Form DOGM - E (Last Revised 2/97)

File Folder # 3

PERMIT TRACKING FORM

☒ Permit Amendment(INS) ☐ Exploration Permit(INS) ☐ N.O.V. (INS) ☐ D.O. ☐ Permit Transfer ☐ Incidental Boundary Change
☐ Permit Midterm (MT) ☐ Permit Renewal (PR) ☐ New Permit ☐ Significant Revision (SR) ☐ Bond Release (BR)

DATE RECEIVED 5.14.97	By: PGL (Initial)	PERMIT NUMBER	INA/015/004
Title of Proposal: Diversity Standards		PERMIT CHANGE #	97B
Description:		PERMITTEE	MOUNTAIN COAL CO.
# Copies Required 5	# Copies Received 5	MINE NAME	HUNTINGTON CANYON #4

☐ PERMIT CHANGE APPLICATION SENT TO SLC	DATE:	LETTER TO PERMITTEE:	
☐: 15 DAY INITIAL RESPONSE TO PERMIT CHANGE APPLICATION OR INITIAL COMPLETENESS REVIEW	DATE DUE	DATE DONE	LETTER TO PERMITTEE:
☐ Notice of Affidavit of Publication. (If change is a Significant Revision, New Permit or Permit Transfer)	DATE DUE:	DATE DONE	PUBLIC COMMENT RECEIVED:

PRICE REVIEW TRACKING	REVIEW DUE	REVIEW DONE	SLC REVIEW TRACKING	REVIEW DUE	REVIEW DONE
☐ Lead ☐ Generalist ___			☒ Lead Susan White ___	5/18	5/19
☐ Administrative ___			☐ Administrative ___		
☐ Land Use/AQ ___			☐ Land Use/AQ ___		
☐ Biology ___			☒ Biology Susan White		
☐ Engineering ___			☐ Engineering ___		
☐ Geology ___			☐ Geology ___		
☐ Soils ___			☐ Soils ___		
☐ Hydrology ___			☐ Hydrology ___		

TA Review Due	Date:	Permittee Response Due ☐ Stipulation ☐ Condition ☐ No Requirements	Date:	DIVISION DECISION LETTER ☒ APPROVE ☐ DENY
TA Review Done	Date:	Response Received	Date:	Date:

COORDINATED REVIEWS	PHONE CONTACT	SENT none	DUE	RECEIVED	ADDITIONAL TRACKING	Date:
☐ OSMRE					PUBLIC HEARING	
☐ US Forest Service (2C)					LETTER FROM COMPLIANCE SUPER.	
☐ BLM					AVS COMPLETED	
☐ US FWS					APPROVAL EFFECTIVE DATE	5.19.97
☐ US NPS					APPROVED COPY TO FILE	
☐ UT SHPO					APPROVED COPY TO PERMITTEE	5.20.97
☐ UT DEQ (L)					APPROVED COPY TO PFO/SLC	
☐ UT Water Rights (L)					APPROVED COPY TO AGENCIES	5.20.97
☐ UT Wildlife Resources(L)					CHIA MODIFIED	
☐ UT SITLA					UPDATE MASTER TA DONE/NEEDED	

PRICE FIELD OFFICE COMMENTS:	SLC OFFICE COMMENTS:

SUPERSEDED
EFFECTIVE:
MAY 19 1997
UTAH DIVISION OIL, GAS AND MINING

3.5.5 Reclamation Monitoring (continued)

There are several good methods to assess diversity of plant communities. One approach that has been suitable for land reclamation enables biologists to compare cover data with given standards of success. In this method each plant species is ranked by relative importance and listed by life form, total cover and relative cover. These variables are then compared with the standard (i.e. reference area). This method can be particularly appropriate because comparisons can be made of cover and characteristics of the taxa, yet the species themselves need not be identical. Not only does this method provide a diversity measurement, it also considers abundance of the species utilizing the cover data.

The method asserts that the relative importance of a set number of species and life forms (at least as many as those in the standard) become established on the reclaimed land. Also a maximum dominance of 40% relative importance is set for each plant species. In other words, if the reference area has five species (e.g 1 shrub, 2 forbs, 2 grasses) with relative covers greater than 5.00%, at the least the same should be established on the reclaimed land. A greater number of species with these amounts would also be acceptable as long as several plant species that complement other species and have similar characteristics to those of the reference area.

The purpose of the above procedures is to demonstrate that based on cover, production, woody plant density, and species diversity, the disturbed areas have been returned to stable plant communities capable of withstanding the intended post-mining land use.

INCORPORATED
EFFECTIVE:
APR 09 1997
UTAH DIVISION OIL, GAS AND MINING

Application for Permit Change
Detailed Schedule of Changes to the Permit

Title of Change: DIVERSITY STANDARS

Permit Number: ACT/015/004

Mine: Huntington Canyon No. 4

Permittee: Mountain Coal Co.

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit change. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the exiting mining and reclamation plan. **Include page, section and drawing numbers as part of the description.**

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
☐ ADD	☑ REPLACE	☐ REMOVE	Page 3-67b
☐ ADD	☐ REPLACE	☐ REMOVE	
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Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

Form DOGM - F (Last Revised 6/93)

File Folder # 3

PERMIT CHANGE CHRONOLOGY

Title of Proposal: DIVERSITY STANDARDS	PERMIT NUMBER: ACT/015/004
Description:	PERMIT CHANGE #:
	PERMITTEE: Mountain Coal Co.
	MINE NAME: Huntington Canyon No. 4

DATE		DOCUMENT ALL ACTIVITIES ASSOCIATED WITH THIS PERMIT CHANGE
	☐Sent ☒Recv'd.	Initial Application for Permit Change Received from Permittee
	☐Sent ☐Recv'd.	
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MASTER COPY

☐ ADDITIONAL SHEETS

Form DOGM - C1 (Last Revised December 10, 1996)

File Folder # 3

APPLICATION FOR PERMIT CHANGE

Title of Change: DIVERSITY STANDARDS

Permit Number: ACT/015/004

Mine: HUNTINGTON CANYON #4

Permittee: MOUNTAIN COAL CO.

Description, include reason for change and timing required to implement:

SUGGESTED BY DIVISION

☐ Yes	☑ No	1. Change in the size of the Permit Area? _____ acres ☐ increase ☐ decrease.
☐ Yes	☑ No	2. Change in the size of the Disturbed Area? _____ acres ☐ increase ☐ decrease.
☐ Yes	☑ No	3. Will permit change include operations outside the Cumulative Hydrologic Impact Area?
☐ Yes	☑ No	4. Will permit change include operations in hydrologic basins other than currently approved?
☐ Yes	☑ No	5. Does permit change result from cancellation, reduction or increase of insurance or reclamation bond?
☐ Yes	☑ No	6. Does the permit change require or include public notice publication?
☐ Yes	☑ No	7. Does the permit change require or include ownership, control, right-of-entry, or compliance information?
☐ Yes	☑ No	8. Permit change as a result of a Violation? Violation #
☐ Yes	☑ No	9. Permit change as a result of Division Order? D.O. #
☑ Yes	☐ No	10. Permit change as a result of other laws or regulations or policies? Explain: Suggested by Division
☐ Yes	☑ No	11. Does the permit change affect the surface landowner or change the post mining land use?
Yes	☑ No	12. Does permit change require or include underground design or mine sequence and timing? (Modification of R2P2?)
☐ Yes	☑ No	13. Does permit change require or include collection and reporting of any baseline information?
☐ Yes	☑ No	14. Could the permit change have any effect on wildlife or vegetation outside the current disturbed area?
☐ Yes	☑ No	15. Does permit change require or include soil removal, storage or placement?
☐ Yes	☑ No	16. Does permit change require or include vegetation monitoring, removal or revegetation activities?
☐ Yes	☑ No	17. Does permit change require or include construction, modification, or removal of surface facilities?
☐ Yes	☑ No	18. Does permit change require or include water monitoring, sediment or drainage control measures?
☐ Yes	☑ No	19. Does permit change require or include certified designs, maps, or calculations?
☐ Yes	☑ No	20. Does permit change require or include subsidence control or monitoring?
☐ Yes	☑ No	21. Have reclamation costs for bonding been provided for any change in the reclamation plan?
☐ Yes	☑ No	22. Is permit change within 100 feet of a public road or perennial stream or 500 feet of an occupied dwelling?
☐ Yes	☑ No	23. Is this coal exploration activity?

☑ **Attach 5 complete copies of proposed permit change as it would be incorporated into the Mining and Reclamation Plan.**

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Dan V. Guy for Paul B. Baillie 5/8/97

Signed - Name - Position - Date

scribed and sworn to before me this 8 day of May, 19 97

Dana Ballard
Notary Public

My Commission Expires: 9-27, 1997

Attest: STATE OF Ut
COUNTY OF Carbon

DANA BALLARD
NOTARY PUBLIC · STATE of UTAH
865 EAST 2800 SOUTH
PRICE, UTAH 84501
COMM. EXP. 9-27-97

RECEIVED
MAY 14 1997
DIV. OF OIL, GAS & MINING

Received by Oil, Gas & Mining

ASSIGNED PERMIT CHANGE NUMBER

Mountain Coal Company
West Elk Mine
Post Office Box 591
Somerset, Colorado 81434
Telephone 303 929-5015

RECEIVED
MAY 14 1997
DIV. OF OIL, GAS & MINING

May 8, 1997

Susan M. White
Senior Reclamation Biologist
Utah Division of Oil, Gas, & Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Re: Revegetation Amendment
Phase III Bond Release Review
Huntington Canyon No. 4 Mine
INA / 015 / 004-96A; Folder #2
Emery County, Utah

Dear Susan:

Enclosed are 5 copies of a proposed amendment to the revegetation section of the Huntington Canyon No. 4 Mine plan. This information is being submitted per your discussions with Mr. Patrick Collins of Mt. Nebo Scientific.

All pages are numbered and should replace corresponding sheets in the M.R.P. Required Permit Change Forms are also enclosed.

If you have any questions, ,or need any additional information, please let me know.

Respectfully,

Dan W. Guy
for
Paige Beville

cc: Paige Beville
File

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

May 19, 1997

Paige B. Beville, Manager
Environmental, Health, & Safety
ARCO Coal Company
555 17th Street, Room 2170
Denver, Colorado 80202

Re: Success Standards, Mountain Coal Company, Huntington #4 Mine, ACT/015/004-97B, Folder #2, Emery County, Utah

Dear Ms. Beville:

The referenced amendment is hereby approved effective May 19, 1997. A stamped incorporated copy is enclosed for insertion into your Mining and Reclamation Plan.

If you have any questions please call the Coal Regulatory Program.

Sincerely,

Joseph C. Helfrich
Permit Supervisor

tt
Enclosure
cc: Janette S. Kaiser, USFS
Mark Page, Water Rights, w/o
Dave Ariotti, Health, w/o
Bill Bates, DWR, w/o
PFO
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State of Utah
DEPARTMENT OF NATURAL RESOURCES
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Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

May 19, 1997

TO: File

THRU: Joe Helfrich, Permit Supervisor

FROM: Susan M. White, Senior Reclamation Biologist

RE: Success Standards, Mountain Coal Company, Huntington #4 Mine, ACT/015/004-97B, Folder #2, Emery County, Utah

Synopsis

Mountain Coal Company submitted a permit amendment to change the vegetation success standards for the above referenced mine. The amendment was received May 14, 1997. The amendment is associated with the Divisions analysis of the Phase III Bond Release Application received in April, 1996. The amendment meets the requirements of the regulations and can be approved.

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:

Standards for Success.

The regulations, for areas previously disturbed by mining that were not reclaimed, are that the vegetative ground cover will be not less than the ground cover existing before redisturbance and will be adequate to control erosion and achieve the approved postmining land use. The Division's interpretation, at this time, is that continuously mined sites also apply to this standard.

The permit states (page 3-67a) that the reclamation will be considered successful if the upper and lower reclaimed areas are at least equal to or greater than the pinyon-juniper reference areas when cover, production, and shrub density are compared.

The reclaimed pumphouse and pond area disturbance is less than 1 acre in size.

No reference area was established for this riparian area, instead a transect 100 feet above and 100 feet below the disturbance will be used as a cover comparison area. Density of woody species will meet a technical requirement of 2000 woody species per acre along the riparian corridor.

A separate diversity success standard is proposed (page 3-67b) for the riparian and pinyon -juniper reclaimed areas. The standard for the riparian area is based on the average number of species found in the meter square quadrants and compared to the comparison area. The MacArthur index will be used to compare diversity to the reference area for the pinyon-juniper community. This index integrates the number of species and the degree to which frequency of occurrence was equitably distributed among those species.

Findings:

The amendment meets the requirements of this section of the regulations.

RECOMMENDATION

Amendment 97B, Success Standards may be approved and incorporated into the permit.

tt
cc: Permit Binder
O:\015004.HU4\FINAL\HUNT4.97B

Mountain Coal Company
West Elk Mine
Post Office Box 591
Somerset, Colorado 81434
Telephone 303 929-5015

RECEIVED
MAY 14 1997
DIV. OF OIL, GAS & MINING

May 8, 1997

Susan M. White
Senior Reclamation Biologist
Utah Division of Oil, Gas, & Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

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Phase III Bond Release Review
Huntington Canyon No. 4 Mine
INA / 015 / 004-96A; Folder #2
Emery County, Utah

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If you have any questions, ,or need any additional information, please let me know.

Respectfully,

Dan W. Guy
for
Paige Beville

cc: Paige Beville
File

Form DOGM - C1 (Last Revised December 10, 1996) File Folder # 3

APPLICATION FOR PERMIT CHANGE

Title of Change: DIVERSITY STANDARDS

Permit Number: ACT/015/004

Mine: HUNTINGTON CANYON #4

Permittee: MOUNTAIN COAL CO.

Description, include reason for change and timing required to implement:

SUGGESTED BY DIVISION

☐ Yes	☑ No	1. Change in the size of the Permit Area? _____ acres ☐ increase ☐ decrease.
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I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Dan V. Guy for Paige B. Baville 5/8/97

Signed - Name - Position - Date

scribed and sworn to before me this 8 day of May, 1997

Dana Ballard

Notary Public

My Commission Expires: 9-27, 1997

Attest: STATE OF Ut

COUNTY OF Carbon

DANA BALLARD
NOTARY PUBLIC • STATE of UTAH
865 EAST 2800 SOUTH
PRICE, UTAH 84501
COMM. EXP. 9-27-97

Received by Oil, Gas & Mining

RECEIVED
MAY 14 1997
DIV. OF OIL, GAS & MINING

ASSIGNED PERMIT CHANGE NUMBER

Application for Permit Change
Detailed Schedule of Changes to the Permit

Title of Change: DIVERSITY STANDARS

Permit Number: ACT/015/004

Mine: Huntington Canyon No. 4

Permittee: Mountain Coal Co.

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit change. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the exiting mining and reclamation plan. **Include page, section and drawing numbers as part of the description.**

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Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

Form DOGM - F (Last Revised 6/93)

File Folder #

PERMIT CHANGE CHRONOLOGY

Title of Proposal: DIVERSITY STANDARDS	PERMIT NUMBER: ACT/015/004
Description:	PERMIT CHANGE #:
	PERMITTEE: Mountain Coal Co.
	MINE NAME: Huntington Canyon No. 4

DATE		DOCUMENT ALL ACTIVITIES ASSOCIATED WITH THIS PERMIT CHANGE
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☐ ADDITIONAL SHEETS

3.5.5 Reclamation Monitoring (continued)

There are several good methods that could assess diversity of plant communities in the reclaimed pinyon-juniper and reference areas. One common and effective diversity measurement is computed using the equation $1/\Sigma\, pi^{i}$ *(MacArthur and Wilson 1976,* The Theory of Island Biogeography, *Princeton: Princeton University Press). In this equation pi is the proportion of sum frequency contributed by the ith species in the sample area of concern. The proportional contribution of each species is then squared and the values of all species in the sample areas are summed. This index integrates the number of species and the degree to which frequency of occurrence was equitably distributed among those species.*

Due to the extremely small size of the reclaimed riparian area, a statistically adequate number of samples would be difficult, if not, impossible to obtain for most parameters in the reclaimed riparian area. For example, all woody species in the area should be counted for density measurements, instead of a random subset of them. For cover measurements, the area is small enough that a reference area should not be required, but as mentioned earlier, another undisturbed area will be used as a general 'comparison area'. For this reason, a straightforward diversity measurement will be used to provide an idea of similarity between the reclaimed and the riparian 'comparison' areas. This measurement will simply be the average number of species calculated in the meter square quadrants.