ADDITION OF COAL MINING REGULATIONS TO THE COMPUTER-AIDED ENVIRONMENTAL LEGISLATIVE DATA SYSTEM (CELDS)

by

Ronald D. Webster
Elizabeth Herrick
Mary Tadie Grieme

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SYSTEM (CELDS)

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Computer-Aided Environmental Legislative Data System (CELDS)
clean mines
regulations
information retrieval

Department of Energy (DOE)-specific regulations on mining have been added to the
Computer-Aided Environmental Legislative Data System (CELDS), an online, interactive
database developed by the U.S. Army Construction Engineering Research Laboratory
(CERL). CELDS indexes and abstracts environmental regulations of the Federal government
and the 50 states. Included now are coal mining regulations for the Federal government
and those states having Department of Interior approval for their mining programs.
The coal mining regulations cover Federal regulatory programs for surface mining and
BLOCK 20. (Continued)

- underground mining of coal on Federal, Indian, and private lands. A draft thesaurus of mining terms has been developed. This thesaurus, which will be merged into the existing CELDS thesaurus, will be used to index CELDS records which cover coal mining regulations. The thesaurus terms cover both coal mining technology and environmental impacts of coal mining.
FOREWORD

This project was performed for the Department of Energy, Operational and Environmental Safety Division, under Interagency Agreement DE-A101-81EV10597, "Incorporation of DOE Specific Data into the Existing Computer-Aided Environmental Legislative Data System (CELDS)." The Technical Monitor was Mr. Robert Poe.

The work was done by the Modeling and Simulation Team, Environmental Division, U.S. Army Construction Engineering Research Laboratory (CERL). CERL personnel directly involved were Mr. Ronald Webster and Ms. Elizabeth Herrick. University of Illinois Library Research Center personnel directly involved were Ms. Barbara Howell and Ms. Mary Tadie Grieme.

Dr. R. K. Jain is Chief of the Environmental Division. COL Louis J. Circeo is Commander and Director of CERL, and Dr. L. R. Shaffer is Technical Director.
CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 INTRODUCTION</td>
<td>5</td>
</tr>
<tr>
<td>2 IDENTIFICATION OF REGULATIONS FOR ABSTRACTING</td>
<td>5</td>
</tr>
<tr>
<td>3 INCORPORATION OF MINING REGULATIONS INTO CELDS</td>
<td>7</td>
</tr>
<tr>
<td>4 DEVELOPMENT OF THESAURUS</td>
<td>7</td>
</tr>
<tr>
<td>5 SUMMARY</td>
<td>8</td>
</tr>
<tr>
<td>APPENDIX A: Table of Federal Mining Regulations and Corresponding CELDS Accession Numbers</td>
<td>9</td>
</tr>
<tr>
<td>APPENDIX B: CELDS Records Fields</td>
<td>16</td>
</tr>
<tr>
<td>APPENDIX C: List of State Regulatory Agencies</td>
<td>17</td>
</tr>
<tr>
<td>APPENDIX D: Thesaurus of Mining Terms</td>
<td>20</td>
</tr>
</tbody>
</table>

DISTRIBUTION
ADDITION OF COAL MINING REGULATIONS TO THE COMPUTER-AIDED ENVIRONMENTAL LEGISLATIVE DATA SYSTEM (CELDS)

1 INTRODUCTION

Background

In May 1980, representatives of the Department of Energy (DOE) and the National Bureau of Standards (NBS) met to discuss possible solutions to the problem of identifying, maintaining, and disseminating information on state and Federal environmental laws and regulations. This information is needed to support DOE activities, specifically in the area of coal mining.

The Computer-Aided Environmental Legislative Data System (CELDS) developed by the U.S. Army Construction Engineering Research Laboratory (CERL) contains environmental regulations of both Federal and state governments. CERL developed CELDS as part of the Environmental Technical Information System (ETIS) to respond to the Army's need for rapid and easy access to environmental regulations relevant to a specific project or activity. Regulations are collected, abstracted, indexed, and entered in the system for later retrieval. CERL updates the system continuously and consults directly with administering agencies to maintain its accuracy.

DOE has no automated system for tracking environmental regulations; instead it relies on hard copies of the regulations, which creates updating problems. NBS obtained information on the CELDS system, which was reviewed by DOE. The two agencies concluded that there was a need for a coordinated effort to include DOE-specific information, as well as any new environmental regulations, in CELDS.

Objectives

The objectives of this study were (1) to identify, obtain, and abstract coal mining regulations of interest to DOE for inclusion in CELDS, and (2) to develop a thesaurus of mining terms for indexing these regulations.

Approach

Federal and state environmental regulations pertaining to coal mining were identified and abstracted. The abstracts for the appropriate regulations were incorporated into CELDS, and procedures for updating them were provided. A draft thesaurus was compiled for indexing and retrieving the mining regulations.

Mode of Technology Transfer

It is recommended that the information in this report supplement existing technical documentation and user manuals on the CELDS database.

2 IDENTIFICATION OF REGULATIONS FOR ABSTRACTING

The Federal Regulatory Program

The Federal Regulatory Program, mandated by the Federal Surface Mining Control and Reclamation Act of 1977 (SMCRA), established national environmental protection standards for regulating the effects of strip and underground coal mining. The Act created the Office of Surface Mining Reclamation and Enforcement (OSM) within the Department of the Interior and established regulations for coal mining on Federal and Indian lands. It also established certain minimum standards regulating the effects of strip and underground coal mining. The Act gives each state the responsibility for creating and monitoring its own regulatory program for surface and underground coal mining. Each state program must be approved by the OSM. This approval is in two forms: one is the initial regulatory program (IRP) and the other is the permanent regulatory program (PRP). A Federal program will be implemented in states that do not submit an acceptable program.

The IRP, which was published in 1977, set nine general performance standards for surface and underground coal mining. Within specified time limits, the state must submit its program for permanent approval under the PRP, which was published in 1979. The IRP performance standard and many other environmental regulations are part of the PRP. As a state's program is approved or disapproved, it is published in the Federal Register. Both the state regulatory programs, which are in various stages of approval, and the Federal regulatory programs have been added to CELDS.

The Department of the Interior has already proposed numerous changes to the two regulatory programs as...
part of a department regulatory review process. If changes to the regulatory program are extensive, they will be reflected in changes in all state programs. The two programs are also being reviewed as part of the President's regulatory review program. Several proposed changes to the regulations have already been published which will significantly change the nature of the regulatory program. Thus, many of the current Federal regulations abstracted for CELDS will need to be changed as these proposed regulations become final. The states must incorporate any changes to the Federal programs into their programs, and this will also require continuous changes to CELDS records.

To incorporate appropriate regulations into CELDS, it was first necessary to identify all current laws pertinent to DOE interests. To do this, CERL contracted with the University of Illinois Library Research Center (LRC) to obtain the appropriate information. They began by abstracting the Federal permitting program. The abstracts were put into the following categories:

1. Surface mining
2. Underground mining
3. Coal exploration
4. Special programs
5. Federal lands

Next, they abstracted the permanent program performance standards for hydrologic balance, explosives, air protection, revegetation, disposal of excess spoil, protection of fish and wildlife, topsoil, and coal processing wastes. Each performance standard was abstracted into the categories listed above. The state programs followed the same procedure.

When all the Federal regulations were entered into CELDS, a table was created in accession number 5582, showing the "Code of Federal Regulations" citation, the corresponding CELDS accession number, and a brief title of the regulation (see Appendix A). These regulations can be updated as necessary. The Federal abstracts are grouped into the following broad topics:

1. Indian lands
2. Surface mining exemptions
3. Surface mining initial program performance standards
4. Surface mining special permanent program performance standards
5. UnderGround mining initial program performance standards
6. Permits special categories of mining
7. Permits bonds and insurance
8. Surface mining permanent program performance standards
9. Federal program
10. Federal lands
11. Permits state or Federal program
12. Permits surface mining state or Federal program
13. Permits underground mining state or Federal program
14. Underground mining permanent program performance standards
15. Surface mining special permanent programs performance standards.

State Regulatory Programs
After the states pass laws and establish regulations to implement their regulatory programs, the OSM will approve or disapprove their programs. In the absence of an approved program, a state must comply with the Federal program. A state's program can be in one of six stages of approval:

1. Approved permanent program
2. Conditionally approved permanent program awaiting a final decision granting primacy to the state. It is conditional, based on correction of minor deficiencies.
3. Partially approved permanent program, which reflects an initial decision, but does not convey primacy. The program must be resubmitted for approval.
Table 1  
States Which Have No Coal Mining or Exploration Activities

<table>
<thead>
<tr>
<th>State</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>Nevada</td>
</tr>
<tr>
<td>California</td>
<td>New Hampshire</td>
</tr>
<tr>
<td>Connecticut</td>
<td>New Jersey</td>
</tr>
<tr>
<td>Delaware</td>
<td>New York</td>
</tr>
<tr>
<td>Florida</td>
<td>North Carolina</td>
</tr>
<tr>
<td>Hawaii</td>
<td>South Carolina</td>
</tr>
<tr>
<td>Idaho</td>
<td>South Dakota</td>
</tr>
<tr>
<td>Maine</td>
<td>Vermont</td>
</tr>
<tr>
<td>Minnesota</td>
<td>Wisconsin</td>
</tr>
<tr>
<td>Nebraska</td>
<td></td>
</tr>
</tbody>
</table>

4. Disapproved permanent program: the state must resubmit it.

5. Permanent program being developed by the state.

6. Federal program being developed for the state by the OSM.

Many states do not have an approved permanent program and may not know the date of final approval. Others have no coal mining or exploration for coal now and do not expect any before June 1985 (see Table 1).

Abstracts pertinent to the state regulatory programs are being added to CELDS as they become available.

3 INCORPORATION OF MINING REGULATIONS INTO CELDS

LRC personnel collected data for the mining regulations by thoroughly studying the Federal Surface Mining Control and Reclamation Act and pursuant regulations. Copies of all relevant regulations were then copied for abstraction from the Code of Federal Regulations and the Federal Register updates. Once regulations pertaining to the two Federal regulatory programs had been identified, a search for the state regulations was begun. Correspondence was initiated with state agencies responsible for establishing mining regulations. NBS provided notebooks containing certain state regulations; these were used to identify possible contacts. Since many of the notebooks either did not contain mining regulations or contained regulations which had not been updated for several years, contact was needed with practically all the states. Separate and uniquely tailored requests were sent to state regulatory agencies. Since state regulatory programs change constantly, this contact must be ongoing. Therefore, LRC asked to be put on routine mailing lists for regulatory changes either proposed or final.

The abstracting, indexing, and entering of the mining regulations into the CELDS database is in accordance with the format used for other CELDS records. Appendix B briefly outlines the 12 CELDS record fields. As with all CELDS records, a full-text, hard copy of the regulations is kept in a state or Federal notebook in accession number order, if any user needs it. LRC maintains a card file system for the states and their regulatory agency(s). Each card has the name and address of the state contact(s), the status of the state program, and a master list of all pertinent mining regulations and laws received. Various inhouse materials are organized for future reference. Appendix C lists the state regulatory agencies identified in the project.

4 DEVELOPMENT OF THESAURUS

Existing CELDS mining records must be indexed. This requires a thesaurus of mining terms. In compiling the terms for the CELDS thesaurus, CERL personnel tried to anticipate terminology for various types of mining, as well as terms for the environmental concerns of mining not already in the current CELDS thesaurus, such as GROUND WATER and HYDROLOGIC BALANCE. Only existing CELDS thesaurus terms are being added to the mining records now. When DOE approves the Thesaurus of Mining Terms, LRC personnel will add indexing terms to the mining records.

In March 1982, CERL finished the CELDS Thesaurus of Mining Terms. The draft copy was sent to DOE personnel for evaluation and revision. The

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thesaurus, which follows the same format as the CILDS thesaurus, is based on technology found in Ecological and Environmental Thesaurus$^4$ and Environmental Chemical Thesaurus$^5$

The technique of “literary warrant” was used in compiling the thesaurus terms, that is, the terms were taken from terminology found in both the regulations and the technology. Many regulations are prefaced by a section called “definitions,” which defines the terms used in the regulation. These definitions sections were used a great deal to collect the terms. The terms were then mapped or matched to similar terms in the existing thesauri, and arranged hierarchically. An asterisk (*) denotes terms which will eventually become part of a hierarchy of an existing CILDS term.

$^4$R. A. Mayer, Ecological and Environmental Thesaurus (Columbus Battelle Memorial Institute, 1979).

$^5$C. R. Shiner, Environmental Chemical Thesaurus (Oak Ridge National Laboratory, 1978).

When the draft thesaurus is approved by DOE, IRS personnel will begin indexing CILDS records that deal with coal mining activities. Appendix D gives the CILDS Thesaurus of Mining Terms. Eventually, these terms will be merged into the existing CILDS thesaurus. Both thesauri will be used to index the CILDS records.

5 SUMMARY

This research identified mining regulations of interest to DOE. Obtained text of these regulations, and abstracted them for inclusion in CILDS. To facilitate retrieval of these regulations so they will be useful to DOE personnel, a thesaurus of mining terms was developed for indexing them.
APPENDIX A:
TABLE OF FEDERAL MINING
REGULATIONS AND CORRESPONDING
CELDS ACCESSION NUMBERS

law 5582
ttl: Table of Office of Surface Mining Reclamation and Enforcement Regulations for Coal Mining with CFR Citations, Accession Numbers, and Titles
dat: 6-17-82
ref: Code of Federal Regulations; Title 30: Mineral Resources chapter 7
Office of Surface Mining Reclamation and Enforcement, Department of the Interior; Parts 700, 710, 715-717, 731-733, 736, 741-744, 771, 776, 778-780, 782-785, 800, 801, 809, 815-819, 822-824, 826-828 (Chapter 1201 et seq.).
mec: land use
gps: us
agy: Office of Surface Mining Reclamation and Enforcement
Department of the Interior
1951 Constitution Avenue, N.W.
Washington, D.C. 20240 (202)343-4953
bib: Same as legislative reference; Federal Register.
abs: Table 1 below lists the Office of Surface Mining Reclamation and Enforcement requirements for coal mining, by the Code of Federal Regulations (CFR) citations, with corresponding accession numbers and short titles, which have been abstracted and indexed for the CELDS database.

The Surface Mining Control and Reclamation Act of 1977 sets nationwide performance standards for surface and underground coal mine operations. These performance standards come in two phases: the initial and the permanent regulatory program. States desiring to continue regulating coal mining passed laws allowing them to enforce the performance standards of the initial regulatory program. Then, under a timetable established by Congress, States could submit a State program to the Secretary of the Interior allowing them to enforce the performance standards of the permanent regulatory program. State requirements, under both programs, are substantially the same as the Federal requirements, when applicable; some states may have additional or more stringent requirements in certain areas. For notable variances from or in addition to the Federal requirements, please refer to the abstracted data under states "GPS". The CELDS manual file contains copies of the state programs as they become available.

The above effective date in field 03 refers to the latest update of the database in Table 1 concerning any CFR part number citations.

tbl: 

9
<table>
<thead>
<tr>
<th>CFR</th>
<th>Accession No</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 177 102 103 107 111</td>
<td>5502</td>
<td>coal mining on Indian lands</td>
</tr>
<tr>
<td>25 177 106</td>
<td>5503</td>
<td>disposal of waste materials on Indian lands</td>
</tr>
<tr>
<td>30 700 11</td>
<td>5447</td>
<td>exceptions from federal surface mining regulations initial or permanent protection programs</td>
</tr>
</tbody>
</table>

### Surface Mining - Initial Program - Performance Standards

<table>
<thead>
<tr>
<th>Surface Mining</th>
<th>Initial Program</th>
<th>Performance Standards</th>
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<td>30 710 11</td>
<td>5504</td>
<td>general requirements</td>
</tr>
<tr>
<td>30 715 12</td>
<td>5505</td>
<td>signs and markers</td>
</tr>
<tr>
<td>30 715 13</td>
<td>5506</td>
<td>postmining land use</td>
</tr>
<tr>
<td>30 715 14</td>
<td>5507</td>
<td>backfilling and grading</td>
</tr>
<tr>
<td>30 715 15</td>
<td>5508</td>
<td>disposal of excess spoil</td>
</tr>
<tr>
<td>30 715 16</td>
<td>5509</td>
<td>topsoil handling</td>
</tr>
<tr>
<td>30 715 17 a,e,f</td>
<td>5510</td>
<td>water effluent and sedimentation ponds, discharge structures</td>
</tr>
<tr>
<td>30 715 17 b,c,d,g,h,i</td>
<td>5511</td>
<td>surface water monitoring, diversions, acid wastes, groundwater, water rights</td>
</tr>
<tr>
<td>30 715 17 j,k,l,m</td>
<td>5512</td>
<td>alluvial floors, impoundments, affect of hydrology of roads and buildings</td>
</tr>
<tr>
<td>30 715 18</td>
<td>5513</td>
<td>impoundment of waste or its use in dam construction</td>
</tr>
<tr>
<td>30 715 19</td>
<td>5514</td>
<td>explosives</td>
</tr>
<tr>
<td>30 715 20</td>
<td>5515</td>
<td>reclamation</td>
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</table>

### Surface Mining - Initial Program - Special Performance Standards

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<th>Special Performance Standards</th>
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<tbody>
<tr>
<td>30 716 2</td>
<td>5516 steep slope</td>
</tr>
<tr>
<td>30 716 3</td>
<td>5517 mountaintop removal</td>
</tr>
<tr>
<td>30 716 4</td>
<td>5703 bituminous coal mines in Wyoming</td>
</tr>
<tr>
<td>30 716 5</td>
<td>5704 anthracite coal mines</td>
</tr>
<tr>
<td>30 716 6</td>
<td>5705 coal mines in Alaska</td>
</tr>
<tr>
<td>30 716 7</td>
<td>5518 prime farmland</td>
</tr>
</tbody>
</table>
Underground Mining - Initial Program - General Requirements and Performance Standards

30:717.11  5469  time schedules and general obligations
            5480  signs and markers
            5490  backfilling and grading
            5491  effluent and sedimentation ponds
            5492  surface and groundwater monitoring and water rights
            5493  diversions and acid and toxic materials
            5494  hydrologic impact of roads and other transport facilities
            5495  dams and impoundments of waste materials
            5496  soil handling and revegetation
            5497  surface and groundwater monitoring and water rights
            5498  diversions and acid and toxic materials
            5499  hydrologic impact of roads and other transport facilities
            5500  dams and impoundments of waste materials

Federal Program

30:736.11  5565  federal program for a state
            21-.23

Federal Lands

30:741.11  5460  permits for surface coal mining on federal lands
            .13
            .22-.23
            .24

30:742.12  5461  performance standards for exploration, reclamation, and abandonment
            .14-.17

30:744.11-.13

Permits - State or Federal Program

30:770.2-.4  5447  general requirements to conduct surface coal mining, reclamation, and coal exploration
            .12
            and

30:771.21-.27  5448  continued operations of existing surface coal mining and reclamation operations under interim federal and state program permits

30:771.11-.17  see 5447

30:771.21-.27  5449  general permit requirements to conduct coal exploration

30:776.11-.17
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<th>Title</th>
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</tr>
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<tr>
<td>30:779.11-21</td>
<td>Legal, financial, compliance</td>
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<td>30:780.11-16</td>
<td>Environmental resources</td>
<td>5452</td>
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<tr>
<td>30:780.18-37</td>
<td>Minimum requirements for the operation plan</td>
<td>5453</td>
</tr>
<tr>
<td>30:782.13-21</td>
<td>Minimum requirements for the reclamation plan</td>
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</tr>
<tr>
<td>30:783.11-27</td>
<td>Environmental resources</td>
<td>5455</td>
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<td>Minimum requirements for the reclamation and operation plan</td>
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<tr>
<td>30:785.11</td>
<td>Anthracite in Pennsylvania</td>
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<td>30:785.12</td>
<td>Bituminous in Wyoming</td>
<td>5463</td>
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<tr>
<td>30:785.13</td>
<td>Experimental practices</td>
<td>5464</td>
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<td>30:785.14</td>
<td>Mountaintop removal</td>
<td>5465</td>
</tr>
<tr>
<td>30:785.15-16</td>
<td>Steep slope and variances from approximate original contour restoration requirements for steep slope mining</td>
<td>5466</td>
</tr>
<tr>
<td>30:785.17</td>
<td>Prime farmland</td>
<td>5467</td>
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<tr>
<td>30:785.18</td>
<td>Variances for delay in contemporaneous reclamation requirements in combined underground and surface mining operations</td>
<td>5468</td>
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<tr>
<td>30:785.19</td>
<td>Alluvial valley floors</td>
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<td>30:785.20</td>
<td>Augering operations</td>
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<td>30:785.21</td>
<td>Coal processing plants not on permit area</td>
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<td>30:785.22</td>
<td>In situ processing activities</td>
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### Permits - Bonds and Insurance

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<td>30 800 2-13</td>
<td>5457</td>
<td>surface coal mining</td>
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<td>30 801 2-15</td>
<td>5458</td>
<td>underground coal mines, coal processing plants, and long-term coal related facilities</td>
</tr>
<tr>
<td>30 809 1-12</td>
<td>5459</td>
<td>anthracite surface coal mining and reclamation in Pennsylvania</td>
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### Surface Mining - Permanent Program - Performance Standards

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<td>5519</td>
<td>coal exploration</td>
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<td>signs and markers</td>
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<td>30 816 13-15</td>
<td>5521</td>
<td>sealing holes and casing</td>
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<td>30 816 21-25</td>
<td>5522</td>
<td>topsoil</td>
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<tr>
<td>30 816 41-42</td>
<td>5523</td>
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<td>30 816 45-46</td>
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<td>30 816 47-48 .55</td>
<td>5525</td>
<td>acid spoil and waste discharge</td>
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<td>5527</td>
<td>surface and groundwater protection and monitoring</td>
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<td>see 5525</td>
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<td>explosives</td>
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<td>5530</td>
<td>disposal of excess spoil</td>
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<tr>
<td>30 816 71-75</td>
<td>see 5526</td>
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<td>5531</td>
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<td>postmining land use and wildlife protection</td>
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<td>see 5526</td>
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### Surface Mining - Special Permanent Programs - Performance Standards

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**Note:** The following 30 CFR Chapter VII regulations have not been abstracted for the database:

1. Subchapter A -- General (definitions, financial interests)
   exception: 30:700.11 abstracted;
2. Part 718-725 (administration inspections, penalties for initial program);
3. Parts 733-735 (administration for permanent program);
4. Subchapter F -- Areas unsuitable for mining;
5. Parts 786-795 (administration, permit handling, SOAP);
6. Parts 805-808 (administration of bonds and insurance);
7. Subchapter L -- Inspection and Enforcement Procedures;
8. Subchapter M -- Training and Certificate Program for Blasters;
9. Subchapter P -- Protection of Employees;
10. Subchapter R -- Abandoned Mine Land Reclamation;
11. Subchapter S -- Mining and Mineral Research Institutes;

Subchapter T -- Programs for States are accessible under the states "GPS".
APPENDIX B:
THE CELDS RECORDS FIELDS

1. ACC--accession number
2. TTL--title of the regulation
3. DAT--effective date of the latest form of the regulation
4. REF--legislative reference
5. MEC--major environmental category
6. GPS--geopolitical scope
7. AGY--agency name and address
8. BIB--bibliographic source of the regulation
9. ABS--abstract of the regulation
10. TBL--tables for numerical standards
11. ATT--environmental attributes
12. KEY--keywords (index terms from the CELDS thesaurus)
APPENDIX C:
LIST OF STATE REGULATORY AGENCIES

Surface Mining Reclamation Commission
P.O. Box 2390
Jasper, Alabama 35501

Department of Natural Resources
Division of Minerals and Energy Management
Pouch 7-005
Anchorage, Alaska 99510

Department of Pollution Control and Ecology
Surface Mining and Reclamation Section
8001 N. National Drive
Little Rock, Arkansas 72201

Department of Natural Resources
1313 Sherman St.
Denver, Colorado 80203

Department of Mines and Minerals
Land Reclamation Division
227 S. 7th St.
Suite 204
Springfield, Illinois 62706

Department of Natural Resources
Division of Reclamation
309 W. Washington St.
Room 201
Indianapolis, Indiana 46204

Department of Soil Conservation
Mines and Minerals Division
Wallace State Office Bldg.
Des Moines, Iowa 50319

Mined Land Conservation and Reclamation Board
P.O. Box 1418
107 W. 11th St.
Pittsburg, Kansas 66762

Bureau of Surface Mining Reclamation and Enforcement
Third Floor Capital Plaza Tower
Frankfort, Kentucky 40601

Department of Natural Resources
Surface Mining Division
P.O. Box 44275
625 North 4th St.
Baton Rouge, Louisiana 70804

Department of Natural Resources
Energy Administration--Bureau of Mines
69 Hill St.
Frostburg, Maryland 21532

Department of Natural Resources
Bureau of Geology and Energy Resources
2525 N. West St.
Jackson, Mississippi 39216
Department of Natural Resources
Land Reclamation Commission
P.O. Box 1368
1026-D Northeast Dr.
Jefferson City, Missouri 65102

Department of State Lands
Reclamation Division
1625 Eleventh Ave.
Helena, Montana 59620

Energy and Minerals Department
Bureau of Surface Mining
Mining and Minerals Division
P.O. Box 2860
Santa Fe, New Mexico 87501

Public Service Commission
Reclamation Division
Capitol Bldg.
Bismarck, North Dakota 58505

Department of Natural Resources
Division of Reclamation
Fountain Square, Bldg. B-3
Columbus, Ohio 43224

Department of Mines
4040 N. Lincoln
Suite 107
Oklahoma City, Oklahoma 73105

Department of Environmental Resources
Office of Environmental Protection
P.O. Box 2063
Fulton Bldg.
Harrisburg, Pennsylvania 17120

Department of Conservation
Division of Surface Mining and Reclamation
1720 W. End Ave.
Suite 507
Nashville, Tennessee 37203

Railroad Commission of Texas
Surface Mining and Reclamation Division
105 W. Riverside Drive
Capitol Station
P.O. Drawer 12967
Austin, Texas 78711

Natural Resources and Energy
Oil, Gas and Mining
4241 State Office Bldg.
Salt Lake City, Utah 84114

Department of Conservation and Economic Development
1100 Washington Bldg. - Capitol Square
Richmond, Virginia 23219
APPENDIX D:
THESAURUS OF MINING TERMS

abandoned mines
BT mines

acid mine drainage
USE acid mine water

acid mine wastes
BT mining wastes

acid mine water
UF acid mine drainage
SN water with a pH of less than 6.0 and in which total acidity exceeds total alkalinity discharged from an active, inactive or abandoned surface coal mine and reclamation operation or from an area affected by surface coal mining and reclamation operations.

BT mine water
RT point sources *

alluvial valley floors
RT mining

anthracite
BT coal *

aquifers
SN an underground water-bearing geological formation.
RT ground water leachate

auguring operations
RT mining

backfilling
RT reclamation

bituminous coal
BT coal *

buffer zone

casing

channelization *
UF diversions

coal *
BT fossil fuels
NT anthracite
bituminous coal
lignite
RT coke *

coal exploration

coal mining

20
BT mining
RT overburden
spoil

canal processing
RT in situ processing

diesel fuels
BT petroleum *
* petroleum products

diversions
USE channelization *

drainage
USE leachate

drilling fluids
RT lubricants
* oil well drilling

energy sources
BT natural resources
NT fuel gases
fuel oil *
fuels *

experimental practices mining
BT mining

federal lands
SN lands, including mineral interests, owned by the U.S. government
Does not include lands within the boundaries of any federal
Indian reservation.

RT land classification *

fossil fuels
BT fuels *
NT coal *
* peat
* petroleum *
* shale oil

fuel gases
BT energy sources
NT liquefied petroleum gases
* natural gases

fuel oil *
BT energy sources
fuels *
BT energy sources
fossil fuels
heating fuels
solid waste fuels
synthetic fuels

dust
air pollution sources

grading
reclamation
ground water
equifers
leachate
water quality standards

heating fuel
petroleum products
fuels

hydrologic balance
relationship between the quality and quantity of water inflow to
water outflow and water storage in a hydrologic unit.
effluents
sedimentation ponds

in situ processing
coal processing

indian lands
lands, including mineral interests, within the boundaries of any
federal indian reservation.
land classification

injection wells
wells
oil well drilling

land classification
federal lands
indian lands
prime farmlands

land subsidence
mining

leachate
drainage
aquifers
ground water
lignite
BT coal

liquefied natural gases
BT natural gases

liquefied petroleum gases
BT fuel gases

lubricants
BT petroleum products
RT drilling fluids

mine drainage
RT mine water

mine water
NT acid mine water
RT mine drainage

mineral deposits

mineral lands
USE mineral resources

mineral resources
UF mineral lands
BT natural resources
RT mineral rights

mineral rights
RT mineral resources

mines
NT abandoned mines
pit mines
strip mines
RT mining

mining
NT coal mining
experimental practices mining
mountaintop removal mining
open pit mining
steep slope mining
strip mining
surface mining
underground mining
RT alluvial valley floors
auguring operations
land subsidence
mines
post-mining
spoil banks
mining claims

mining wastes
NT acid mine wastes

mountaintop removal mining
BT mining

natural gases
BT fuel gases
NT liquefied natural gases

natural resources
NT energy sources
mineral resources
water resources
wildlife *

oil industry
USE petroleum industry

oil recovery
RT oil well drilling

oil refineries
USE refineries *

oil well drilling
RT drilling fluids
injection wells
oil recovery
oil wells

oil wells
BT wells *
RT oil well drilling

open pit mining
BT mining
operation plan

overburden
SN material of any nature, consolidated or unconsolidated, that overlies
a coal deposit, excluding topsoil.
RT coal mining

peats
SN a soft light swamp soil consisting mostly of decayed vegetation
fossil fuels
  petroleum
  diesel fuels
  gasoline
  heating fuel
  lubricants
  petroleum coke
  petroleum industry
  oil industry
  petroleum products
  diesel fuels
  gasoline
  heating fuel
  lubricants
  petroleum coke

pit mines
  mines

post-mining
  mining

prime farmlands
  land classification

reclamation
  backfilling
  grading
  revegetation

revegetation
  reclamation

soiling

sedimentation ponds
  hydrologic balance

shale oil
  fossil fuels

signs (markers)

slope stability

solid waste fuels
  fuels

spoil
  overburden that has been removed during surface coal mining operations.

25
spoil banks

RT mining

spoil

steep slope mining

BT mining

strip mines

BT mines

strip mining

BT mining

surface mining

BT mining

surface water

RT water quality standards *

synthetic fuels

BT fuels *

topsoil
SN the A soil horizon layer of the three major soil horizons.

underground mining

BT mining

water resources

BT natural resources

RT wells

water rights **

water wells

BT wells *

wells *

NT injection wells

oil wells

water wells

RT water resources


** = existing term in the CELDS thesaurus, but scope note will be eliminated.
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**Note:** The document appears to be a list of addresses and phone numbers for various Army Engineer Division locations across the United States. The format suggests it is used for communication or logistics purposes, possibly for fielding requests or inquiries from different military bases and offices.
Webster, Ronald Dwight

Addition of coal mining regulations to the Computer-Aided Environmental Legislative Data System (CELDS). by Ronald D. Webster, Elizabeth Herrick, Mary Tadle Grieve. -- Champaign, Ill.: Construction Engineering Research Laboratory; available from NTIS, 1983.

26 p. (Technical report; Construction Engineering Research Laboratory; N-161).

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