

**WYOMING DEPARTMENT
OF
ENVIRONMENTAL QUALITY
LAND QUALITY DIVISION**



**COAL PERMITTING HANDBOOK
FORMAT & COMPLETENESS**

1995 EDITION



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GOVERNOR

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August 1, 1995

To Whom it May Concern:

Attached is the 1995 edition of the Coal Permitting Handbook. This handbook was developed to set the limits and define the methodology to be used during the processing of a coal permit application or renewal. This document has been in use since April 15, 1994. Due to document usage and changes to the LQD Coal Rules and Regulations, modifications and updates to the handbook were necessary. Consequently, this edition of the handbook incorporates the necessary changes and updates to the 1994 version of the handbook.

The primary use for the handbook is to aid the LQD staff in the review of permits and to define the elements of "completeness" for coal permits. It also gives all coal operators general guidance for the how, what and why aspects of a coal permit "completeness" review and determination. The ultimate goal in creating and using this handbook is to remove some of the perceived arbitrary elements of a "completeness" review and should result in more efficient and quicker reviews. In addition, it is recommended that the package be applied as appropriate to coal permit revisions. Although, revisions do not undergo a "completeness review," the package is useful for defining the content, structure, format, and the index sheets to accompany all revisions.

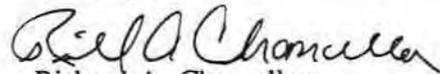
The handbook is not meant to replace LQD Guideline 6A and 6A-R, but to act as a supplement to these guidelines. Areas of overlap between the handbook and guidelines do exist. In these areas, the guidance set forth in the handbook should be followed. All other elements of LQD Guideline 6A and 6A-R are still to be utilized.

The format set forth in this handbook is to be used for all mines. In other words the same skeletal elements will be in each permit and each major section will be situated in approximately the same location for all permits.

It is envisioned that this package will be modified and added to in the future. Potentially a technical guidance section may be added to this package. Upon completion, the additional sections will be forwarded by the WDEQ/LQD. It will be the responsibility of the recipient to update the package as necessary.

If you have questions regarding the attached handbook please contact Jim Luther of the Cheyenne Office.

Sincerely,

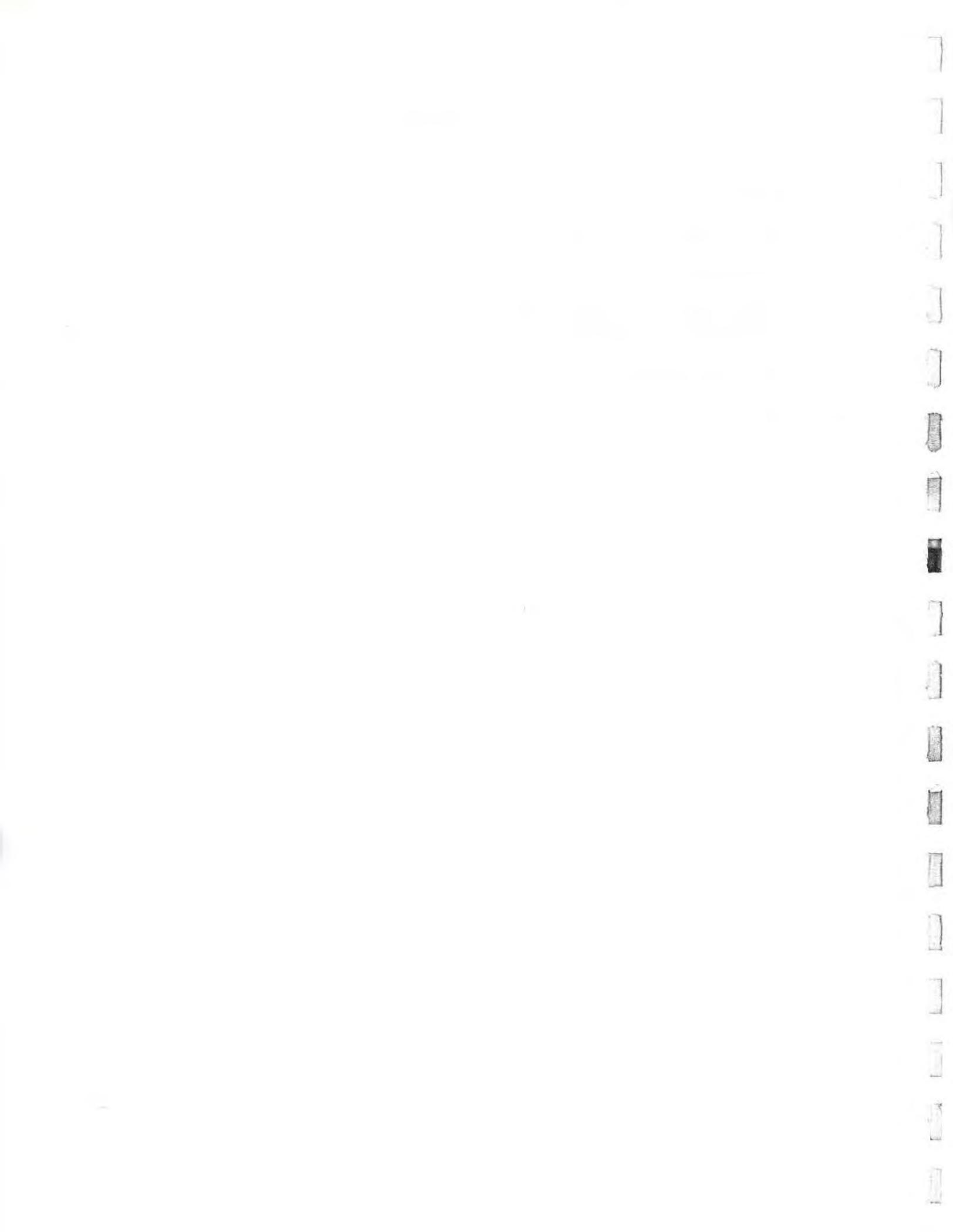


Richard A. Chancellor
Administrator
Land Quality Division

RC:RV-SF²
Attachments

TABLE OF CONTENTS

	Page
1. Instruction Section for the Coal Permitting Handbook	1-1
2. General Format Requirements for Coal Permits	2-1
3. Completeness Criteria	3-1
4. 1994 Coal Rule and Regulation Reference for the Completeness Criteria	4-1
5. Electronic Data Submittal Format and Content	5-1
6. Index Sheet for LQD Permitting Changes	6-1



**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY (WDEQ)
LAND QUALITY DIVISION (LQD)**

INSTRUCTION SECTION FOR THE COAL PERMITTING HANDBOOK

The Coal Permitting Handbook consists of six distinct, yet highly inter-related sections. The first section is the "Instruction Section for the Coal Permitting Handbook", which outlines the usage of the Coal Permitting Handbook. The remaining five sections include the following:

- "General Format Requirements for Coal Permits"
- "Completeness Criteria"
- "1994 Coal Rule and Regulation Reference for the Completeness Criteria"
- "Electronic Data Submittal Format and Content"
- "Index Sheet for LQD Permitting Changes"

General Format Requirements for Coal Permits This section outlines the general setup, structure and content of the coal permit application as well as the application's pagination, indexing and table of content items. This section is fundamental to the "Completeness Criteria" section. While the "Completeness Criteria" section states the information to be contained in an application, the "General Format Requirements for Coal Permits" section states how and where the information should be presented and organized. This section also details indexing for Amendments, Revisions and/or Renewals.

Completeness Criteria This section should be used for determining the "completeness" status of permit applications and renewals for coal mine operations by the LQD staff and in the preparation of applications by the applicant. The document represents a minimum of information required to obtain the Administrator's decision for a complete coal permit application. The "Completeness Criteria" section follows the "General Format Requirements for Coal Permits" section.

1994 Coal Rule and Regulation Reference for the Completeness Criteria This section cites the references for the numerous components of the "Completeness Criteria" section. Citation sources include the 1994 Wyoming Coal Rules and Regulations and the Wyoming Environmental Quality Act. The document's outline is identical to that of the "Completeness Criteria" section for ease of comparison and correlation.

Electronic Data Submittal Format and Content This section stipulates the format and content of electronic data submittals. This section provides information concerning the submittal of text, graphics, and data files while detailing general file formats, software specific formats, and compatibility issues. The section also discusses various methods and alternatives for data transfer including the internet, modems, and magnetic media. In addition, this section discusses information management, security, and retrieval.

Index Sheet for LOD Permitting Changes This section stipulates the necessary information to be provided and its presentation format. This section provides the LQD with consistent index sheets and verification of their accuracy. This will also aid the applicant in supplying the required information, while allowing for expedient review of new or replaced permit pages that contain pagination or minimal content changes. The index sheets have been provided for your convenience. They should be copied as necessary, but should not be modified or revised in any way.

Following is a list of additional pertinent information to be considered for permit revisions:

- New lands may be added to the approved permit if all the statutory and regulatory requirements for a new permit (including public notice) are met.
- Any additional information submitted after the completeness review has been initiated will be reviewed for completeness separately from the initial document. The two packages of information will be combined after each package has been deemed complete.

To use the handbook appropriately and effectively, one should be cognizant of the individual sections while comprehending the relevance of each section to the other. Each section is integral to the proper usage of the handbook.

The handbook has been created to provide direction to both the LQD and the applicant. It is succinct yet comprehensive and its use will result in more timely and productive reviews. It will be updated and modified as needed on no more than an annual basis to eliminate confusion over the version of the package being used.

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY (WDEQ)
LAND QUALITY DIVISION (LQD)

GENERAL FORMAT REQUIREMENTS FOR COAL PERMITS

A. GENERAL SETUP, STRUCTURE AND CONTENT

1. The general structure and setup of the permit document must be presented as outlined in the "Completeness Criteria" section.
2. The application should consist of two distinct parts.
 - a. The first part is the adjudication file. This section contains important documents such as the "Permit to Mine" (Form 1) and "License to Mine" (Form 3), Reclamation Performance Bond, Notification and Consent Forms, etc.
 - b. The second part is the application supporting information which contains information requested by Sections 3.(d) and 10 of Form 1 (Application for Permit to Mine), W.S. § 35-11-406(b), and the LQD Coal Rules and Regulations, Chapter II, Section 2.
3. The original copies of Form 1, Form 3, bonding instrument form, surface owner consent forms, Certificate of Public Liability and Appendix "C" should be submitted in a loose format. All other application documents must be submitted in loose leaf three-ring binders properly labeled as to the contents.
4. The information should be submitted on 8½ X 11 inch paper with standard margins. The paper should be durable of 20 pound bond and of good quality. All figures, tables, maps, etc., larger than 8½ X 11 inches should be folded to fit into the application and should be physically attached to the appropriate location of the application.
5. All pages should include a header or footer with a revision date, when applicable.
6. Baseline Appendices
 - a. Following is a list of the baseline appendices with a brief summary illustrating the information that should be contained therein. For a more detailed explanation, please see the Completeness Criteria section of the Coal Permitting Handbook. Please provide the appendices in the following order.
 - i. Appendix D-1

This appendix should briefly list, describe and map the historical and present land uses within the permit area. Use only the acceptable land use categories as outlined by the Wyoming Environmental Quality Act, located in W.S. § 35-11-103(e), and LQD Coal Rules and Regulations, Chapter I, Section 2.(av) and (ba), as approved by the Office of Surface Mining (OSM).
 - ii. Appendix D-2

This appendix should briefly describe the history of the permit as it relates to the regional historic setting. This appendix may utilize and/or refer to useful elements of the cultural resource inventory for the permit area. This appendix should encompass sites included on the National Register of Historic Places.
 - * For guidance in the preparation of Appendix D-2 please refer to LQD Guideline No. 11.

iii. Appendix D-3

This appendix should briefly describe the archaeological and paleontological resources of the permit and adjacent areas in a summary manner. The summary should not describe sites in detail or show their location.

The professionally conducted survey intending to fulfill the U.S. Secretary of Interior's Standards for Archaeology and Historic Preservation should be tabbed in this appendix or placed in a separate volume, so it can be filed separately under "restricted access".

- * For guidance in the preparation of Appendix D-3 please refer to LQD Guideline No. 11.

NOTE: The LQD will notify SHPO that the reports are available for review in the LQD office.

iv. Appendix D-4

This appendix should describe the regional climate in the vicinity of the permit area and include all specific climatological data collected within and adjacent to the permit area.

- * For guidance in the preparation of Appendix D-4 please refer to LQD Guideline No. 8.

v. Appendix D-5

This appendix should contain distinct sections describing the premining topography, geology and stratigraphy, and a section detailing the quantity and quality of premining overburden.

- * For guidance in the preparation of Appendix D-5 please refer to LQD Guideline Nos. 1 and 8.

vi. Appendix D-6

This appendix should describe the regional hydrology and hydraulics for both surface and groundwaters in the vicinity of the permit area, while including all specific premine hydrologic and hydraulic data collected within and adjacent to the permit area. Regional and permit area water quality data should also be discussed.

- * For guidance in the preparation of Appendix D-6 please refer to LQD Guideline No. 8.

vii. Appendix D-7

This appendix should detail the premining soil survey, present laboratory analysis, describe actual soil mapping units horizons, present general soil mapping unit characteristics, synthesize data to establish topsoil and subsoil salvage information for use in relationship to reclamation requirements.

- * For guidance in the preparation of Appendix D-7 please refer to LQD Guideline No. 1.

viii. Appendix D-8

This appendix should detail the premining vegetation survey, present the baseline data, analyze the baseline data and establish Control, Reference or Extended Reference Areas. Also discuss the occurrence of threatened or endangered species.

- * For guidance in the preparation of Appendix D-8 please refer to LQD Coal Rules and Regulations Appendix A.

ix. Appendix D-9

This appendix should list indigenous vertebrate species, describe the regional prairie wildlife communities, discuss distributions and affinity for specific habitats, and the occurrence of threatened or endangered species.

- For guidance in the preparation of Appendix D-9 please refer to LQD Guideline No. 5 and LQD Coal Rules and Regulations Appendix B.

Note: All wildlife studies must be done in accordance with all State and Federal Wildlife Agency rules and regulations.

x. Appendix D-10

This appendix should include the U.S. Army Corps of Engineers approved Nationwide Permit 21, wetlands delineation and other applicable supporting information.

- For guidance in the preparation of Appendix D-10 please refer to the Army Corps of Engineers 1987 Wetland Delineation Manual.

xi. Appendix D-11

This appendix should include a prairie alluvial valley floor determination, delineation, and a significance to farming determination within the permit area and on adjacent areas, accompanied by all supporting information. The supporting information should include a discussion of the alluvial valley floors' essential hydrologic functions, if applicable.

- For guidance in the preparation of this Appendix D-11 please refer to LQD Guideline No. 9.

- The "Executive Summary", "Summary" or initial section of a baseline appendix (all synonymous terms) should contain a summary of the initial baseline data, as well as, a synthesis of all additional or subsequent baseline data. This section should be a "stand-alone" type of section. The summary section should accurately cross reference any and all data sets, by section (or exhibit) and page number, when applicable.
 - Each individual baseline data set should be placed in a tabbed addendum or subsection of the main baseline appendix.
 - Additional data submitted to support Mine Plan or Reclamation Plan changes should be located in a separate section or addendum of the appropriate baseline appendix. This data should again be properly labeled, paginated, referenced, etc.
 - Baseline appendices should not contain Mine or Reclamation Plan information.
 - Each baseline appendix should contain a list of persons consulted or responsible for collecting and analyzing all data.
 - Each baseline appendix should contain a complete list of the literature or publication citation for all methodological and analytical procedures.
- Discussions in the Mine or Reclamation Plans that rely on data or information in other volumes or sections of the permit should properly cross reference these data or information by volume, section and preferably page number, if the sections are large or the data that is referenced is specific.
 - All maps should be submitted according to Guideline No. 6A, Part III and the LQD Coal Rules and Regulations, Chapter II, Section 1.(c).

9. The following table outlines the total number of submittals needed and where they should be sent.

Type of Lands	For Mines Located in/on	Total number of Submittals	Copies sent to Cheyenne	Copies sent to the District	Copies sent to OSM
No Federal Lands (surface or mineral)	District I Mines	3	2	0	1 to Casper
	District II Mines	4	2	1	1 to Casper
	District III Mines	4	2	1	1 to Casper
Federal Lands (surface and/or mineral)	District I Mines with BLM Lands	5	2	0	3 to Denver
	District II Mines with BLM Lands	6	2	1	3 to Denver
	District III Mines with BLM Lands	6	2	1	3 to Denver
Federal Lands with Forest Service Lands	District I Mines with Forest Service Lands	7	2	0	5 to Denver
	District II Mines with Forest Service Lands	8	2	1	5 to Denver
	District III Mines with Forest Service Lands	8	2	1	5 to Denver

10. All electronic information (text, data, maps, figures, tables, etc.) available for the submittal should be included. Subsection E of this General Format Requirements Section and Section 5 of this handbook address the electronic information needed and the preferred electronic format.

B. INDEXING FOR AMENDMENTS, REVISIONS AND/OR RENEWALS

1. Master index of changes. This section should provide a qualitative summary of information regarding the location, nature and purpose of each change. The summarized information should be submitted according to the major sections or subsections of the permit document.
2. Index sheet information.
 - a. Page, Map, or other permit entry (sections, volume, tables, figures, etc.) to be removed.
 - b. Page, Map, or other permit entry (sections, volume, tables, figures, etc.) to be replaced or added (if pages are not enumerated on the index sheets, it is assumed that they have not been changed).
 - c. Description of change stating the subject matter and content, type, and extent of the change.
 - d. If a volume has NO CHANGES, please include an entry for that volume stating NO CHANGE.
 - e. Mine company name, mine name, and existing mine permit number.
3. The temporary filing number (TFN) should be left blank by the company. The Technical Records Specialist will be responsible for determining this number.
4. Index sheets should be submitted in conjunction with the original submittal and updated with each subsequent comment response package. This update should illustrate the most recent changes in the response package in **bold**. The index sheets should be a cumulative record of changes with the final index sheet illustrating the cumulative approved changes to the permit document.

5. Please copy and use the LQD index sheets located in Section 6 of this document. These index sheets should **not** be modified without permission from the LQD Technical Records Specialist.

C. TABLE OF CONTENTS (TOC)

1. The master TOC for the entire application (permit) should be submitted in either the front of the Adjudication Volume or in a separate volume (labeled Volume 1, I or A, etc.). This master TOC should also note the volume location for all major permit sections and appendices.
2. Each volume should contain a specific TOC for items within that particular volume. All exhibits, figures, maps, plates, tables, addenda, etc., should be listed separately within the volume TOC.
3. Each volume TOC may or may not contain a skeletal outline of the permit appendices and major sections (i.e., adjudication, mine plan, reclamation plan, etc.) included in the other volumes. This would be helpful, but is not required.
4. All sections in the TOC should have a corresponding page number (either beginning or inclusive).
5. All pages within the master TOC and individual volume TOC should be delineated with unique page numbering.

D. PAGINATION

1. All page numbers should be unique or distinct. No two pages within the entire permit document should contain the exact same page number.
2. All pages should be numbered, including figures, addenda pages, letters, forms, exhibits, appendices, tables, etc., and should be properly referenced in the text.

E. ELECTRONIC DATA

1. Reference Section 5 of this handbook for additional information pertaining to the electronic submittal of data.
2. All files submitted should be identical to the paper copies of the permit and organized in the same fashion. All files should be referenced in the readme.txt and where possible in the index file. The body of the permit text may be submitted as one file that includes all sections.
3. The text of the document shall be transmitted in one or more files, as identified by the readme.txt file, in an ASCII line delimited text format. By this it is meant that the ASCII file should have a cr/lf at the end of each line. To maintain the layout of the page in the ASCII Format, the original file may be changed to a fixed space length font such as Courier before conversion. This format is not software specific and can be read by most editors, word processing programs, and numerous other types of software. Each file may also be transmitted in a software specific format. As of 7/1/95 the LQD is using WordPerfect as a word processing program. If practical the LQD requests that the permittee submit the text in WP5.1 format. Other document formats may be submitted if the permittee provides the LQD access to the necessary software to examine said files.
4. The drawings shall be transmitted in either .dxf or iges format. The files shall be identified in the readme.txt file. All drawings and graphical files should also be submitted in an software specific format as well. Where possible these formats should be compatible with software packages available to LQD.

As of 7/1/95 the LQD is using EarthVision 2.0, AutoCad 12, ArcInfo, ArcView 2.0, Stratifact 4.0 and Statgraphics 7.0. as the primary graphics packages. All map data should be indexed to the appropriate Wyoming Coordinate Zone.

5. Data files can be divided into base two categories; raw permanent data and model data. Raw permanent data files are the most important. These files should be carefully documented, organized, and submitted in comma or space delimited ASCII files. The same data submitted in software specific files, in addition to the ASCII files, may save time and confusion for both the permittee and LQD. Input and output files from models should be submitted in the appropriate formats. The examination and use of these files frequently saves a great deal of review time and eliminates numerous comments.

**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY (WDEQ)
LAND QUALITY DIVISION (LQD)**

COMPLETENESS CRITERIA

This section is a criteria outline to be used for determining the "completeness" status of permit applications and renewals for coal mine operations by the LQD staff and in the preparation of applications by the applicant.

Completeness as used in "completeness" review (and this criteria document) is defined by the Wyoming Environmental Quality Act, 1994 Edition, W.S. § 35-11-103(e)(xxii) which states "Complete application under W.S. § 35-11-406(e) means that the application contains all the essential and necessary elements and is acceptable for further review for substance and compliance with the provisions of this chapter". The "essential and necessary elements" are presented in the "Completeness Criteria" section of the Coal Permitting Handbook.

The completeness criteria presented in this section represent the information required by the statutes and regulations to obtain the Administrator's decision for a complete coal permit application. All items not specifically included in this "Completeness Criteria" section, and that may be technically inadequate, inaccurate or do not comply with all appropriate regulations are subject to review and comment under the "technical review" process. After declaring the permit complete, it will be thoroughly evaluated during the technical review using all applicable LQD Coal Rules and Regulations that pertain to coal renewals and amendments.

For renewals all previously approved changes to the permit must be brought forward and incorporated into the submittal. In addition, any conditions from the previous term of permit, that have not been satisfied, must be brought forward to the new term of permit and listed on the current Form 1.

To provide for an expedient and efficient review, coal permit applications should be in the format specified in the "General Format Requirements for Coal Permits" section of this document. The "General Format Requirements for Coal Permits" section outlines the general setup, structure and content of the coal permit application, as well as, pagination, indexing and table of content items.

I. Adjudication File

A. Form 1: Application for Permit to Mine

One original copy must contain the original signature and an affixed legible corporate seal. The original form must be one continuous form.

B. Form 3: License to Mine Application

One original copy should contain the original signatures and have a legible corporate seal. The original form must be one continuous form. A new Form 3 is not required for renewals or amendments unless the operator changes.

C. Reclamation Bond

1. Reclamation performance bond submitted in the form of one or a combination of the following: original execution of a surety bond, cash, certified check, Federally Insured Automatically Renewable Certificate of Deposit, Letter of Credit, Government Securities, self-bonding. Contact the division for applicable rules and format. The performance bond may be submitted after the bond amount has been set by the District.

2. In the instance that a self-bond will be used as a performance bond, the bond will need to be included with the initial (permit) application package.
3. For individual instructions on filing reclamation performance bonds contact the LQD Bonding Specialist.

D. Certificate of Public Liability

An original certificate is required.

E. Appendix "A" (For lands within the permit area)

1. List of names, in alphabetical order, and last known addresses of:
 - a. Owners of record of the surface rights within permit area.
 - b. Owners of record of the mineral rights within permit area.
2. Maps showing locations of ownership in 1.a. above.
3. Oil and gas wells.
 - a. List of the name, in alphabetical order, and last known mailing address for all operators of oil and gas wells within the permit area in a separate table.
 - b. List of the name, in alphabetical order, and last known mailing address for lessees of record of any oil and gas lease within the permit area (if the lease does not have an operating well).
 - c. Map showing the leases and/or operating wells.

F. Appendix "B" (For lands adjacent [within one-half mile] to the permit area)

1. List of names, in alphabetical order, and last known addresses of:
 - a. Owners of record of surface rights of lands within one-half mile to the proposed permit area.
 - b. Owners of record of coal within one-half mile to the proposed permit area.
 - c. Any other persons having a valid legal estate of record within one-half mile of the proposed affected portions of the permit area, such as, water rights, rights-of-way owners, etc.
2. Maps showing the locations of the ownership in 1.a. and b. above.

G. Appendix "C"

1. Tabulation of all lands in the proposed permit (or amendment) area, including all transportation corridors and facilities, etc., by legal subdivision according to U.S. Public Land Survey terminology (section, township, range, county, and municipal corporation, if any, LQD Form C-1, one copy must contain an original signature).
2. Lands not described by the U.S. Public Land Survey terminology, must be described by a "bearing and distance" or "metes and bounds" description (LQD Form C-2, one copy must contain an original signature).
3. A certified statement from a licensed surveyor stating the metes and bounds of the permit area close.
4. For lands where the applicant claims no right to mine, a tabulation by legal description, of all those lands within the permit (or amendment) area.

5. List and map identifying the location of all lands in the permit area which also occur in other permit areas (i.e., dual permitted and/or license to mine areas), including the land use agreements (A.K.A., easement, encroachment, overstrip agreements, etc.) and all supporting legal documents.
6. Surface owner consent, including:
 - a. Instrument of consent from the resident or agricultural owner, if different from the mineral estate owner, granting permission to enter and commence surface mining, and also written approval of the applicant's mining and reclamation plans.
 - b. Instrument of consent from the surface landowner, if different from the owner of the mineral estate, including any lands privately owned but not covered by the provisions of W.S. § 35-11-406(a)(xi), to the mining and reclamation plan.

H. Appendix "E"

1. A new permit application or renewal application shall show the following information on original U.S.G.S. topographic maps, clearly outlining and identifying the lands to be within the proposed permit and amendment area. Photo copies or other copies are not acceptable unless prior approval is obtained from the LQD.
 - a. The permit and amendment area boundary (clearly identified).
 - b. Lands to be affected over the life of the mine.
2. In addition, Appendix E shall contain the following information on maps, based upon public records, at a scale between 1" = 400' to 1000', as well as, the additional lists as specified.
 - a. Location and names of all roads, railroads, rights-of-way, easements and utility lines.
 - b. Drainage areas within and surrounding the (proposed) permit area, including all surface water features.
 - c. List and map of owners of adjudicated and permitted water rights within and adjacent to the permit area.
 - d. List and map of all water well owners within and adjacent to the permit area.
 - e. List and map of all Wyoming State Engineer Office (SEO) well permits inside and within three miles of the permit.
 - f. Location, and list of the ownership and use, of all buildings on or adjacent to the proposed affected portions of the permit area.
 - g. Probable limits of all previously disturbed or proposed disturbance by underground mining, and probable limits of all surface mining (active or inactive), on or adjacent to the land proposed to be affected.
 - h. Map and list of the political boundaries of special districts such as water, police, fire, conservation; public and private parks; cemeteries; Indian burial grounds; and locations of any areas mentioned in Chapter XII, Section 1.(a)(v), if applicable.
 - i. For coal operations which began prior to November 25, 1980, a map distinguishing between the following phases of the operation, if applicable:
 - i. Prior to August 3, 1977.
 - ii. August 3, 1977 and prior to May 3, 1978.
 - iii. May 3, 1978 and prior to November 25, 1980.

I. Statement of Compliance

1. Statement that the proposed affected area is not within an area designated unsuitable for surface coal mining.
2. The following information, including a list of and date of approval for:
 - a. Mine Safety and Health Administration (MSHA) identification numbers for the mining operation.
 - b. SEO permit identification numbers (Reference Section I.H.2.e. as needed).
 - c. Identify the type and identification number of all licenses, permits and approvals from other divisions of the WDEQ and all Federal, State and local regulatory agencies, needed to conduct the surface mining operation. Include information about what you need to do to comply with requirements for all permits not yet obtained.
3. List of all notices of violation incurred by the applicant and any subsidiary, affiliates or persons controlled by or under common control with the applicant, for any U.S. surface coal mine operated during the three years prior to the date of the application. Each violation should include:
 - a. Description and identification of the violation.
 - b. The date the violation occurred.
 - c. Description of the abatement action taken, and date the abatement was approved.
4. List of all suspended or revoked permits incurred by the applicant and any subsidiary, affiliates or persons controlled by or under common control with the applicant, for any U.S. surface coal mine operated during the five years prior to the date of the application. Each suspension or revocation should include:
 - a. Description and identification of the suspension or revocation, including the regulatory authority, proceedings and current status.
 - b. The date the suspension or revocation occurred.
5. List of all forfeited Federal or State coal mining performance bond or similar security deposited in lieu of bond, incurred by the applicant and any subsidiary, affiliates or persons controlled by or under common control with the applicant, for any U.S. surface coal mine operated. Each forfeiture should include:
 - a. Description and identification of the forfeiture, including the regulatory authority, proceedings and current status.
 - b. The date the forfeiture occurred.

J. Identification of Interests

1. List all owners or record of the property to be mined, including legal and equitable owners, holders of record of any leasehold interest, and any purchaser of record under a real estate contract for the property to be mined.
2. A statement of all lands, interests in lands, options, or pending bids on interests held or made by the applicant for lands which are contiguous to the proposed area to be mined during the term of the permit.

K. Applicant Violator System (AVS)

1. For each person who owns or controls the applicant including all managers, officers, controllers, partners, directors, and executives directly responsible for operation, the following is required for each within five years preceding the date of application:

- a. Name and address.
 - b. The person's ownership or control relationship to the applicant, including percentage of ownership and location in organizational structure.
 - c. The title of the person's position, date the position was assumed or date of departure from that position.
2. List of all current, pending (including this application) or previous U.S. surface coal permits held by the applicant, partner or principal shareholder during the five years preceding the date of the application. Include the regulatory authority.

L. Fees

1. Form 1.
 - a. New permit applications or renewal applications require a minimum fee of \$100.00 plus \$10.00 for each acre within the permit area. The maximum fee is \$2,000.00.
 - b. Permit amendment application require a fee of \$200.00 plus \$10.00 for each acre within the amended area. The maximum fee is \$2000.00.
2. Form 3: If a new Form 3 is submitted, a \$25.00 license filing fee is required.

II. **Supporting Information**

A. Appendix "D-1" - Land Use.

1. Discussion of and premining map showing the past land uses within the permit area (i.e., fencing, depressions, wetlands, etc., in relation to land use).
2. Discussion of and premining map showing the present land uses within the permit area.
3. If necessary, description and map of areas designated unsuitable for mining within and adjacent to the proposed permit boundary. Areas under study for designation should be included.
4. Description of and premining map showing the areas within or adjacent to the permit area where mining is limited or prohibited.
5. Map showing the location and extent of any existing or previously surface or underground mined areas within or adjacent to the proposed permit area, if applicable.
6. List of persons consulted or responsible for compiling the appendix.

B. Appendix "D-2" - History of the Area.

1. History of the permit area, including the description of sites on the National Register of Historic Places.
2. List of persons consulted or responsible for compiling the appendix.

C. Appendix "D-3" - Archeological and Paleontological Resources.

1. Investigative reports including a list of persons consulted or responsible for collecting and analyzing the data, if other than the applicant. This appendix will be filed separately under restricted access.

D. Appendix "D-4" - Climatology.

1. Discussion of the meteorological data of the general area.
2. Discussion of the meteorological data of the permit area, including precipitation and wind information. Illustrate monitoring locations and elevations on a premine topographic map.
3. List of references and sources for the meteorological information.

E. Appendix "D-5" - Topography, Geology, and Overburden Assessment.

1. Description of the premining topographic slope conditions (i.e., depressions, ridges, valleys, knolls, etc.), including the appropriate measurement information and a map showing the measurement locations.
2. Surficial geology map.
3. Map and discussion of the geologic stratigraphy and structure of the permit area and general area.
4. Geologic cross-sections showing the lithology across permit area. Identify these cross-sections on a premine topographic map. Overburden test holes (drill or core holes from which samples are collected for laboratory analyses) should be located on a premine topographic map and on the geologic cross-sections.
5. Qualitative and quantitative overburden analysis for affected lands.
 - a. Geologist's log for each overburden test hole and geophysical logs for cross-section holes.
 - b. Overburden sampling and analytical methodology.
 - c. Analytical results.
6. Discussion of the toxic, acid-forming or vegetative retarding substances, including the location and extent of the material.
7. Discussion of the nature and extent of coal deposits in terms of BTUs, ash, water content and sulphur. Include a map showing coal croplines and isopachs of overburden and coal. Isopach information could be substituted with the top and bottom of coal and overburden contour maps and information.
8. List of persons consulted or responsible for collecting and analyzing the data.

F. Appendix "D-6" - Hydrology.

1. Groundwater.
 - a. Discussion and map of the aquifer locations and hydraulic properties within the permit area and the general area.
 - b. Premine piezometric (potentiometric) contour maps of aquifers that may be affected.
 - c. Sampling locations included on a map and discussion of water quality.
 - d. Discussion, identification and location of groundwater recharge and discharge areas (i.e., scoria, coal, creeks, streams, depressions, etc.).
 - e. Discussion including hydrologic characteristics of critical and important habitat, such as wetlands, floodplains, depressions, etc.

2. Surface Water.

- a. A discussion including the name, location and use of all surface water features (i.e., rivers, creeks, lakes, reservoirs, springs, marshes, depressions, and other water courses) in and adjacent to the permit area, including stream classifications (i.e., perennial, intermittent or ephemeral).
 - b. Discussion of premine drainage basins, including drainage basin delineations, and the names and locations of lakes, reservoirs, springs, marshes, depressions, and other water courses on a map.
 - c. Discussion of premine surface water runoff quantity information.
 - d. Discussion of premine surface water quality data and sediment loads.
 - e. Description of premine stream characteristics.
 - f. Discussion including hydrologic characteristics of critical and important habitat, such as wetlands, floodplains, depressions, etc.
 - g. Premine monitoring plan. Monitoring sites should be located on a premine topographic map.
3. Water Rights. Description and location of water supply diversions, structures and intakes within the permit area, adjacent to the permit area and within hydrologic areas defined by the Administrator.
4. List of persons consulted or responsible for collecting and analyzing the data.

G. Appendix "D-7" - Soil Assessment.

1. Site specific soil inventory and suitability map with soil units and affected lands outlined and identified.
2. Description of site specific soil mapping units and profiles (i.e., uplands, depressions, bottomlands, etc.).
3. Discussion including soil characteristics of critical and important habitat, such as wetlands, floodplains, depressions, etc.
4. Discussion of qualitative soil analyses.
 - a. Sampling methodology.
 - b. Analytical results.
5. Discussion and tabulation of quantitative topsoil analyses.
 - a. Discussion of the soil resource in relationship to reclamation.
 - b. Discussion of soil stripping depth map for affected lands.
6. Discussion of prime farmland within the permit area.
 - a. Soil survey and characterization of specific types of soil.
 - b. A copy of the Soil Conservation Service prime farmland determination.
7. List of persons consulted or responsible for collecting and analyzing the data.

H. Appendix "D-8" - Vegetation Inventory.

1. Methods.
 - a. Discussion of vegetation type delineations, including mapping techniques and topographic associations (i.e., depressions, bottomlands, roughbreaks, shrublands, etc.).

- b. Sampling design for affected and reference, control or extended reference areas, including methodologies.
- c. Cropland and prime farmland productivity, if applicable.

2. Results.

- a. Description of vegetation types including acreages and photographs for each vegetation type. Tabulation of acreages.
 - b. Discussion including vegetation characteristics of critical and important habitat, such as wetlands, floodplains, depressions, etc.
 - c. Vegetation map, including vegetation type delineation, proposed affected area and all control, reference or extended reference areas locations.
 - d. List and map location (if necessary), of the noxious weeds, selenium indicators, endangered or threatened species.
 - e. Species list for the permit area.
 - f. Cover, productivity, density, species composition/diversity and sample adequacy data.
3. Summarization, tabulation and discussion of all qualitative and quantitative results for all the collected and analyzed data for all vegetated areas.
 4. List of persons consulted or responsible for collecting and analyzing the data.

I. Appendix "D-9" - Wildlife.

1. List of the indigenous vertebrate wildlife species on or adjacent to the permit area.
2. Description of potential and actual faunal distribution within the permit area and on adjacent areas, include these areas on a map. All sampling locations should be specified.
3. Habitat affinity of animals on-site.
4. Seasonal data including methods and analyses.
5. Identification of unique, critical, and important habitat types within and adjacent to the permit area, include these areas on a map (i.e., wetlands, depressions, riparian zones, etc.). Appendix D-10 may be referenced.
6. Occurrence of threatened or endangered species on or within one mile of the permit area.
7. Determination of the importance of individual waters for aquatic life or wildlife use.
8. Summary and discussion.
9. List of persons consulted or responsible for collecting and analyzing the data.

J. Appendix "D-10" - Wetlands.

1. The wetland delineation study. Appendix D-9 may be referenced.
2. Map delineating study area and wetlands. Appendix D-9 may be referenced.
3. Copy of the U.S. Army Corps of Engineers approved Nationwide Permit 21.

4. List of persons consulted or responsible for collecting and analyzing the data.

K. Appendix "D-11" - Alluvial Valley Floors.

1. Discussion concerning the presence or absence of alluvial valley floors within the permit area or on adjacent areas, accompanied by a map illustrating the extent of unconsolidated streamlaid deposits, subirrigation and flood irrigation.
2. Determination of the existence or lack thereof of alluvial valley floors, including the alluvial valley floor delineation on a map.
3. Discussion of alluvial valley floors within the proposed permit area and on proposed affected lands, including a discussion of their essential hydrologic functions.
4. Discussion of alluvial valley floors which exist within the proposed permit area, but do not occur on proposed affected lands, or are located on adjacent lands, including a discussion of their essential hydrologic functions.
5. Determination that an alluvial valley floor is or is not important to farming on the basis of a comparison of the productivity of the affected alluvial valley floor to a farm's total agricultural production. This is not applicable to operations having a permit to mine within or adjacent to the AVF in question prior to August 3, 1977. Please refer to the statutory exclusions of W.S. § 35-11-406(n)(v).
6. List of persons consulted or responsible for collecting and analyzing the data.

L. Mine Plan

1. Description of the mining operation.
2. Discussion of mine facilities describing facility design and maps showing facilities.
3. Discussion describing roads, railroads and other transport systems including a map showing their locations.
4. Mining methods and schedules.
 - a. Map and discussion showing the mining sequence for the life of mine. Include a map and discussion of areas which may experience temporary cessation of operations, if applicable.
 - b. Soil.
 - i. Map showing topsoil and subsoil removal, including stockpile locations.
 - ii. Discussion of topsoil and subsoil removal and handling, including segregation and stockpiling techniques, and stockpile erosion control plan.
 - iii. Tables containing the volume expected in each stockpile.
 - c. Mine pit excavation, backfilling, and contouring.
 - i. Map showing the overburden removal sequence.
 - ii. Discussion of methods of pit excavation and backfilling, including a time schedule and sequence map for rough backfilling.
 - iii. Discussion of the spoil piles (located within and outside of the pit boundaries). Stockpiles should be located on a map.
 - iv. Discussion of backfilled material stability and plans for the prevention of subsidence.

- v. Tabulation of the volumes of excavated material.
 - vi. Plan demonstrating the proposed postmining contours can be achieved, including either:
 - A. Declaration of Approximate Original Contour: Demonstration of the ability to achieve the approximate original contours or;
 - B. Declaration of Thick Overburden: Demonstration that the volume of spoil over the life of mine is more than sufficient to achieve the approximate original contours or;
 - C. Declaration of Thin Overburden: Demonstration of the inability to restore to the approximate original contours, including bulking factors and coal removal.
 - d. Commodity (minerals).
 - i. Statement of all commodities to be mined.
 - ii. Removal and handling plan.
 - iii. Estimated reserves and percent recovery.
5. Mining hydrology.
- a. Hydrologic control plan to protect the quantity and quality of, and rights to both surface and groundwater, including:
 - i. Plan and timetable for control and treatment of surface water and groundwater.
 - ii. Discussion of source, quality, and quantity of groundwater and surface water, if any, to be used in the mining operation.
 - iii. Discussion and determination of the during mining probable hydrologic consequences (both within and outside the permit area).
 - b. Groundwater.
 - i. Discussion of the quantity and quality of groundwater discharged into the mine pit at various stages during mining, including methods used to calculate discharge estimates. Plans describing the disposition and use of any water pumped from the mine.
 - ii. Groundwater monitoring plan during mining, including the collection, recording and reporting of water levels and quality data.
 - iii. Discussion of groundwater drawdown estimates, including methodologies and drawdown estimates illustrated on topographic maps.
 - iv. Description of procedures to cap, plug and seal exploration holes, auger holes, wells or other openings.
 - c. Surface water.
 - i. Active mining surface water and sediment control plans, including a hydrologic control map, structure designs, and maintenance plan.
 - ii. Surface water monitoring plan for monitoring runoff quality and quantity from affected lands, and NPDES discharge points during mining.
 - iii. Description of and mine plan map showing stream buffer zones.
6. Interim wetland mitigation plan, including interim areas designated on a during mining topographic map.
7. Refuse and waste disposal.
- a. Plans for coal processing waste banks, including maps and diagrams as required by MSHA.

- b. Plans for the disposal of all waste materials generated on site, including contingency plans to preclude or control combustion of materials constituting a fire hazard. Disposal areas should be located on a map.
 - c. Discussion of the sources and quality of waste material.
 - d. Discussion of the sources and effect on the hydrologic regime.
8. Description of and location for signs, and markers.
9. Blasting plan. The storage and handling facility locations should be shown on a map.
10. Plans for conducting surface mining activities within 500 feet of an underground mine.
11. Compliance plan in cases of temporary or permanent cessation of the operations.
12. Compliance plan if combined surface and underground mining operations will occur.
13. Plans for the protection of other resources, structures and services, including access to public lands.
14. Plans for minimizing adverse impacts on fish and wildlife, including any short-term impacts resulting from the mining operations.
15. Plans for protecting, minimizing adverse impacts or mitigating impacts on cultural resources.
16. Discussion of the procedures proposed to avoid constituting a public nuisance, endangering the public safety, human or animal life, property and the surface owner's ongoing operation.
17. For alluvial valley floors:
 - a. Discussion demonstrating that the proposed operation will not interrupt, discontinue, or preclude farming on alluvial valley floors (This does not apply to those operations having a permit before August 3, 1977. Please refer to the statutory exclusions of W.S. § 35-11-406(n)(v)).
 - b. Discussion demonstrating that the proposed operation will not cause material damage to alluvial valley floors.
 - c. Discussion illustrating the preservation of the essential hydrologic functions of alluvial valley floors located outside the affected lands, and/or in off-site areas.
 - d. Environmental monitoring plan for all alluvial valley floors.
18. Plans and discussion of methods for the separation and replacement of soils for prime farmlands.
19. For underground mining operations:
 - a. Discussion and map of the planned underground mine layout for the life-of-mine.
 - b. Subsidence control plan, including the assessment of subsidence effects.
 - c. Plans for removal and disposal of mine development wastes.
 - d. Description and location on a map where underground mining is limited or prohibited.
20. For (joint) auger mining:
 - a. Discussion and map of the planned auger mining layout for the life-of-mine.
 - b. Subsidence control plan, including the assessment of subsidence effects.
 - c. Plans for removal and disposal of mine development wastes.
 - d. Description and location on a map where auger mining is limited or prohibited.

21. Plans of the operation, facilities and structures, including dual permitted and license to mine areas, proposed to be shared by two or more separately permitted operations or references to these plans and all associated agreements, if applicable.
22. Requests for variances from certain environmental performance standards to conduct experimental practices, if applicable.

M. Reclamation Plan

1. Postmining land uses.
 - a. Discussion of the proposed uses of the land after reclamation, including their relationship to premine and present land uses. The extent of each land use should be shown on a postmining land use map.
 - b. Alternate postmine land use plan presenting a discussion, documentation and designs, if applicable. Alternative land use areas should be shown on a postmining contour map.
2. Postmining topography.
 - a. Discussion and assessment of postmining topographic slope conditions and configuration.
 - b. Postmining topographic map with slope measurements and locations, cross-sections, etc.
 - c. Map showing the blending of permit area postmining contours with adjacent lands.
 - d. Discussion of the erosion and sedimentation control practices.
 - e. Discussion of and map showing watershed reestablishment.
 - f. Schedule for backfilling and grading, including a map and discussion of areas which may experience temporary cessation of the operations, if applicable.
 - g. Plan to prepare the spoil surface prior to subsoil/topsoil replacement.
3. Assessment of postmining spoil quality.
 - a. Discussion of the regraded spoil monitoring and sampling program.
 - b. Mitigation plan for unsuitable material.
4. Topsoil and subsoil replacement.
 - a. Plan, including a map, and schedule for replacement.
 - b. Discussion of erosion control and water conservation practices.
 - c. Discussion of soil amendments practices, including the monitoring/sampling plan.
 - d. Replacement and depth verification plan.
 - e. Discussion including soil characteristics of the restoration of critical and important habitat, such as wetlands, floodplains, depressions, etc. All habitat restoration information may be compiled and located in the final wetland habitat restoration section of the Reclamation Plan.
5. Vegetation reclamation.
 - a. Mulching and erosion control plan for reclaimed areas.
 - b. Revegetation plan, including a listing of seed mixtures and nursery stock, for reclamation areas. On a postmine topography map, delineation of seedings and/or plantings (trees, shrubs, nursery stock, etc.) locations, including dates.
 - c. Discussion of irrigation methods, if applicable.
 - d. Discussion of methods for the protection of newly seeded areas.
 - e. Interim vegetation monitoring plan for permanently reclaimed areas.

- f. Discussion including vegetation characteristics of the restoration of critical and important habitat, such as wetlands, floodplains, depressions, etc. All habitat restoration information may be compiled and located in the final wetland habitat restoration section of the Reclamation Plan.
 - g. Management, husbandry and grazing plans for permanently revegetated areas, control areas and/or reference areas.
6. Fish and wildlife habitat restoration plan, if applicable, including any long-term impacts resulting from the mining operation.
7. Hydrologic reclamation.
- a. Discussion and determination of the postmining probable hydrologic consequences (both within and outside the permit area).
 - b. Discussion of source, quality, and quantity of groundwater and surface water, if any, to be used in the reclamation operation.
 - c. Discussion including hydrologic characteristics of the restoration of critical and important habitat, such as wetlands, floodplains, depressions, etc. All habitat restoration information may be compiled and located in the final wetland habitat restoration section of the Reclamation Plan.
 - d. Groundwater.
 - i. Discussion of aquifer reconstruction and restoration.
 - ii. Discussion of the estimated final water quality and quantity.
 - iii. Discussion of and contour map displaying the final anticipated potentiometric surfaces of affected aquifers.
 - iv. Discussion of the restoration of recharge and discharge areas.
 - v. Postmining monitoring plan with a description of and a map displaying the location of all proposed permanent backfill wells.
 - vi. Schedule of restoration events, including:
 - A. Backfill well installation;
 - B. Resaturation predictions for the backfill aquifers.
 - e. Surface water.
 - i. Discussion including the name, location, and use of all postmine surface water features (i.e., lakes, reservoirs, rivers, creeks, springs, marshes, and depressions) both within and adjacent to the permit area.
 - ii. Discussion of the permanent postmining impoundments, including written consent from the surface owner and a map showing impoundment locations.
 - iii. Discussion of postmine drainage basin and stream channel reconstruction (general area), including designs and drainage basin delineation on a map.
 - iv. Discussion of postmining watershed and stream characteristics.
 - v. Discussion of the estimated final water quality and quantity.
 - vi. Postmining monitoring plan. Monitoring sites should be located on a postmine topographic map.
 - vii. Schedule of restoration events, including:
 - A. List of and schedule for permanent surface feature completion (reclamation, etc.) and release;
 - B. List of and schedule for temporary surface water feature removal and reclamation.

8. Final wetland habitat restoration plan, including a postmine topography map illustrating the final designated wetland habitats.
9. For alluvial valley floors:
 - a. Discussion of the procedures for preserving and reestablishing the essential hydrologic functions and agricultural utility on all alluvial valley floors (both within and outside the permit area).
 - b. Environmental monitoring plan for all alluvial valley floors (both within and outside the permit area), illustrating that all essential hydrologic functions are being preserved and/or reestablished.
10. For depressions:
 - a. Discussion of all postmine depressions, including their locations illustrated on a postmine topography map.
 - b. Discussion of the procedures for reestablishing postmine depressions.
11. For prime farmland:
 - a. Plan including soil handling, reconstruction of and revegetation for prime farmlands.
 - b. Written suggestions by the local Conservation District.
12. Discussion and schedule for the reclamation of mine facilities, roads, railroads and other transport facilities.
13. Discussion and plans pertaining to the reclamation and bonding of dual permitted and license to mine areas, or references to these plans and all associated agreements, if applicable.
14. For underground mines:
 - a. Plans for reclaiming any mine openings, adits, portals, shafts, etc.
 - b. Plan for preventing mine drainage.
 - c. Subsidence monitoring plan, including a corrective action plan for unanticipated or significant subsidence.
15. Reclamation performance bond.
 - a. New permit applications must contain the bond estimate, covering all disturbance and construction anticipated during the first 12 months of the permitted operation.
 - b. Renewal permit applications must contain the bond estimate or a written request that the LQD accept the current bond analyses and total from the most recent annual report.
 - c. Amendment applications must contain a bond estimate covering the first year's disturbance of amended lands or written request that the LQD accept the current bond analyses from the most recent annual report.
16. Bond Release Monitoring.
 - a. Discussion of sediment control release procedures for permanently reclaimed lands in conjunction with any request for partial or full bond release.
 - b. Partial and full bond release plans.

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY (WDEQ)
LAND QUALITY DIVISION (LQD)

1994 COAL RULE AND REGULATION REFERENCE FOR THE COMPLETENESS CRITERIA

I. **Adjudication File**

A. Form 1: Application for Permit to Mine

W.S. § 35-11-406(a)(i), (ii), (iii), (vi)(B), (vi)(C) and (vi)(D), (x) and (xi); P.L. 95-87, Title IV.

B. Form 3: License to Mine

W.S. § 35-11-410.

C. Reclamation Bond

W.S. § 35-11-403(a)(ii); W.S. § 35-11-410(c); W.S. § 35-11-417.

1. W.S. § 35-11-418.

2. Chapter II, Section 2.(a).

3. NA

D. Certificate of Public Liability

W.S. § 35-11-406(a)(xiii); Chapter XII, Section 2.

E. Appendix "A" (For lands within the permit area)

W.S. § 35-11-406(a)(iv).

1. W.S. § 35-11-406(a)(iv); Chapter II, Section 1.(a) and (b); Form 1, Section 3.(a).

a. W.S. § 35-11-406(a)(iv); Form 1, Section 3.(a).

b. W.S. § 35-11-406(a)(iv); Form 1, Section 3.(a).

2. W.S. § 35-11-406(a)(ix)(A); Form 1, Section 3.(b).

3.a. W.S. § 35-11-406(a)(ix) and (j); Chapter II, Section 1.(a) and (b), and Section 2.(a)(vi)(Q).

b. Chapter II, Section 1.(a) and (b), and Section 2.(a)(i)(A).

c. W.S. § 35-11-406(a)(ix).

F. Appendix "B" (For lands adjacent [within one-half mile] to the permit area)

W.S. § 35-11-406(a)(v).

1. W.S. § 35-11-406(a)(v) and (ix)(A); Chapter II, Section 1.(a) and (b); Form 1, Section 3.(b)(i).
 - a. W.S. § 35-11-406(a)(v); Form 1, Section 3.(b)(i).
 - b. W.S. § 35-11-406(a)(v) and (ix)(A); Form 1, Section 3.(b)(iii).
 - c. W.S. § 35-11-406(a)(v) and (ix)(A); Form 1, Section 3.(b)(ii).
2. W.S. § 35-11-406(a)(ix)(A); 30 CFR 779.24.

G. Appendix "C"

W.S. § 35-11-406(a)(vi).

1. W.S. § 35-11-406(a)(vi)(A); Form 1, Section 3.(c)(i); Form C1.
2. W.S. § 35-11-406(a)(vi)(A); Chapter II, Section 2.(b)(iv)(G)(II); Form 1, Section 3.(c)(i); Form C2.
3. W.S. § 35-11-406(a)(vi)(A).
4. Chapter II, Section 2.(b)(iii)(G)(I); Form 1, Section 3.(c)(ii).
5. W.S. § 35-11-406(a)(ix); Chapter II, Section 2.(b)(iv)(G)(I); Form 1, Section 3.(c)(iii).
- 6.a. W.S. § 35-11-406(b)(xi).
 - b. W.S. § 35-11-406(b)(xii).

H. Appendix "E"

W.S. § 35-11-406(a)(viii) and (ix); Chapter II, Section 2.(a)(vi)(Q); Form 1, Section 3.(e).

1. W.S. § 35-11-406(a)(viii) and (b)(v); Form 1, Section 3.(c)(iv).
 - a. W.S. § 35-11-406(a)(vi); Chapter II, Section 1.(c); Form 1, Section 3.(e).
 - b. W.S. § 35-11-406(a)(vi)(C) and (c)(ix); Chapter II, Section 2.(a)(vi); Form 1, Section 3.(e)(i).
2. W.S. § 35-11-406(a)(ix); Chapter II, Section 1.(c) and Section 3.(a)(L).
 - a. W.S. § 35-11-406(a)(ix); Form 1, Section 3.(e)(iii).
 - b. W.S. § 35-11-406(a)(ix); Chapter II, Section 2.(a)(vi)(L)(II); Form 1, Section 3.(e)(ii).
 - c. W.S. § 35-11-406(a)(vii); Chapter II, Section 2.(a)(vi)(N)(I).
 - d. W.S. § 35-11-406(a)(ix); Chapter II, Section 2.(a)(vi)(N)(II); Form 1, Section 3.(e)(iii).
 - e. Chapter II, Section 2.(a)(vi)(N)(II).
 - f. W.S. § 35-11-406(a)(ix)(B); Form 1, Section 3.(e)(vi).
 - g. W.S. § 35-11-406(a)(ix); Form 1, Section 3.(e)(iv).
 - h. W.S. § 35-11-406(a)(ix)(D).
 - i. Chapter II, Section 1.(c).

I. Statement of Compliance

1. W.S. § 35-11-406(n)(iv); Chapter II, Section 3.(a)(iv).
- 2.a. Chapter II, Section 2.(a)(v).
 - b. Chapter II, Section 2.(a)(v)(A).
 - c. Chapter II, Section 3.(a)(v)(A).
- 3.a. Chapter II, Section 2.(a)(ii)(B).
 - b. Chapter II, Section 2.(a)(ii)(B).
 - c. Chapter II, Section 2.(a)(ii)(B).
- 4.a. Chapter II, Section 2.(a)(ii)(A)(I).
 - b. Chapter II, Section 2.(a)(ii)(A)(I).
- 5.a. Chapter II, Section 2.(a)(ii)(A)(II).
 - b. Chapter II, Section 2.(a)(ii)(A)(II).

J. Identification of Interests

1. Chapter II, Section 2.(a)(i)(A).
2. Chapter II, Section 2.(a)(i)(D).

K. Applicant Violator System (AVS)

3/31/91 MOU between the OSM and WDEQ/LQD which sets forth how the WDEQ/LQD and the OSM will implement 30 U.S.C. 1260(c) of SMCRA and W.S. § 35-11-406(a)(xiv), (n)(vii) and (o) of Wyoming's approved regulatory program.

- 1.a. Chapter II, Section 2.(a)(i)(B); 3/31/91 MOU between the OSM and WDEQ/LQD.
 - b. Chapter XII, Section 1.(a)(ix)(C); U.S. Federal Register; 3/31/91 MOU between the OSM and WDEQ/LQD.
 - c. Chapter XII, Section 1.(a)(ix)(C); U.S. Federal Register; 3/31/91 MOU between the OSM and WDEQ/LQD.
2. Chapter II, Section 2.(a)(i)(C); 3/31/91 MOU between the OSM and WDEQ/LQD.

L. Fees

- 1.a. W.S. § 35-11-406(a)(xii).
 - b. W.S. § 35-11-406(a)(xii).
2. W.S. § 35-11-410(b)(vi).

II. Supporting Information

A. Appendix "D-1" - Land Use.

W.S. § 35-11-406(a)(vii); Chapter II, Section 2.(a)(vi)(A) and (vi)(B).

1. Chapter II, Section 2.(a)(vi)(A) and (vi)(B).

2. Chapter II, Section 2.(a)(vi)(A) and (B).
3. Chapter II, Section 2.(a)(iv).
4. Chapter II, Section 2.(a)(vi)(J)(IV).
5. Chapter II, Section 2.(a)(vi)(J)(III) and (D)(B).
6. Chapter II, Section 1.(b).

B. Appendix "D-2" - History of the Area.

W.S. § 35-11-406(a)(vii); Chapter II, Section 2.(a)(vi)(A) and (B).

1. Chapter II, Section 2.(a)(vi)(B), (F) and (b)(xiv)(B)(II)(3); Chapter XVII, Section 1.(b).
2. Chapter II, Section 1.(b).

C. Appendix "D-3" - Archeological and Paleontological Resources.

Chapter II, Section 2.(a)(vi)(S).

1. Chapter II, Section 1.(b) and Section 2.(a)(vi)(S); Chapter IV, Section 2.(l)(ii)(E); Chapter XVII, Section 1.(b).

D. Appendix "D-4" - Climatology.

W.S. § 35-11-406(a)(vii); Chapter II, Section 2.(a)(vi)(D) and (E).

1. W.S. § 35-11-406(a)(vii).
2. Chapter II, Section 2.(a)(vi)(D), (E), and (J)(VIII).
3. Chapter II, Section 1.(b) and (d).

E. Appendix "D-5" - Topography, Geology, and Overburden Assessment.

W.S. § 35-11-406(a)(vii); Chapter II, Section 2.(a)(vi)(K).

1. Chapter II, Section 2.(a)(vi)(J)(IV).
2. Chapter II, Section 2.(a)(vi)(K)(I), and (H) and (J).
3. Chapter II, Section 2.(a)(vi)(H), (I)(I) and (II), and (J).
4. Chapter II, Section 2.(a)(vi)(K)(III), and (I), and (J)(I) and (II).
- 5.a. Chapter II, Section 2.(a)(vi)(I), and (J)(I) and (II).
- b. Chapter II, Section 2.(a)(vi)(K)(I), and (I) and (J)(I), and Section 3.(a)(vi)(B) and (C)(I).
- c. Chapter II, Section 2.(a)(vi)(K)(I), and (I)(III) and (IV).

6. Chapter II, Section 2.(a)(vi)(K)(I), and (H), and (I)(III) and (IV).
7. Chapter II, Section 2.(a)(vi)(K)(III), and (I)(IV), and (J)(I) and (II).
8. Chapter II, Section 1.(b).

F. Appendix "D-6" - Hydrology.

W.S. § 35-11-406(a)(vii); Chapter II, Section 2.(a)(vi)(L), (M) and (N).

- 1.a. Chapter I, Section 2.(i), (al), (as), (at) and (bl); Chapter II, Section 2.(a)(vi)(M) and (b)(xii); Chapter XIX, Section 2.(a)(i).
- b. Chapter II, Section 2.(a)(vi)(M).
- c. Chapter II, Section 2.(a)(vi)(M)(I).
- d. Chapter II, Section 2.(a)(vi)(M)(IV).
- e. W.S. § 35-11-103(x) through (xvi); W.S. § 35-11-308 through 311; Chapter II, Section 2.(b)(vi)(B)(III).
- 2.a. W.S. § 35-11-406(a)(vii); Chapter II, Section 2.(a)(vi)(L)(I).
- b. W.S. § 35-11-406(a)(ix); Chapter II, Section 2.(a)(vi)(L)(II).
- c. Chapter II, Section 2.(a)(vi)(L)(III).
- d. Chapter II, Section 2.(a)(vi)(I)(IV).
- e. Chapter IV, Section 2.(e)(i)(E)(II).
- f. W.S. § 35-11-103(x) through (xvi); W.S. § 35-11-308 through 311; Chapter II, Section 2.(b)(vi)(B)(III).
- g. Chapter II, Section 2.(b)(xi)(D); Chapter IV, Section 2.(i)(ii).
3. W.S. § 35-11-406(a)(vii) and (ix); Chapter II, Section 2.(a)(vi)(N) and (J)(V).
4. Chapter II, Section 1.(b).

G. Appendix "D-7" - Soil Assessment.

W.S. § 35-11-406(a)(vii); Chapter II, Section 2.(a)(vi)(K)(II)(I.), and (2.).

1. Chapter II, Section 2.(a)(vi)(K)(1.) and (2.), (b)(vi)(A), and (K)(II).
2. Chapter II, Section 2.(a)(vi)(K)(II)(1.) and (2.), and (I)(II) and (K)(II).
3. W.S. § 35-11-103(x) through (xvi); W.S. § 35-11-308 through 311; Chapter II, Section 2.(b)(vi)(B)(III) and Chapter II, Section 2.(a)(vi)(B); (K)(II).
- 4.a. Chapter II, Section 2.(a)(vi)(K)(II)(1.) and (2.).
- b. Chapter II, Section 2.(a)(vi)(K)(II)(1.) and (2.), and (I)(II).
- 5.a. Chapter II, Section 2.(a)(vi)(K)(II)(1.) and (2.), and (b)(vi)(A).
- b. Chapter II, Section 2.(a)(vi)(K)(II)(1.) and (2.), and (b)(vi)(A).
- 6.a. Chapter II, Section 2.(a)(vi)(K)(II) and (F).
- b. Chapter II, Section 2.(a)(vi)(F)(I).

7. Chapter II, Section 1.(b).

H. Appendix "D-8" - Vegetation Inventory.

W.S. § 35-11-406(a)(vii); Chapter II, Section 2.(a)(vi)(C).

- 1.a. Chapter II, Section 2.(a)(vi)(C)(II); Appendix A, Section I.A. and Section II.
- b. Chapter II, Section 2.(a)(vi)(C)(II); Appendix A, Section I.B. and C.
- c. Chapter II, Section 2.(a)(vi)(A), and Section 2.(a)(vi)(B) and (F); Chapter III, Section 1.(a)(iv); Appendix A, Section II.C.2.c.
- 2.a. W.S. § 35-11-406(a)(xv); Chapter II, Section 2.(a)(vi)(C); Appendix A, Section I.D.
- b. W.S. § 35-11-103(x) through (xvi); W.S. § 35-11-308 through 311; Chapter II, Section 2.(b)(vi)(B)(III).
- c. Chapter II, Section 2.(a)(vi)(C); Appendix A, Section I.A.
- d. Chapter II, Section 2.(a)(vi)(C)(II) and (III); Appendix A, Section I.D.
- e. Chapter II, Section 2.(a)(vi)(C); Appendix A, Section I.E.
- f. Chapter II, Section 2.(a)(vi)(C); Appendix A, Section I.B., C. and F., Section II. and Section III.A.
3. W.S. § 35-11-406(a)(xv); Chapter II, Section 2.(a)(vi)(C); Appendix A, Section I.B., C. and F., Section II. and Section III.A.
4. Chapter II, Section 1.(b).

I. Appendix "D-9" - Wildlife.

W.S. § 35-11-406(a)(vii); Chapter II, Section 2.(a)(vi)(G).

1. W.S. § 35-11-406(a)(vii); Chapter II, Section 2.(a)(vi)(G)(I).
2. Chapter II, Section 2.(a)(vi)(G); Appendix B.
3. Chapter II, Section 2.(a)(vi)(G); Appendix B, Section A.
4. Chapter II, Section 2.(a)(vi)(G); Appendix B.
5. Chapter II, Section 2.(a)(vi)(G)(II) and Section 2.(a)(vi)(G); Appendix B.
6. W.S. § 35-11-406(a)(xv); Chapter II, Section 2.(a)(vi)(G); Appendix B.
7. Chapter II, Section 2.(a)(vi)(G); Appendix B.
8. W.S. § 35-11-406(a)(xv).
9. Chapter II, Section 1.(b).

J. Appendix "D-10" - Wetlands.

1. W.S. § 35-11-103(x) through (xvi); W.S. § 35-11-308 through 311; Chapter II, Section 2.(b)(vi)(B)(III); Chapter IV, Section 2.(r)(i)(C); Chapter XII, Section 1.(a)(ix)(C); Chapter XIX, Section 2.(a)(i).

2. W.S. § 35-11-103(x) through (xvi); W.S. § 35-11-308 through 311; Chapter II, Section 2.(b)(vi)(B)(III); Chapter IV, Section 2.(r)(i)(C); Chapter XII, Section 1.(a)(ix)(C); Chapter XIX, Section 2.(a)(i).
3. Chapter XII, Section 1.(a)(ix)(C).
4. Chapter II, Section 1.(b).

K. Appendix "D-11" - Alluvial Valley Floors.

1. Chapter II, Section 2.(a)(vi)(P) and (Q); Chapter III, Section 2.(b); Chapter XII, Section 1.(a),(i).
2. Chapter III, Section 2.(c); Chapter XII, Section 1.(a)(i).
3. Chapter III, Section 2.(c).
4. Chapter III, Section 2.(d).
5. Chapter III, Section 2.(f).
6. Chapter II, Section 1.(b).

L. Mine Plan

1. Chapter II, Section 2.(b)(i)(A), and Section 2.(b)(i) and (iii).
2. W.S. § 35-11-406(b)(v); Chapter II, Section 2.(b)(i)(D)(V).
3. W.S. § 35-11-406(b)(v); Chapter II, Section 2.(b)(iv)(G); Chapter IV, Section 2.(j)(iii) and (iv).
4. Chapter II, Section 2.(b)(i) and (ii), and Section 2.(b)(i)(C) and (iii); Chapter IV, Section 2.(k)(i).
 - a. W.S. § 35-11-406(b)(v) and (vii); Chapter II, Section 2.(b)(i) and Section 2.(b)(xx).
 - b.i. W.S. § 35-11-406(b)(v); Chapter II, Section 2.(b)(iv)(A).
 - ii. W.S. § 35-11-406(b)(viii); Chapter II, Section 2.(b)(iv)(A) and Section 2.(b)(i)(D)(IV); Chapter IV, Section 2.(c)(i)(A) and (B), (ii) and (iii), and Section 2.(c)(iii).
 - iii. Chapter II, Section 2.(b)(iv)(A).
 - c.i. W.S. § 35-11-406(b)(v); Chapter II, Section 2.(b)(i)(C).
 - ii. Chapter IV, Section 2.(b).
 - iii. W.S. § 35-11-406(b)(v); Chapter II, Section 2.(b)(iv)(A); Chapter IV, Section 2.(c)(xi).
 - iv. Chapter II, Section 2.(b)(iv)(B)(V).
 - v. Chapter II, Section 2.(b)(i)(A) and (iv)(A).
 - vi. Section 2.(b)(iii), (iv)(C), (v), (vi) and (vii).
 - A. Chapter I, Section 2.(h); Chapter IV, Section 2.(b)(iii)
 - B. Chapter IV, Section 2.(b)(vii).
 - C. Chapter IV, Section 2.(b)(vi).
 - d.i. W.S. § 35-11-406(a)(x); Chapter II, Section 2.(a)(vi) and (b)(i)(A).

- ii. Chapter II, Section 2.(a)(vi)(A), (b)(i)(A) and (iv)(A), and Section 2.(b)(iii).
 - iii. Chapter II, Section 2.(a)(vi)(A) and (b)(i)(A), and Section 2.(b)(viii).
- 5.a. Chapter II, Section 2.(b)(i)(D)(IV) and (xi).
- i. Chapter II, Section 2.(b)(xi)(A).
 - ii. W.S. § 35-11-406(b)(xvi); Chapter II, Section 2.(b)(xi), (xii) and (xiii).
 - iii. W.S. § 35-11-406(b)(xviii); Chapter II, Section 2.(b)(xi),(xii); Chapter XIX, Section 2.(a)(i).
- b.i. W.S. § 35-11-406(b)(xvi); Chapter II, Section 2.(a)(v)(A)(I) and (vi)(I)(I); Chapter IV, Section 2.(e)(ii)(C)(III).
- ii. Chapter II, Section 2.(b)(iv)(D); Chapter IV, Section 2.(i)(i).
 - iii. Chapter IV, Section 2.(h).
 - iv. W.S. § 35-11-404; Chapter II, Section 2.(b)(ix); Chapter IV, Section 2.(p).
- c. W.S. § 35-11-406(b)(xiv).
- i. W.S. § 35-11-406(b)(v); Chapter II, Section 2.(b)(i)(D)(IV) and (xi).
 - ii. W.S. § 35-11-406(b)(xvi); Chapter II, Section 2.(b)(iv)(D), and Section 2.(a)(v)(A)(I)(1.) and (b)(xi); Chapter IV, Section 2.(i) and (ii).
 - iii. Chapter II, Section 2.(b)(xi); Chapter IV, Section 2.(r)(ii).
6. Chapter IV, Section 2.(r)(i)(C); Chapter XII, Section 1.(a)(ix)(C).
- 7.a. W.S. § 35-11-406(b)(v); Chapter II, Section 2.(a)(v), (b)(i)(D)(III) and (xv); Chapter XII, Section 1.(a)(ix)(C).
- b. W.S. § 35-11-406(b)(v) and (ix); Chapter II, Section 2.(b)(i)(D)(III) and (ix); Chapter IV, Section 2.(c)(xii) and (xiii).
 - c. Chapter II, Section 2.(b)(iv) and Section 2.(b)(xv)(B).
 - d. W.S. § 35-11-406(b)(ix); Chapter II, Section 2.(b)(xv)(C).
8. Chapter II, Section 2.(b)(i)(D)(VI) and (ii); Chapter IV, Section 2.(o).
9. W.S. § 35-11-406(b)(xvii); W.S. § 35-11-415(b)(xi); Chapter II, Section 2.(b)(i)(D)(II) and (v); Chapter VI.
10. Chapter II, Section 2.(b)(xvi); Chapter IV, Section 2.(t).
11. Chapter II, Section 2.(b)(xx); Chapter IV, Section 2.(k) and (u).
12. Chapter III, Section 4.
13. Chapter II, Section 2.(b)(iii); Chapter IV, Section 2.(n).
14. Chapter II, Section 2.(b)(vi); Chapter IV, Section 2.(r)(i).
15. Chapter XII, Section 1.(a)(ix)(C).
16. W.S. § 35-11-406(b)(xii)(C) and (xiii); Chapter II, Section 2.(b)(iii); Chapter IV, Section 2.(n).
- 17.a. W.S. § 35-11-406(n)(v)(A); Chapter II, Section 2.(b)(xiii); Chapter V, Section 3.(a) and (b)(i).

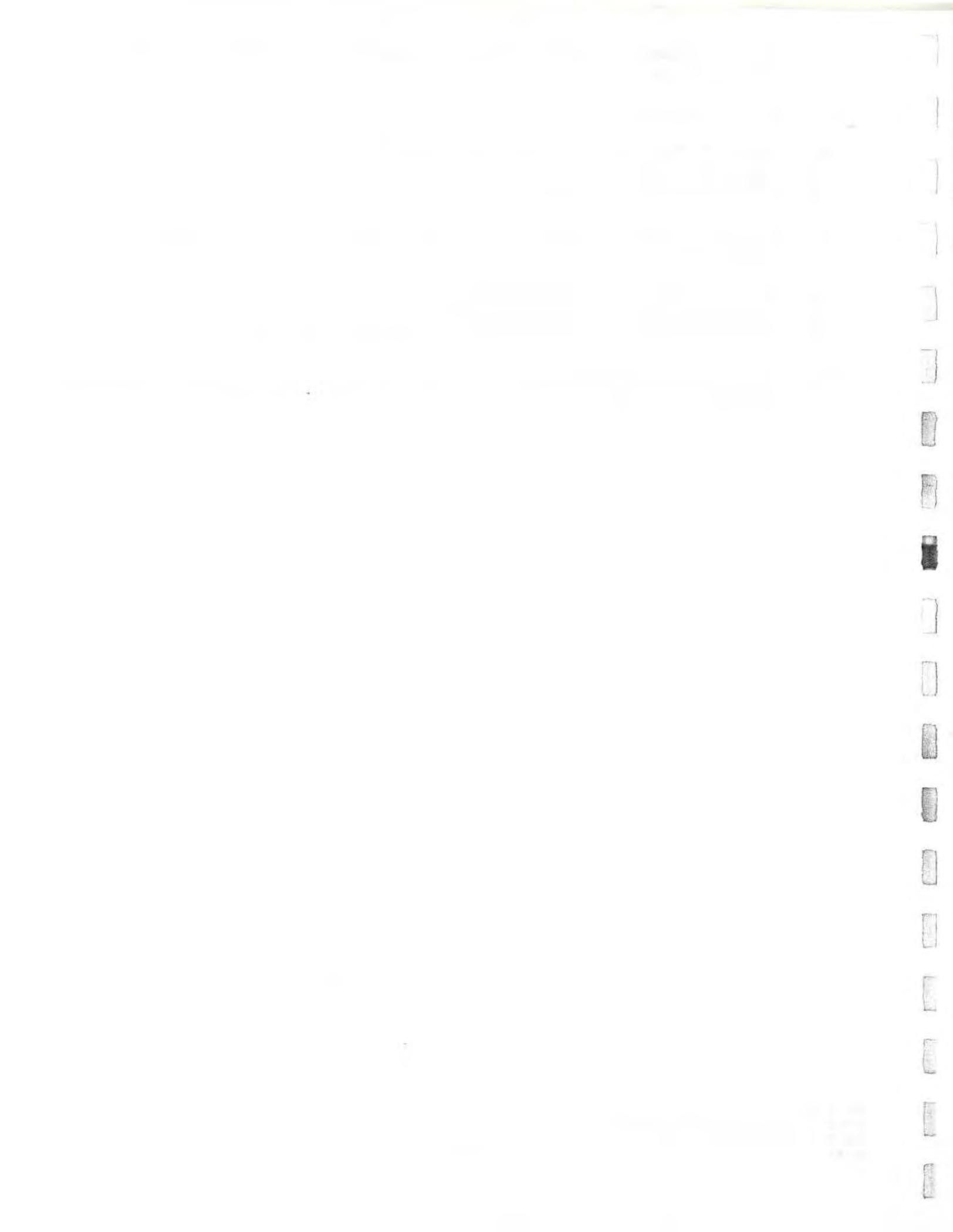
- b. W.S. § 35-11-406(n)(v)(B); Chapter III, Section 2.(d)(iv).
 - c. Chapter V, Section 3.(c)(ii).
 - d. Chapter III, Section 2.(e); Chapter V, Section 3.(b).
18. W.S. § 35-11-406(n)(vi); Chapter III, Section 1.(a)(i).
- 19.a. Chapter VII, Section 1.(a) and (a)(vi).
- b. Chapter VII, Section 1.(a)(v), and Section 2.(b)(iii).
 - c. Chapter VII, Section 1.(a)(iii).
 - d. Chapter VII, Section 2.(b)(iv), (v) and (vi).
- 20.a. Chapter III, Section 5.(a)(i).
- b. Chapter V, Section 6.(d); Chapter VII, Section 2.
 - c. Chapter V, Section 6.(c) and (e).
 - d. Chapter V, Section 6.(b).
21. Chapter II, Section 2.(b)(xxi).
22. Chapter X, Section 1. and Section 2.

M. Reclamation Plan

- 1.a. W.S. § 35-11-406(b)(i), (ii) and (vii); Chapter II, Section 2.(b)(iv)(B)(I) and Section 2.(b)(xiv)(A).
 - b. Chapter II, Section 2.(b)(xiv)(B).
- 2.a. W.S. § 35-11-406(b)(ii); Chapter II, Section 2.(b)(iv)(B)(I) and (IV), and Section 2.(a)(vi)(J)(IV).
- b. W.S. § 35-11-406(b)(v) and (vii); Chapter II, Section 2.(b)(iv)(B)(I) and Section 2.(a)(vi)(J)(IV); Chapter IV, Section 2.(b)(ix)(A).
 - c. W.S. § 35-11-406(b)(v); Chapter IV, Section 2.(b)(iii).
 - d. W.S. § 35-11-406(b)(xv); Chapter IV, Section 2.(c)(vi).
 - e. Chapter II, Section 2.(b)(xi)(E) and (xii); Chapter IV, Section 2.(w); Chapter XII, Section 2.(a)(i).
 - f. W.S. § 35-11-406(b)(xix); Chapter II, Section 2.(b)(i)(B) and (ii), and Section 2.(b)(xx); Chapter IV, Section 2.(b) and (k), and Section 2.(b)(i).
 - g. Chapter IV, Section 2.(b)(ii).
3. Chapter IV, Section 2.(c)(xi).
- a. Chapter IV, Section 2.(c)(xi)(D) and (E).
 - b. W.S. § 35-11-406(b)(ix); Chapter IV, Section 2.(c)(xi)(D) and (E).
- 4.a. Chapter II, Section 2.(b)(iv)(A).
- b. W.S. § 35-11-406(b)(xv); Chapter II, Section 2.(b)(iv)(B)(II) and (III), and (C); Chapter IV, Section 2.(d)(iv), (vii) and (viii).
 - c. Chapter IV, Section 2.(c)(i)(C), and Section 2.(c)(vii) and (ix).
 - d. Chapter II, Section 2.(b)(iv)(A); Chapter IV, Section 2.(c)(v)(A).
 - e. W.S. § 35-11-103(x) through (xvi); W.S. § 35-11-308 through 311; Chapter IV, Section 2.(r)(i)(C); Chapter XIX, Section 2.(a)(i).
- 5.a. W.S. § 35-11-406(b)(xv); Chapter II, Section 2.(b)(iv)(C); Chapter IV, Section 2.(d)(iv).
- b. W.S. § 35-11-406(b)(iii) and (vii); Chapter II, Section 2.(b)(iv)(B)(I) and (C), and Section 2.(b)(vii); Chapter IV, Section 2.(d)(vi), and (k)(i)(A), (B), (C) and (D); Appendix A, Section VII.B.
 - c. Chapter II, Section 2.(b)(vii)(A); Chapter IV, Section 2.(d)(xii).

- d. Chapter II, Section 2.(b)(iv)(C); Chapter IV, Section 2.(d)(xii).
 - e. Chapter II, Section 2.(b)(vii)(C).
 - f. W.S. § 35-11-103(x) through (xvi); W.S. § 35-11-308 through 311; Chapter IV, Section 2.(r)(i)(C); Chapter XIX, Section 2.(a)(i).
 - g. Chapter II, Section 2.(b)(vii)(C); Chapter IV, Section 2.(d)(x)(A) and (B), and Section 3.(d)(xi); Appendix A, Section III, VII and VIII.
6. Chapter II, Section 2.(b)(vi).
- 7.a. W.S. § 35-11-406(b)(xviii) and (n)(iii); Chapter II, Section 2.(b)(xi), (xii) and (xiii); Chapter XIX, Section 2.
- b. W.S. § 35-11-406(b)(xvi).
 - c. W.S. § 35-11-103(x) through (xvi); W.S. § 35-11-308 through 311; Chapter IV, Section 2.(r)(i)(C); Chapter XIX, Section 2.(a)(i).
 - d.i. W.S. § 35-11-406(b)(xviii); Chapter II, Section 2.(b)(ii), and Section 2.(b)(xi)(A) and (C); Chapter IV, Section 2.(h) and (i).
 - ii. Chapter II, Section 2.(b)(iv)(E)(IV) and Section 2.(b)(xi); Chapter IV, Section 2.(h) and (i).
 - iii. Chapter II, Section 2.(b)(xi) and (xii); Chapter IV, Section 2.(h) and (w); Chapter XIX, Section 2.(a)(i).
 - iv. Chapter II, Section 2.(b)(xi)(C).
 - v. W.S. § 35-11-406(b)(xix); Chapter II, Section 2.(b)(i)(D)(I) and (xi)(D).
 - vi. W.S. § 35-11-406(b)(xix); Chapter II, Section 2.(b)(ii) and Section 2.(b)(xi)(A).
 - A. W.S. § 35-11-406(b)(xix); Chapter II, Section 2.(b)(ii).
 - B. W.S. § 35-11-406(b)(xix); Chapter II, Section 2.(b)(xi)(A) and (C); Chapter IV, Section 2.(h).
 - e.i. W.S. § 35-11-406(b)(i); Chapter II, Section 2.(a)(vi)(L)(I).
 - ii. Chapter II, Section 2.(b)(iv)(B)(III) and (E)(I).
 - iii. Chapter II, Section 2.(a)(vi)(L)(II) and (b)(iv)(D); Chapter IV, Section 2.(e)(i)(E)(II).
 - iv. Chapter II, Section 2.(a)(vi)(L)(II) and (b)(iv)(D); Chapter IV, Section 2.(e)(i)(E)(II).
 - v. Chapter II, Section 2.(b)(xi), (xii) and (xiii); Chapter XIX, Section 2.(a)(i).
 - vi. Chapter II, Section 2.(b)(xi)(D); Chapter IV, Section 2.(i) and (ii).
 - vii. W.S. § 35-11-406(b)(xix); Chapter II, Section 2.(b)(ii) and Section 2.(b)(xi)(A); Chapter IV, Section 2.(k).
 - A. W.S. § 35-11-406(b)(xix); Chapter II, Section 2.(b)(ii) and Section 2.(b)(xi)(A); Chapter IV, Section 2.(k).
 - B. W.S. § 35-11-406(b)(xix); Chapter II, Section 2.(b)(ii) and Section 2.(b)(xi)(A).
8. W.S. § 35-11-103(x) through (xvi); W.S. § 35-11-308 through 311; Chapter IV, Section 2.(r)(i)(C); Chapter XIX, Section 2.(a)(i); Chapter XII, Section 1.(a)(ix)(C).
- 9.a. W.S. § 35-11-406(b)(xviii) and (n)(v); Chapter V, Section 3.(a) and (c).
- b. Chapter III, Section 2.(e); Chapter V, Section 3.(a) and (b).
- 10.a. Chapter II, Section 2.(a)(vi)(L)(I).
- b. Chapter IV, Section 2.(b)(ix)(A), and Section 2.(b)(iv) and (c)(xi)(K).
- 11.a. W.S. § 35-11-406(n)(vi); Chapter III, Section 1.; Chapter V, Section 2.(a) and (b).
- b. Chapter III, Section 1.(b); Chapter V, Section 2.(b)(ii)(D) and (E).

12. W.S. § 35-11-406(b)(iv) and (xix); Chapter II, Section 2.(b)(ii), (iv)(G)(II) and (H); Chapter IV, Section 2.(j)(iv)(B).
13. W.S. § 35-11-406(a)(xv).
- 14.a. Chapter VII, Section 1.(a)(vii), and Section 2.(a)(ii) and (iii).
 - b. Chapter VII, Section 1.(a)(iv).
 - c. Chapter VII, Section 1.(a)(v)(D).
15. W.S. § 35-11-403(a)(ii); W.S. § 35-11-410(c); W.S. § 35-11-417; Chapter XI; Chapter XII, Section 2., Chapter XX.
 - a. W.S. § 35-11-410(c); W.S. § 35-11-417(c)(ii).
 - b. W.S. § 35-11-411(d); W.S. § 35-11-417(c)(ii).
 - c. W.S. § 35-11-410(c); W.S. § 35-11-417(c)(ii); Chapter XII, Section 1.(b).
- 16.a. Chapter XV, Section 5.(a)(ii)(B)(I).
 - b. Chapter II, Section 2.(b)(vii)(C); Chapter IV, Section 2.(d)(x) and Section 2.(d)(ix); Appendix A, Section VIII.



**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY (WDEQ)
LAND QUALITY DIVISION (LQD)**

ELECTRONIC DATA SUBMITTAL FORMAT AND CONTENT

I. INTRODUCTION

Submission of electronic data to support the permit application will result in a more timely and efficient permit review. Although Chapter II, Section 1.(a) of the Land Quality Division Coal Rules and Regulations allow the Administrator to require a specific format for information, at this time the request for electronic submittal is being made on an as available basis. In order to improve the accuracy and efficiency of the review process, the LQD requests the cooperation of the mining industry. The following paragraphs identify the specific types of files requested. All information required for completeness should be submitted in the appropriate electronic format, as well as in the printed form.

II. METADATA (DATA ABOUT THE DATA)

As the data is reduced from being printed on paper to electronic files, it becomes ever more abstract and compact. For this information to be useful, information about how to access it, where it comes from, what it is, and how it was gathered must be directly associated with the information file.

- A. **readme file:** All transmittals should include a readme file that includes all the information that the operator would normally tell the LQD if the application were hand delivered. In addition responses to the questions the reviewer might ask the operator should be included here. "readme.txt" is a default name universally used and this convention should be followed.
- B. **Information about the sources of data:** The additional metadata files can be named whatever is desired, as long as these names are identified and explained in the readme.txt file.
- C. **Organization:** The electronic data should be organized in accordance with the Coal Permitting Handbook. The index should be a separate text file named "idx?????.txt". The five ? marks can be replaced with characters of the permittee's choice as in "idxmyt2.txt"

III. BASIC INFORMATION TYPES

- A. **Text Files:** The bulk of the permit appears in text. The text can be submitted in one or several files at the permittee's convenience. LQD uses Word Perfect 5.1 at the present. Where practical, the text should be submitted in WP51 files. In all instances the text should be submitted in ASCII .txt files. Other document formats may be submitted if the permittee provides the LQD access to the necessary software to examine the files.
- B. **Graphics Files:** Graphics files generally contain much more information than can be interpreted from the map or graphic printed. By having the electronic files available, all the information is available. Unfortunately formatting becomes much more variable and software specific. Where possible, generic formatted files should be submitted in addition to the software specific files. Graphics are prepared in either a vector or raster based image. The image will determine the type of generic file submitted.

1. Maps: All map files should be submitted in either .dxf or iges formats. LQD uses Autocad and Arcinfo. If the maps were prepared in either of these softwares, the software specific files should be submitted also.
 2. Drawings: All drawing files should be submitted in .dxf format and in a .dwg format compatible with Autocad 12 where possible.
 3. Miscellaneous: Many graphics are raster based rather than vector based. Raster based graphics should be submitted in a tiff format and in the original software specific format.
- C. Data Files: All data files should be submitted in an ASCII comma, space delimited, or columnar format. The accompanying metadata file should carefully explain the organization of each row and column, and the derivation of each value.
1. Topography: Topography is expressed digitally in x (easting), y (northing), and z (elevation) values. All coordinates should be in the appropriate state plane coordinate zone or in latitude and longitude. The metadata files should include the accuracy of the data and which geodetic model the data is based on. Local coordinate zones should not be used.
 2. Hydrology: Most hydrology data should be formatted to be imported into the CPR (hydrology) database.
 3. Soils, Vegetation, Miscellaneous: Arcinfo files are the file of choice. Autocad drawings are also acceptable, however all lines describing areal information must be in either 2D or 3D poly lines.
- D. File Formats: Electronic file formats are constantly being changed to accommodate added software features. This complicates being able to retrieve archived data. Most files will be submitted twice, once in a software specific format and again in a generic format.
1. Generic:
 - a. Text and Data: Since most software packages can read ASCII files and will be able to in the future, one copy of all files should be submitted in an ASCII format.
 - b. Vector Graphics: The generic vector formats are the .dxf developed by Autodesk and made available universally and the iges (initial graphic exchange system) format.
 - c. Raster Graphics: The universal generic format is the tiff format used by fax machines.
 2. Software Specific: Most softwares use some format rather than the generic formats listed above. The software specific formats usually contain some enhancements or information lost in the translation to the generic formats.
 3. Compatibility Issues: While LQD prefers submission of the software specific files, if a software package capable of reading the particular file is not available to the LQD staff, nothing is gained. Direct coordination between the permittee staffs preparing the files and the LQD staff is necessary to limit the compatibility problems.
- E. Methods of Transfer: Many choices of transfer methods are available. Technology has progressed in the last couple of years to the point that transfers can be accomplished easily and quickly.

1. Internet: LQD has internet connections through both the OSM Wide Area Network and the State Wide Area Network. For those operators that have Internet access, two options are available for file transfer. The files can be submitted through email. Problems remain with the integrity of binary files when emailed. Both the sender and receiver must be using similar encoding routines. Coordination with LQD before submitting the file is recommended. The unix coordinator is Louis Harmon. His phone number is 307-777-7066 and his email address is lharmon@osmre.gov. The lharmon@osmre.gov address is using the pine mail package which works with the "mime" encoder for binary files. LQD will also establish a unix account for any active permit with password security upon request. This account will allow direct logon to a secured area of the LQD unix server and the use of ftp to transfer files to LQD.
 2. Modem: LQD has 14.4 kbaud fax/modems at all locations. Procedures will be developed to allow permittees to call up these modems and transfer files to secured accounts. Modems operating at these speeds can transfer 7-9 megs/hour.
 3. Magnetic Media: Small files can be easily transferred using floppy disks. Larger files become cumbersome on floppy disks. LQD also has 120/250mb QIC tape drives, CD-ROM, and 4 mm DAT drives that work well for larger files such as a complete permit application. Almost any other media can be used by prior arrangement.
- F. Information Management and Security: Because of the ease and speed with which electronic files can be altered, security becomes a very critical issue. LQD has developed procedures designed to guarantee integrity of the data submitted.
1. Archival: When data is submitted on magnetic media, the media is read one time to retrieve the files and then placed in a locked archive with controlled access. This original media is never placed in a drive again unless some problem is thought to have occurred with the secured read only copy placed on the server.
 2. Tape Backup: Scheduled backups of the online server will be made. For data submitted by modem or Internet, immediately upon receipt a tape backup will be made and placed in the archive as the original data.
 3. Secured unix server: The data will be placed on a unix server in read only files. Only the LQD records management staff will have write access to the these files.
- G. Information Retrieval: The present LQD policy is that electronic data need not be made available to the public to satisfy the Wyoming Public Records Act as long as the same information is available in the printed files. Until further development of electronic permit submittal, all information will have to be submitted in hard copy as is the present practice.
1. LQD Staff: All LQD staff in all locations will have simultaneous password secured read access to the same data. This accessibility should result in one of the major increases of productivity to be realized from electronic permit submittals.
 2. Public - No Electronic Retrieval: The unix server allows the efficient administration of data security procedures. No party other than the LQD staff will be able to read the electronic files.

3. Release upon Permittee Approval: Because situations will occur where the permittee finds it easier to transfer their data from the LQD system to a third party rather than from their own system, the data will be released electronically by the LQD upon the permittee's written request.

H. Electronic File Submittals Based on the Permit Format

1. Adjudication File

- a. Form 1: Application for Permit to Mine
- b. Form 3: License to Mine Application
- c. Reclamation Bond
- d. Certificate of Public Liability

These items should be scanned and submitted as .tif graphical files. Each form should be submitted as a separate file.

- e. Appendix "A" (For lands within the permit area)
- f. Appendix "B" (For lands adjacent [within one-half mile] to the permit area)
- g. Appendix "C"

The lists of owners should be prepared in a tabular alphabetical fashion that allows import from the ASCII files into the LQD database. The maps should be printed in properly indexed and identified .dxf or iges files, and in a software specific file, either AutoCad or ArcInfo, if possible.

h. Appendix "E"

It is not necessary to submit the U.S.G.S. topo sheets in electronic format. LQD has access to the digital versions. The information added to the U.S.G.S. topo sheets should be submitted in electronic format in .dxf and software specific files.

All lists should be submitted in ASCII files organized to allow import to other databases. These files should be in a columnar format, comma or space delimited. Maps should be submitted in .dxf or iges and software specific formats.

- i. Statement of Compliance
- j. Identification of Interests
- k. Applicant Violator System (AVS)

The text should be submitted as recommended (Subsection III.A of this Section). Where appropriate, information should be submitted in properly organized lists.

2. Supporting Information

- a. Appendix "D-1" - Land Use
- b. Appendix "D-2" - History of the Area.
- c. Appendix "D-3" - Archeological and Paleontological Resources.
- d. Appendix "D-4" - Climatology

Please submit this information as directed in the instructions (Subsection III.A of this Section).

e. Appendix "D-5" - Topography, Geology, and Overburden Assessment.

Text and maps should be submitted as directed in the instructions (Subsection III.A and B of this Section). If the cross sections have been prepared using Stratifact, please submit the Stratifact files. The data should be submitted in ASCII files as organized by the operator.

f. Appendix "D-6" - Hydrology.

Text and maps should be submitted as directed in the instructions (Subsection III.A and B of this Section). The hydrology data should be submitted in the format as requested for input to the CPR (hydrology) database. Input files and output files from the hydrology modelling efforts should be provided in the software format and in ASCII format if LQD uses a different software for the same type of analysis.

g. Appendix "D-7" - Soil Assessment.

h. Appendix "D-8" - Vegetation Inventory.

i. Appendix "D-9" - Wildlife.

j. Appendix "D-10" - Wetlands.

k. Appendix "D-11" - Alluvial Valley Floors.

l. Mine Plan

Text, data and maps should be submitted as directed in the instructions (Subsection III.A and B of this Section).

m. Reclamation Plan

Text and maps should be submitted as directed in the instructions (Subsection III.A and B of this Section). Scattered (gridded is less desirable) data files of the final proposed topography in comma delimited ASCII text are requested.

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**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY (WDEQ)
LAND QUALITY DIVISION (LQD)**

INDEX SHEET FOR LQD PERMITTING CHANGES

Please use the supplied index sheet on the following page to make copies for all index sheets to accompany a submittal. Copy the supplied sheet as much as necessary, but please do not alter or modify the supplied index sheet in any way.

Faint, illegible text at the top of the page, possibly a header or title.



INDEX SHEET FOR MINE PERMIT AMENDMENTS OR REVISIONS

Page of
Date
TFN

MINE COMPANY NAME: _____

MINE NAME: _____

PERMIT NO.: _____

Statement:

I, _____, an authorized representative of _____ declare that only the items listed on this and all consecutively numbered Index Sheets are intended as revisions to the current permit document. In the event that other changes inadvertently occurred due to this revision, those unintentional alterations will not be considered approved. Please initial and date.

VOLUME NUMBER	PAGE, MAP OR OTHER PERMIT ENTRY TO BE REMOVED	PAGE, MAP OR OTHER PERMIT ENTRY TO BE ADDED	DESCRIPTION OF CHANGE
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NOTES:

- 1) Include all revision or change elements and a brief description of or reason for each revision element.
- 2) List all revision or change elements in sequence by volume number; number index sheets sequentially as needed.
- 3) If there are no revisions to one or more volumes, include an entry for that volume stating NO CHANGE.

