a copy of Milliman's work to governmental entities, as required by law.
- (c) Company may provide a copy of Milliman's work to its Attorney provided they agree not to use Milliman's work for any purpose other than to provide services to the Company and agrees not to distribute the work to any other person or entity.

In the event Milliman consents to release its work product, it must be provided in its entirety. We recommend that any such party have its own actuary or other qualified professional review the work product to ensure that the party understands the assumptions and uncertainties inherent in our estimates. No third party recipient of Milliman's work product should rely upon Milliman's work product.

SAMPLE REPORT

In addition, Milliman's name, trademarks or service marks, or reference to Milliman directly or indirectly in any media release, public announcement or public disclosure, including in any promotional or marketing materials, customer lists, referral lists, websites or business presentations without Milliman's prior written consent is prohibited.

SAMPLE REPORT

EXECUTIVE SUMMARY

Actuarially Sound Average Rate

Our estimated reasonable average rate as of January 1, 2010 for a pollution insurance policy with \$500,000 per occurrence and \$500,000 annual aggregate limits with a deductible of \$10,000 is \$_____ per facility. The following table and Exhibit 1 summarizes the calculation of the current indicated average rate based on the experience-based analysis we performed:

ABC COMPANY ESTIMATED RATE FOR \$500,000 / \$500,000 LIMITS OF CLAIMS-MADE COVERAGE	
Previously Indicated Average Rate	
Experience Modification (Credit)	
Indicated Average Rate – January 1, 2009	
Applicable Trend	
Indicated Average Rate – January 1, 2010	

The previous rate Milliman developed for the Company, for a pollution liability policy effective (date), was developed using industry data and rate filings available at the time. Milliman utilized the Company's claim experience for the insurance program in order to assess the plan's performance. To date, the Company has only received ___ claims; ___ have closed with no payment, ___ has closed for \$_____, and ___ remains open with a reserve of \$_____. This favorable experience led to a credit of approximately ___%, based on the ISO experience rating plan and certain judgmental adjustments as of January 1, 2009 (prior to trend). After applying an ISO industry-based trend factor of _____, our current recommended annual rate is \$_____, a decrease of ___%, or \$___ per facility.

Our estimates presented in this report can be characterized as actuarial central estimates. Each estimate represents an expected value over a range of reasonably possible outcomes. They do not reflect all conceivable extreme events where the contribution of such events to an expected value is not reliably estimable. The estimates are not defined by a precise statistical measure (i.e., mean, median, mode, etc.), but are selected from multiple indications produced by a variety of generally accepted actuarial methods that are intended to respond to various drivers of ultimate claim liabilities.

SAMPLE REPORT

Other Considerations

Our initial report in ____ discussed the possibility of varying the base rate depending on a variety of factors. These included:

- Amount of solvent used annually;
- Type of machinery used (level of pollution control safety); and
- Type of system (Petroleum based or Non-petroleum based).

It is our understanding that none of the above classifications will be separately utilized and that the Company has elected to use a simplified rating plan (e.g., a flat rate per insured). We should point out that this classification approach may be prone to adverse selection. We would, therefore, be available to assist the Company in designing and developing a more sophisticated rating system.

SAMPLE REPORT

DISCUSSION OF ANALYSIS

Development of Base Rate

The base rate used in our initial report was used as the starting point in our experience rating analysis. Details of this calculation are provided in our initial report.

Experience Rating Methodology

An example of the recommended experience rating plan is provided on Exhibits 1 through 7. This example is used to facilitate the following discussion of the plan and is based on the 2006 "Commercial General Liability Experience and Schedule Rating Plan", per the Insurance Services Office, Inc. (ISO) rating plan.

Loss Valuation Date and Policy Years Used in Calculation

This study is being conducted for policies effective January 1, 2010. We have included the policy years beginning July 1, 2005, July 1, 2006 and July 1, 2007 in our experience period analysis. This resulted in an experience adjusted indicated rate average effective January 1, 2009. Trend was then applied to calculate the appropriate annual average rate as of January 1, 2010.

Subject Premiums

On-level premiums are first developed based on current rates and historical exposures. Exhibit 2 displays the Company's current in-force policies and annual rates by policy year. Multiplying the number of policies by the current annual rate provides an exposure base called the basic limits premium, which is used to calculate expected losses.

Subject Loss Experience

Exhibit 3 derives the expected Company Subject Loss Cost from the basic limits premium using a selected loss ratio and policy adjustment and detrend factors. The selected loss ratio of ___% is based on industry experience (as provided by ISO). The policy adjustment and detrend factors are also from the ISO rating plan. Policy adjustment factors are used to: a) adjust the policy being rated from a claims-made policy to an

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occurrence policy; and b) to adjust the experience period policies to an occurrence basis. Loss detrend factors are the first adjustment utilized to reflect the ultimate level of loss by policy year. The Company Subject Loss Cost is then the product of the basic limits premium and various adjustment factors by year.

Exhibit 4 shows a calculation to derive likely future losses (e.g., incurred but not reported (IBNR)) based on an expected experience ratio and loss development factors in order to reflect the ultimate level of expected losses. The expected experience ratio is a function of the Company Subject Loss Cost, per the ISO rating plan. Loss development factors, or more accurately IBNR factors, acknowledge the long-tail nature of commercial general liability policies. While in practice, claims-made policies do not require pure IBNR adjustments, our analysis accounts for the development of existing claims and circumstances becoming claims that are eventually covered by the Company. We utilized other liability claims-made industry data to help derive IBNR factors.

Exhibit 5 displays the Company's actual losses by policy year limited by the Maximum Single Loss (MSL). The MSL is also a function of the Company Subject Loss Cost. For the Company, the MSL has not come into play, as the experience period losses have been small in comparison.

Exhibit 6 adds the Company's actual losses limited by the MSL to the adjustment to reflect ultimate losses (an IBNR component). This total is then divided by the expected Company Subject Loss Cost to derive the actual experience ratio (AER). The AER for the Company is ____%.

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Experience Rating Modification

Exhibit 7 derives the experience modification factor. It is calculated by dividing the difference between the actual and expected experience ratio by the expected experience ratio, and then multiplying by a credibility factor. The credibility factor is based on the ISO rating plan and is a function of the Company Subject Loss Cost. The resulting experience rating modification of ____ implies a credit to our previously calculated rate. Thus, as summarized on Exhibit 1, the ____% credit applied to the prior rate of \$____ is equal to \$____. The new recommended rate after trend and applicable to policies effective January 1, 2010 is \$_____.

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OTHER CONSIDERATIONS

Several final points should be made. Any actuarial estimate is subject to uncertainty from various sources, including changes in claim reporting patterns, claim settlement patterns, judicial decisions, legislation, economic conditions, etc. In estimating a reasonable rate for the Company's insurance program, it is necessary to project future loss and loss adjustment expense (LAE) payments. It is certain that actual future losses and LAE will not develop exactly as projected and may, in fact, vary significantly from our projections. Further, our projections make no provision for future emergence of new classes of losses or types of losses, which are not sufficiently represented in the Company's historical database or which are not yet quantifiable.

The limited history of the program and lack of claim data related to the Company's insurance program exacerbate this uncertainty. The reliance on industry factors and competitor's published rates further add to the uncertainty in our estimates.

In performing this analysis, we relied on data and other information provided by the Company or obtained from public sources. We have not audited or verified this data and information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

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CLOSING

We appreciate the opportunity to be of service to the ABC Company. Please call with any comments or questions.

Sincerely,

April 28, 2009

RFQ No. DEP15120

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owned is an amount greater than one thousand dollars in the aggregate

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, Limited Liability Company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Milliman, Inc.

Authorized Signature: Peter J. Wick Date: 12 July 2010

State of Wisconsin

County of Waukesha; to-wit:

Taken, subscribed, and sworn to before me this 12 day of July, 2010

My Commission expires 25 August, 2013

AFFIX SEAL HERE

NOTARY PUBLIC

Sara Schimmel

