

October 26, 2004

Jay Marshall, Resident Agent
UtahAmerican Energy, Inc.
P.O. Box 986
Price, Utah 84501

Re: Vegetation Standards Clarification and Updates, UtahAmerican Energy, Inc.,
Horse Canyon Mine, C/007/0013, Task ID #2022, Outgoing File

Dear Mr. Marshall:

The above-referenced amendment has been reviewed. There are deficiencies that must be adequately addressed prior to approval. A copy of our Technical Analysis is enclosed for your information. In order for us to continue to process your application, please respond to these deficiencies by December 10, 2004.

If you have any questions, please call me at (801) 538-5268, Jerriann Ernstsén at (801) 538-5214, or Karl Houskeeper at (435) 613-1146 ext. 201.

Sincerely,

Pamela Grubaugh-Littig
Permit Supervisor

jae an
Enclosure
cc: Price Field Office
O:\007013.HOR\FINAL\TA\TA2022.DOC

State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Horse Canyon Mine
Vegetation Standards Clarification and Updates
C/007/0013, Task ID #2022
Technical Analysis
October 21, 2004

TABLE OF CONTENTS

INTRODUCTION.....	3
GENERAL CONTENTS.....	7
IDENTIFICATION OF INTERESTS	7
RIGHT OF ENTRY	7
PERMIT APPLICATION FORMAT AND CONTENTS	7
RECLAMATION PLAN.....	9
REVEGETATION.....	9
Revegetation: Standards For Success	9

TABLE OF CONTENTS

TECHNICAL ANALYSIS

TECHNICAL ANALYSIS

The Division ensures compliance with the Surface Mining Control and Reclamation Act of 1977(SMCRA). When mines submit a Permit Application Package or an amendment to their Mining and Reclamation Plan, the Division reviews the proposal for conformance to the R645-Coal Mining Rules. This Technical Analysis is such a review. Regardless of these analyses, the permittee must comply with the minimum regulatory requirements as established by SMCRA.

Readers of this document must be aware that the regulatory requirements are included by reference. A complete and current copy of these regulations and a copy of the Technical Analysis and Findings Review Guide can be found at <http://ogm.utah.gov/coal>

This Technical Analysis (TA) is written as part of the permit review process. It documents the Findings that the Division has made to date regarding the application for a permit and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings, which comprise the necessary components of an application. Each section is analyzed and specific findings are then provided which indicate whether or not the application is in compliance with the requirements.

Often the first technical review of an application finds that the application contains some deficiencies. The deficiencies are discussed in the body of the TA and are identified by a regulatory reference, which describes the minimum requirements. In this Technical Analysis we have summarized the deficiencies at the beginning of the document to aid in responding to them. Once all of the deficiencies have been adequately addressed, the TA will be considered final for the permitting action.

It may be that not every topic or regulatory requirement is discussed in this version of the TA. Generally only those sections are analyzed that pertain to a particular permitting action. TA's may have been completed previously and the revised information has not altered the original findings. Those sections that are not discussed in this document are generally considered to be in compliance.

Page 2
C/007/0013
Task ID #2022
October 21, 2004

TECHNICAL ANALYSIS

INTRODUCTION

INTRODUCTION

The Division received the application for a permit amendment on August 26, 2004. The cover letter was dated August 24, 2004. The application includes the following:

Page I-9, I-10 & I-12	Updated Corporate Office Address
Certificate of Insurance (Appendix I-3)	Updated Insurance Renewal Form
Pages VIII-42 to VIII-45	Text Changes to Revegetation Standards

This technical analysis addresses the updated corporate office address, the updated insurance renewal form, and the changes to the revegetation standards. The address- and insurance-related information meets the minimum associated requirements. In addition, the insurance renewal information meets the minimum requirements for insurance coverage.

The vegetation standard changes do not meet the minimum associated requirement. The approved MRP was not clear on the type of analysis to apply for density and diversity evaluations. The amendment removed some the unclear information, but the Permittee must still clarify some of the existing and proposed commitments to meet the Vegetation Information Guidelines.

Page 4
C/007/0013
Task ID #2022
October 21, 2004

INTRODUCTION

SUMMARY OF DEFICIENCIES

SUMMARY OF DEFICIENCIES

The Technical analysis of the proposed permit changes cannot be completed at this time. Additional information is requested of the permittee to address deficiencies in the proposal. A summary of deficiencies is provided below. Additional comments and concerns may also be found within the analysis and findings made in this Draft Technical Analysis. Upon finalization of this review, any deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the division, result in denial of the proposed permit changes, or may result in other executive or enforcement action and deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, the permittee must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

Regulations

- R645-301-121.200**, • Remove productivity related statements. • Correct the misused word “diversity” to read “density”. • Provide reasoning for the removal of the life-form requirement. 8
- R645-301-356.231**, Provide support for the change in the density value to 2,000 10

Page 6
C/007/0013
Task ID #2022
October 21, 2004

SUMMARY OF DEFICIENCIES

GENERAL CONTENTS

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

A new address was provided for the UtahAmerican Energy , Inc. corporate office.

Findings:

Information provided in the plan meets the minimum Identification of Interests requirements of the regulations.

RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

Analysis:

A new address was provided for the UtahAmerican Energy , Inc. corporate office.

Findings:

Information provided in the plan meets the minimum Right of Entry requirements of the regulations.

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

The list below provides editorial or clarity issues associated with the Reclamation chapters that the Permittee must address (R645-301-121.200). Remove productivity related statements. Correct the misused word “diversity” to read “density”. Provide reasoning for the

removal of the life-form requirement. (Details for these deficiencies are in the Revegetation section of this TA.)

Findings:

Information provided in the plan does not meet the minimum Permit Application Format and Contents in General Contents requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

- R645-301-121.200**, • Remove productivity related statements. • Correct the misused word “diversity” to read “density”. • Provide reasoning for the removal of the life-form requirement.

RECLAMATION PLAN

RECLAMATION PLAN

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

Revegetation: Standards For Success

The R645 rules do not require productivity measurements for years nine and ten if the postmine land use is wildlife (refer to R645-301-356.230). The postmine land use for Horse Canyon Mine is wildlife. The amendment includes removing statements concerning productivity survey requirements for success standards. The Permittee must remove remaining productivity related statements(see R645-301-121.200 for deficiency): (Amendment Chap. VIII Sec. 8.4.2.)

- Pg. 44: “livestock or”
- Pg. 44: “The productive measurements will be....”.

The Division will judge success based on the effectiveness and permanence of the vegetation for the approved postmine land use. The Permittee will meet success standards when plant cover (MRP VIII Sec. 8.4.2.6 p. 42) and woody plant densities (MRP Chap. VIII Sec. 8.4.2.6 p. 45) are not less than 90% of the standard at the 90% confidence level.

The proposed woody plant density success standard is 2,000 stems/acre, which is 1,000 stem/acre less than the approved MRP (Amendment Chap. VIII Sec. 8.4.2.6 p. 45). The Permittee commitments to bring “diversity” requirements within 90% of the standard. The Permittee must correct the misused word “diversity” to read “density” (see R645-301-121.200 for deficiency). The Permittee must also provide support for the change in the density value to 2,000 (R645-301-356.231).

The *Vegetation Information Guidelines* state that success includes when similarity indices are greater or equal to 70% between reclaimed and reference areas (p.5). The idea behind this similarity requirement is to determine if the number of species (diversity) and distribution within an area are the same. The Jaccard equation is one of the models to use to compare similarity.

The MRP and amendment are somewhat unclear in terminology and methodology for comparing diversity at time of bond release. The Permittee may want to replace the commitment to measure diversity using ranking or “relative importance” with the Jaccard’s equation (Vegetation Information Guidelines). In order to successfully meet similarity requirement of

70%, the Permittee must use life-forms as the equation parameter (Jaccard) not species. If the seed mix had been developed with the same or nearly the same species as those found in the reference area, then the Permittee could use species as the equation parameter.

The MRP states that relative importance (relative cover) of any one species will not exceed 50%. It also states success includes meeting a standard of at least one tree or shrub, one forb, and two cool season grasses. The Permittee must provide reasoning for the removal of this standard (see R645-301-121.200 for deficiency).

Findings:

Information provided in the plan does not meet the minimum Revegetation - Reclamation Plan requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

R645-301-356.231, Provide support for the change in the density value to 2,000