

Division of Mineral Resources Management

** Procedure Directive **

Regulatory 2016-02

- SUBJECT:** Calculation and Implementation of a Long-Term Water Treatment Trust Fund to meet the Alternative Financial Security Requirements of Ohio Revised Code 1513.16(F)(8).
- EFFECTIVE:** TBD
- PURPOSE:** To specify the manner in which Long-Term Water Treatment Trust Funds are established, calculated, implemented, and maintained for areas affected by coal mining that require an Alternative Financial Security.
- AUTHORITY:** Ohio Revised Code 1513.16(F)(8)
- DISCLAIMER:** The procedures outlined in this procedure directive are intended to supplement existing requirements and do not constitute an adjudication or a regulation. Nothing in the procedure directive shall affect regulatory requirements. This document establishes the framework within which the Division shall exercise its administrative discretion. The Division reserves the discretion to deviate from this procedure directive if circumstances warrant.

DEFINITIONS AND AUTHORITY

"Alternative financial security" means a trust fund, a standby trust fund, or other similar agreement or mechanism for the benefit of the state, enforceable under law and approved by the chief, that assures sufficient funds are available and devoted solely to the purpose of providing and maintaining long-term water treatment or a long-term alternative water supply, as applicable, for permits the chief determines require alternative financial security under division (F)(8) of section 1513.16 of the Revised Code.

RC 1513.16(F)(8)(a) states:

"If the chief determines that a permittee is responsible for mine drainage that requires water treatment after reclamation is completed under the terms of the permit or that a permittee must provide an alternative water supply after reclamation is completed under the terms of the permit, the permittee shall provide alternative financial security in an amount determined by the chief prior to the release of the remaining portion of performance security under division (F)(3)(c) of this section. The alternative financial security shall be in an amount that is equal to or greater than the present value of the estimated cost over time to develop and implement mine drainage plans and provide water treatment or in an amount that is necessary to provide and maintain an alternative water supply, as applicable. The alternative financial security shall include a contract, trust, or other agreement or mechanism that is enforceable under law to provide long-term water treatment or a long-term alternative water supply, or both. The contract, trust, or other agreement or mechanism included with the alternative financial security may provide for the funding of the alternative financial security incrementally over a period of time, not to exceed five years, with reliance on guarantees or

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other collateral provided by the permittee and approved by the chief for the balance of the alternative financial security required until the alternative financial security has been fully funded by the permittee.”

Ohio Revised Code (ORC) 1513.16 (F)(8)(c) states:

“If the chief determines that a permittee must provide alternative financial security under division (F)(8)(a) of this section and the performance security for the permit was provided under division (C)(2) of section 1513.08 of the Revised Code, the permittee may fund the alternative financial security incrementally over a period of time, not to exceed five years, with reliance on the reclamation forfeiture fund created in section 1513.18 of the Revised Code for the balance of the alternative financial security required until the alternative financial security has been fully funded by the permittee. The permittee semiannually shall pay to the division of mineral resources management a fee that is equal to seven and one-half per cent of the average balance of the alternative financial security that is being provided by reliance on the reclamation forfeiture fund over the previous six months. All money received from the fee shall be credited to the reclamation forfeiture fund.”

SCOPE

This Procedure Directive focuses on the establishment of Alternative Financial Security (“AFS”) and speaks in terms of mine drainage that requires water treatment after reclamation is completed under the terms of the permit. The same requirements apply where the Chief determines a post-mining obligation exists to provide an alternative water supply. The amount of AFS will be based on costs associated with the installation, operation, maintenance, and replacement of a water supply rather than the costs of water treatment.

Procedure Directive Regulatory 2013-01 establishes guidelines for implementing statutory and regulatory requirements for replacement of water supplies affected by active coal mining operations. The standards for “Quality of permanent water supply” and “Quantity of permanent water supply” found therein will be acceptable for replacement or restoration of water supplies under 1513.16(F)(8) as will connection to a public water supply system or its equivalent. However, an AFS will need to be established to maintain the water supply until water quality and quantity meets applicable standards.

BACKGROUND

When a post-mining pollutional discharge occurs the permittee is liable for, and is required to continue, the treatment of the post-mining discharge for as long as the discharge exists. Most discharges will exist for a very long time, if not in perpetuity. Where the Chief determines that an AFS is necessary pursuant to RC 1513.16(F)(8), the amount of the AFS will be calculated based on the cost to the Division to treat the discharge in perpetuity. Any remaining performance security held for the permit by the Division under RC 1513.16(F)(3)(c) will not be released until the AFS is fully funded.

Costs are calculated using a 75-year period because an evaluation of financial data shows that calculations projected beyond 75 years are not useful due to the variability of the data. The

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documents establishing the trust will provide for the release of funds from the trust in the event water treatment is no longer necessary. Where more than one discharge exists on a mine site, both the individual and cumulative impacts of the discharges will be evaluated. One trust can be established for all the discharges associated with a mine site or for all a permittee's discharges.

The necessary financial assurance can be a bond (surety or collateral) that will be adjusted every 5 years or a trust fund. The preferred mechanism for funding an AFS is the creation of a trust fund or standby trust fund whereby a third-party trustee is established to manage investments and dispense funds for the long term treatment of discharges. The purpose of the trust fund is to generate sufficient income to cover the cost of treatment into the future. The Division is the irrevocable beneficiary of the trust. The trust will be established using Division forms containing the terms and conditions established by the Division.

The trust is implemented through a negotiated Consent Order and Agreement ("Consent Order"), a companion Trust Agreement, and supporting documents. Supporting documents include maps and plans showing the discharge location, treatment facility details, sampling locations, ponds, channels, access roads, and any other site-specific features that should be documented, such as pipelines or other utilities (the "footprint area"). Easements from the landowner for access to the property required for the operation and maintenance of the treatment facility must be obtained. Any area that may be needed for future enhancements of the treatment system should be included in the footprint area.

A fully funded AFS may include provisions for payments to the permittee for costs actually incurred by the permittee for water treatment or supply obligations. Payments from the income stream of a fully funded AFS will not be considered a performance security release or forfeiture. The AFS will include other provisions that provide for the continuation of treatment in the event the permittee fails to meet its treatment obligations. In addition to the water treatment calculation, there must be sufficient funds in the trust to reclaim those areas used in connection with the water treatment facility to the standards required by ORC Chapter 1513 and Ohio Admin. Code 1501:13.

Once an AFS is fully funded, the permittee will be able to secure release of conventional performance security, including the portion of the permit that supports the treatment of the discharge or the water supply obligations. The terms of the Consent Order and Trust Agreement will provide the financial security to ensure long term water treatment or supply obligations and reclamation of all footprint areas as well as enforcement authority to ensure compliance with applicable performance standards of ORC Chapter 1513, Ohio Admin. Code 1501:13, and the terms of the Consent Order.

Where the performance security was provided under RC 1513.08(C)(2) the permittee may request to fund the AFS incrementally over a period of time, not to exceed 5 years, with reliance on the reclamation forfeiture fund for the balance of the required AFS during this incremental funding period. The request must include a proposed schedule for submitting payments to the Division, on a monthly or quarterly basis, until the AFS is fully funded. Upon the Chief's approval of this request and proposed payment schedule, the permittee must deposit within the time specified in the

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Consent Order a minimum of twenty percent of the required guarantees or other collateral required to fully fund the AFS outlined in the Consent Order, made payable only to the state. In addition to the proposed payment schedule, the permittee must agree to pay semiannually to the Division of Mineral Resources Management a fee that is equal to seven and one-half percent of the average balance of the AFS that is being provided by reliance on the reclamation forfeiture fund over the previous six months. An invoice will be sent by certified mail to the permittee for the previous six months, which must be paid within 30 days of receipt.

If the person responsible for water treatment under the terms of the Consent Order fails to continue the required treatment, then the treatment trust will take over. At this point, that person is in violation of the Consent Order and will be subject to enforcement proceedings by the Division, if appropriate. A person in default will be subject to a permit block whereby the Division will enter the default into the Federal Applicant/Violator System which will constitute a permit block nationwide.

LONG TERM WATER TREATMENT TRUST CALCULATIONS

The fundamental question for determining the amount of the trust fund is “How much money needs to be invested today to produce sufficient income to pay for the future costs for treatment?” The following four factors determine the value of a trust fund:

- Annual operation and maintenance costs;
- Initial capital costs and the recapitalization costs;
- Inflation; and
- Rate of return on the invested funds.

Annual Operation and Maintenance Costs

The annual operation and maintenance (“O&M”) costs are all those costs and expenses associated with the day-to-day operation and maintenance of the treatment facility. Operation costs include, but are not limited to: chemicals, electricity, labor (including benefits), water sampling, sludge removal and disposal, transportation, maintenance of access roads, mowing, snow removal, general upkeep and contingency costs. System maintenance costs include, but are not limited to cleaning influent and effluent channels, inspecting the berms for rodent holes and repairing them, correcting short-circuiting in the ponds, and maintaining and repairing all equipment and buildings. Sampling frequency must be established to ensure proper operation of the facility.

Costs are determined, where possible, using the permittee’s actual annual costs as a guide. The average of the permittee’s costs for the five most recent years will generally be used to account for variations associated with variable flow conditions. The permittee can establish its annual operation and maintenance costs by providing an accounting of the costs prepared in accordance with Generally Accepted Accounting Principles and accompanied by an affidavit of permittee’s president, or its equivalent if not a corporation, attesting to the completeness and accuracy of the costs.

The Division will verify the permittee’s annual O&M costs by using AMDTreat, a treatment cost calculation model developed by the U.S. Department of Interior, Office of Surface Mining

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Reclamation and Enforcement and determine the costs of the Trustee as those costs will likely be higher than the permittee's. An alternative cost calculating model may be used only if approved by the Chief.

Capital Improvement/Recapitalization Costs

The Capital Target Valuation is comprised of the sum of the present value of future capital and recapitalization costs for the Water Treatment System and Facility through time over 75 years, plus initial costs. Initial up-front costs are not affected by adding the present value analysis parameters. Capital improvement or recapitalization costs are those anticipated periodic expenditures necessary for the continued operation of the treatment system over a period of 75 years. Capital costs include the anticipated costs for replacement of capital components, improvements, final reclamation costs, and expenses other than O& M costs of the Water Treatment Systems and Facility, including but not limited to design, profit, overhead, mobilization, and demobilization, adjusted for the cost to the regulatory authority to carry out the activities.

The present value of the recapitalization costs is calculated by determining the expected average lifespan of each major component of the treatment system and its cost in today's dollars. These costs are then inflated to each expected replacement point, and the present values of the future costs are added together. The requested amount of recapitalization costs are recalculated on an annual basis and each time a distribution payment is made from the trust. For passive treatment systems, data from the person responsible for water treatment under the terms of the Consent Order should be compared to other published cost data.

Inflation

Inflation is the overall general upward price movement of goods and services in an economy. The Division has used an inflation rate of 3.0 % for the trust fund calculations. This rate of inflation is the compound annual inflation rate over 1926 to 2008, based on the Consumer Price Index-All Urban Consumers, not seasonally adjusted. Source: *Ibbotson S&P 2009 Classic Yearbook: Market Results for Stocks, Bonds, Bills, and Inflation 1926-2008* (Morningstar: 2009), pages 5 and 31-32. The rate will be adjusted based on current year inflation rate published by *Ibbotson*. [*Ibbotson* appears to have ceased publication; I'll need to research a proper replacement]

Return on Investment

Return on investment is the growth in the value of the trust fund due to income from its investments, less any fees. The expected rate of return on investment is directly related to the amount of risk the investor is willing to assume. This risk, and the correlating effective rate of return, can be modified based on the mix of investment vehicles used.

The primary investment objective is to achieve long-term growth by investing monies in the trust fund in a well-diversified portfolio of stocks, bonds, money market securities, and other investment assets. The trust fund shall seek to achieve the following long-term investment objectives:

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1. Provide a long-term real rate of return¹ that is high enough to protect the purchasing power of the trust fund;
2. Increase the long-term risk adjusted return potential of the trust fund;
3. Reduce the trust fund's total long-term return variability; and
4. Reduce the exposure of the trust fund to any single component of the capital market.

Given the nature of the trust fund liabilities as well as the long duration of the liabilities, an asset mix favoring a higher weighting in equities relative to fixed income investments is authorized consistent with the goal of providing a long-term real rate of return that is high enough to protect the ability of the trust fund to continue water treatment until the Chief of the Division determines the pollutorial discharge has abated or no longer exists.

Accordingly, the trust fund will be invested in assets authorized under the trust and subject to the following asset allocation limits based on total market values:

Equity:	Minimum	Maximum	Target
U.S. stocks and equivalent	0%	100%	60%
Non-U.S. stocks and equivalent	0%	30%	15%
Other equity (REIT's, UIT's) as listed on Schedule A of the Trust Agreement	0%	30%	5%
Total Equity			80%

Fixed Income:	Minimum	Maximum	Target
Bank and cash accounts ²	0%	100%	5%
Bonds, other fixed income as listed on Schedule A of the Trust Agreement	0%	80%	15%
Total Equity			20%

It is acknowledged that the probability of short-term volatility and the potential for negative returns in the short run is greater with a portfolio that is more heavily weighted in equities relative to a portfolio that is more heavily weighted in fixed income assets. A diversified portfolio approach will be used in order to mitigate risk and diminish the impact of a decline in any one sector of the investment market. This approach recognizes that risks that would be unsuitable for an individual investor may be prudent in the context of a diversified portfolio of assets consistent with the

¹ For purposes of performance measurement, rate of return means total rate of return, that is, investment income plus realized and unrealized capital gains and losses, calculated on a time-weighted basis.

² Includes demand deposit notes, certificates of deposit, treasury bills, bank accounts and money market funds.

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purposes and circumstances. For example, potentially volatile investment strategies may be combined with less volatile investment strategies in such a way to meet the Fund's objectives. Combining investment strategies that have a low correlation to each other is authorized to reduce volatility and risk.

CALCULATING THE TRUST AMOUNT

The initial trust amount is determined by using a variation of the time value of money formula. The time value of money formula determines the present value of the costs to be incurred in the future. The formula is embedded in a spreadsheet that calculates the costs, adjusted for inflation. The annual operation and maintenance cost and capital cost for replacement are input into this spreadsheet. The spreadsheet calculates the bond amount and balance of funding in the trust. The formulas used to calculate the trust amount are available upon request.

The total trust amount needed to fund an AFS is the sum of the present value of the future O&M costs of the Water Treatment System and Facility and the present value of the capital improvement/recapitalization costs through time over 75 years, adjusted for the cost to the regulatory authority to carry out the treatment, plus initial costs and the costs of the first year of treatment.

ESTABLISHMENT AND IMPLEMENTATION OF THE TRUST AGREEMENT

The Trust Agreement establishes the trust fund wherein money or property is set aside for the benefit of the Division, held by a trustee, and specifies the powers of the trustee and rights of the Division. The Trust Agreement is between the permittee and a trustee selected by the permittee and approved by the Division. The trust has two sub-accounts, one for operation and maintenance costs (the Primary Trust) and another for capital improvements/recapitalization (the Capital Improvement Account). The trustee must be an Ohio chartered or national bank or financial institution with trust powers, a trust company with offices located within Ohio, or an entity approved by the Chief of the Division. The financial custodian of trust fund activities must be examined or regulated by a state or federal agency.

The Trust Agreement provides for annual disbursement to the person responsible for water treatment under the terms of the Consent Order; the reimbursement is the smaller of the annual treatment costs or the excess value in the trust. The trustee is required to provide quarterly statements of the activity and balances of the trust. The trustee is paid from the trust. Any tax on the earnings of the trust is to be paid by the permittee. A nontaxable charitable trust can be established, in which case the earnings of the trust would not be taxable. The trust can own real and personal property, easements, and equipment.

Each year the costs associated with treating the discharge and the value of the trust are analyzed to determine if the objectives of the trust are being met. This is a financial review that includes a detailed accounting of costs. If it is determined that the trust value is insufficient or excessive, appropriate adjustments are made to the trust. The details of the financial requirements of the trust are specifically described in the Consent Order and Agreement and Trust Agreement.

An annual meeting between the Division, the person responsible for water treatment under the terms of the Consent Order, and, if applicable, the trustee, is required by the Consent Order to

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review the performance of the treatment system and evaluate the trust amount. The treatment system evaluation will take any unusual climatic conditions into account. If the costs for treatment change by more than 10% since the creation or last modification of the trust, then the trust amount should be recalculated. The annual reporting/meeting requirement and the year-to-year performance of the trust are tracked by the Division.

TERMINATION OF THE TRUST AFTER POLLUTION CEASES

If the person responsible for water treatment under the terms of the Consent Order, the Division, or any other party believes the pollutorial discharge has been abated or no longer exists, the untreated discharge shall be monitored on a monthly basis for compliance with applicable federal and state effluent limitations as set forth in the Consent Order to demonstrate material damage to the hydrologic balance at and outside the permit area is not occurring. If the untreated discharge meets the applicable discharge effluent limitations for a two-year period and demonstrates the pollutorial discharge has been abated, then the Division will approve request for release of AFS and termination of any corresponding obligations under the Trust Agreement.

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