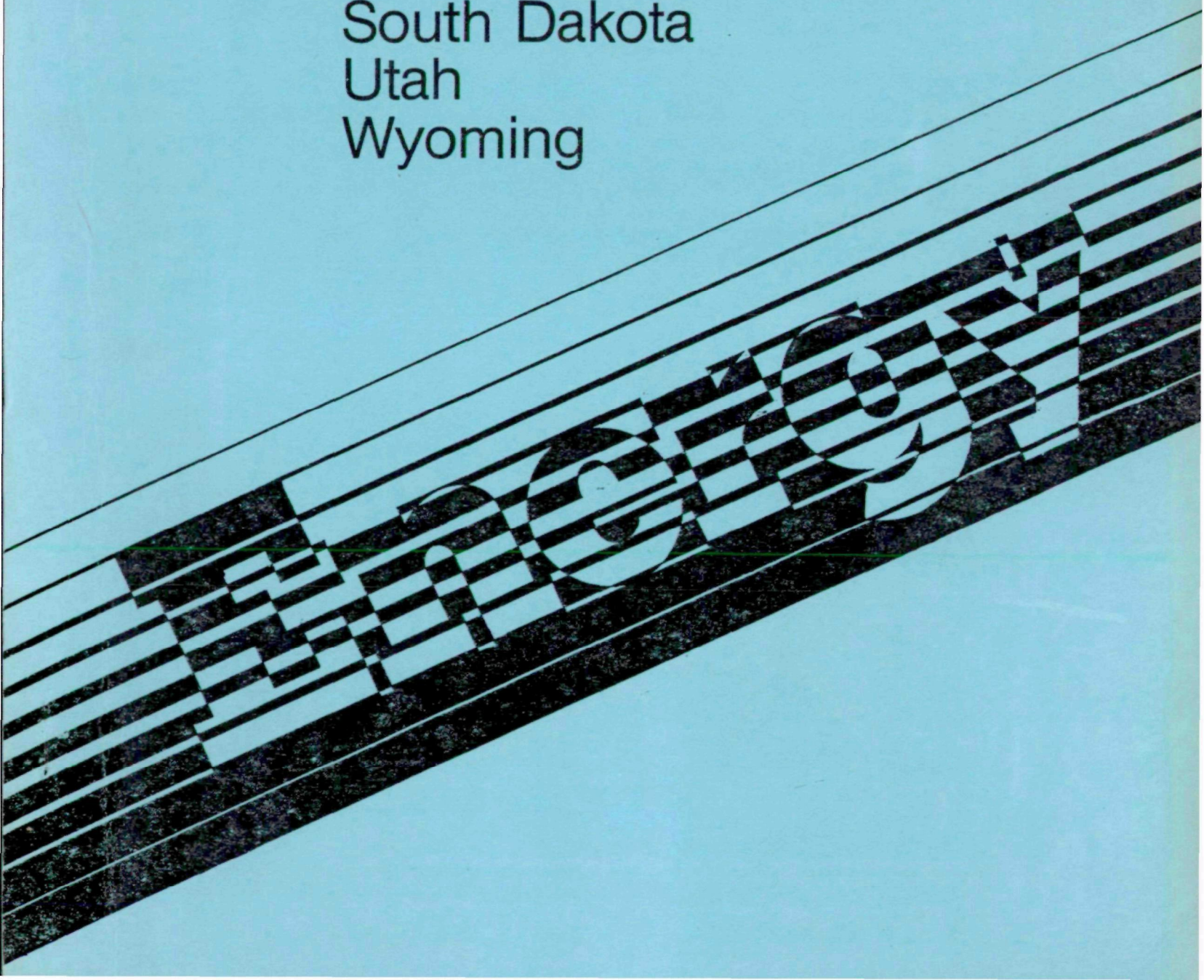


Energy Project Review and Permitting Status Report

Colorado
Montana
North Dakota
South Dakota
Utah
Wyoming





Ref: 8EA

Dear Colleague:

The six states (Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming) in EPA Region VIII have been experiencing increasing energy resource development in recent years. The future promises that this development will increase even more dramatically. The development of these resources will play a vital role in the Nation's attempt to achieve energy self-sufficiency. These states are also rich in high quality environment. I am committed to the protection of this high quality environment and to being responsive to the Nation's energy self-sufficiency goal. The EPA Region VIII Energy Policy Statement reflects this commitment.

One of our commitments is to routinely provide regional energy/environment information to interested persons. I am pleased to provide you with the first "Energy Policy Review and Permitting Status Report" prepared by EPA Region VIII. This report will be updated quarterly. It provides information on our regulatory activities during calendar year 1979 and first quarter 1980.

You will note that the Region took 162 regulatory actions regarding energy projects in 1979 and 34 in the first quarter 1980. This is an extremely heavy workload - more than one energy action every other working day. The environmental regulatory process produces environmental benefits, some of which are described in this report.

We hope you will find this information useful. If you have comments, questions, and/or suggestions for improvement please direct them to Mr. Terry Thoem, Director, Energy Policy Coordination Office at 303/837-5914.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Roger L. Williams".

Roger L. Williams
Regional Administrator

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Energy Project Review and Permitting Report
(Vol. I-- No. 1)

EPA Region VIII

Purpose/Scope of Report

This status report discusses energy project review and permitting actions taken by EPA during calendar year 1979 and first quarter 1980 (January 1 to April 1) for the six Region VIII States of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming. Actions include environmental impact statement (EIS) reviews, prevention of significant deterioration (PSD) permits, National pollutant discharge elimination system (NPDES) permits, and Section 404 (dredge and fill permit) reviews. This report discusses actions taken in both delegated and non-delegated program States. As of April 1, 1980, the PSD program had been delegated to North Dakota and Wyoming. The NPDES program has been delegated to Colorado, Montana, North Dakota, and Wyoming. This status report also discusses highlights of the review and permitting actions. Projections of energy resource development and of Region VIII regulatory actions which will be necessary in response to that development is provided. Finally, because of the attention which synthetic fuels development has received, a project status and EPA regulatory status report is provided.

Summary and Highlights

The Region took 162 energy project regulatory actions in 1979 -more than one every other working day. Table 1 provides a breakdown of these actions by program. Comparisons to 1978 and projections for the 1980-85 time period are also provided. The basis for calendar year 1981-85 is the 1980 estimate plus additional projects resulting from an induced synthetic fuels program. Table 2 provides details. Figures 1-4 show energy resource development past and projected in the Region VIII states.

Of particular significance is the fact that of the 162 regulatory actions in 1979, there was one denial and one proposed denial. Both projects resubmitted permit applications (PSD) demonstrating increased air pollution control technology and were subsequently approved. Energy project review and permitting resulted in a number of environmentally improved projects during 1979. A summary discussion of the major "environmental success stories" is provided by program below. The Appendix to this report provides a listing of all EIS, PSD, NPDES, 404 project reviews.

- o In conjunction with efforts by the State of Utah and the DOI, EPA activities via the EIS process aided in the relocation of the 3000 MWe Intermountain Power Plant project. The proposed site was located within 12 miles of Capitol Reef National Park. Concern

was expressed by EPA over the potential violation of PSD Class I air quality increments. Relocation to Western Utah, near Lyndyl, has allowed EPA to propose to issue the PSD permit.

- o EPA has been concerned with the quality of past Regional EISs prepared for coal development. The fEIS describing the new Federal Coal Management Program sets forth a good framework for future coal leasing. We anticipate that future Regional coal EISs will be of high quality.
- o The revised permit application for the 1556 MWe Colstrip power plant was approved. Provisions for 94.8 percent SO₂ control make it the best controlled power plant in the U.S. The permit also stipulates the need to periodically reassess the practicability of retrofit technology for additional NO_x control.
- o Sulfur removal from the retort off-gas stream was increased to 97.9 percent via the review of the permit application for Union Oil Company's proposed oil shale facility.
- o Provision of extremely stringent controls for both SO₂ (99.6 percent from retort gas) and particulate (about 99.7 percent) allowed the permitting of Colony's proposed 47,000 BPD commercial oil shale facility. Emissions will be compatible with both the PSD Class II increments and with the PSD Class I increments for the nearby (60 km) Flat Tops Wilderness Area.
- o Several major new steam electric power plants in the Region are designed to meet the National objective of no discharge of pollutants to waters of the United States. These include the Public Service Company of Colorado Pawnee Plant and the new Basin Electric Plant near Wheatland, Wyoming.
- o AMOCO Refinery at Mandan, North Dakota has created a wastewater treatment system that provides better than nationally required treatment levels while being the heart of a several hundred acre wildlife refuge. This system of controlled ponds, shelter belts and irrigated farmland provides habitat for fish, pheasants, wild turkey, geese, ducks, antelope, deer, plus numerous other species. All the effluent from the 50,000 barrel per day refinery passes through this refuge and provides it with its only constant source of water.
- o Achieved better control than Best Practical Treatment (BPT) through Best Engineering Judgement case-by-case determinations for most coal mines, and the majority of uranium mines and oil and gas wells.

The principle environmental improvements resulting from 404 actions were better location and scheduling of pipeline crossings so as not to interfere with critical spawning areas, minimizing wetland fill, revegetation of disrupted areas, pipeline construction techniques which minimized wetland losses, and reduced stream channelization.

Program Summaries

EPA Region VIII performed reviews of 21 final and 20 draft EISs in 1979. Nine projects had both a draft and a final EIS. Therefore, a total of 32 energy projects received EIS review. Only four energy project EISs were received for review in the first quarter 1980. Table A-1 in the Appendix lists the EIS, the assigned EPA review rating, and an explanation of EPA's EIS rating system. Table 3 provides a summary of these project reviews by State where the project is proposed. In addition to the formal EIS review, 8 pre-EIS liaison scoping meetings were attended and 6 scoping letters were sent in 1979.

A total of 48 PSD permit applications for energy projects were processed in 1979. There were 20 PSD actions in first quarter 1980. Table 4 provides a summary of the PSD permits issued by State. Table 5 provides additional detail on these regulatory actions. Also provided are energy capacity permitted and comparisons with past year PSD actions.

There were 62 NPDES permits issued to energy projects in 1979. EPA-delegated States issued 57 of the 62 in 1979. A total of 62 "major" energy NPDES permits will expire during 1980. Table 6 provides a summary of these actions and Table 7 provides additional details.

There were eleven 404 actions taken on energy projects during 1979 and two in first quarter 1980. Table 8 provides a summary of these actions and Table 9 provides additional detail.

One of the commitments made in the Energy Policy Statement regarded expedited regulatory decision making. The Statement commits the Region to on time EIS reviews and permit processing six months from the time a completed application is received.

A number of PSD permits took longer than six months. The statutory requirement of one year and the Energy Policy Statement objective of six months represent a time period starting when the application is determined by EPA to be "complete". In looking back at past actions the date when the application was deemed "complete" was not always recorded. However, as a general rule it has taken as long as six months to obtain a "complete" application. A tracking system which will be operational in the Region by July 1, 1980 will allow a "better" discussion of time required for processing PSD permits in future quarterly reports.

A number of NPDES permits issued in less than six months also deserves special mention. Half (20 of 39) of the permits which were issued in less than six months were renewals. It is likely that the renewal application was received as much as six months before the expiration date. Therefore, some of the 20 renewals may have taken longer than six months since the time period was calculated from the expiration date. Our tracking system will provide us better information on this aspect for subsequent reports.

Energy Project Review
and Permitting Report
June 20, 1980

Due to the attention which the development of synthetic fuels has received in the past year, Table 10 provides a listing of the known commercial projects in Region VIII States. Also shown is the project status and the status of EPA regulatory involvement.

If all of the oil shale projects listed were developed, a total production of about 375,000 BPD would result. This may be compared to the President's and Congress' goal of 400,000 BPD by 1992. If all of the coal gasification and coal liquification projects listed were developed, a total production of about 440,000 BPD OE would result. This represents about one third of the 1 to 1.5 million BPD OE National goal from coal synfuels by 1992.

TABLE 1

Regulatory Actions - Energy Facilities

EPA Region VIII

	<u>CY 1978</u>	<u>CY 1979</u>	<u>Estimated CY 1980</u>	<u>CY 1981-1985</u>
EIS Reviews	9	41	35 +	
PSD Permits	28	48	40 +	
NPDES Permits	25	62	60 +	
404 Actions		11	30 +	
	<hr/> 62	<hr/> 162	<hr/> 165 +	<hr/> about 200 per year

Note 1 Actions reflect those taken both by EPA and delegated states. EPA actions accounted for 100 of the 162 calendar year 1979 total.

Note 2 PSD permit activity for 1980 may be less than 40 + with a reduced number of mine applications due to the recent Alabama Power decision.

Note 3 The 1981-1985 actions assume a 1980 base plus an induced synthetic fuels and coal conversion energy program anticipated to become law.

TABLE 2

Additional Impact on Regulatory Activities of an Induced Synfuels Program

A. Facilities (estimated)

Coal mines	14	180,000,000 tons per year (TPY)
Coal synfuels	10	600,000 barrels per day (BPD)
Oil Shale	7	350,000 BPD
Unconventional gas	4	200,000 barrels per day
	<u>35</u>	oil equivalent (BPDOE)

B. Regulatory Actions FY 81-85

EIS (draft and final)	70
PSD (some phasing)	40
NPDES (some phasing)	40
RCRA (Resource Conservation and Recovery Act)	<u>17</u>
	167

C. Additional Regulatory Actions

404 Reviews
Regional Coal EISs
Water-for-Energy Resource Projects
Transportation systems
Programmatic EISs
Population induced power plants
Population induced sewage treatment plants

These could easily add up to 50 additional regulatory actions.

D. Estimate of FY 81-85 Breakdown

$$\frac{167 + 50}{5} = 44 \text{ per year}$$

1980	165 ++
Induced	<u>44</u>
209 ++ actions per year	

TABLE 3

Summary of EIS Actions

	<u>1979</u>	<u>1st Quarter 1980</u>	<u>Pending</u>
Colorado	6	2	0
Montana	6	1	0
North Dakota	2	0	0
South Dakota	1	0	0
Utah	10	0	0
Wyoming	14	1	0
Multi State	<u>2</u>	<u>0</u>	<u>1</u>
	41	4	1

TABLE 4

Summary of PSD Permits Issued/Pending

	<u>1979</u>	<u>1st Quarter</u> <u>1980</u>	<u>Pending</u>
Colorado	10	2	5
Montana	2	0	2
North Dakota	2	1	-
South Dakota	0	0	0
Utah	4	0	7
Wyoming	<u>20</u>	<u>5</u>	<u>-</u>
	38	8	14

Table 5

Energy PSD Activity Details - 1979 and 1st Quarter 1980

1. PSD Actions (1976-1979)
1976

	<u>1977</u>	<u>1978</u>	<u>1979</u>	
Energy	3	7	28	48
Non-Energy	0	2	12	23
Total	<u>3</u>	<u>9</u>	<u>40</u>	<u>71</u>

Total Permits(1976-1979)

56 energy issued
25 non-energy issued
1 energy denial
<u>1 energy proposed denial</u>
<u>83</u>

2. 1979 Actions Energy

38 permits
7 non-applicability
<u>3 pre-application monitoring</u>
<u>48</u>

3. 1979 Permits Issued by Category

Uranium mine/mill	8	4500 tons per day (TPD)mill; 1,415,000 TPY mine
Coal mine	20	114,000,000 TPY
Power Plants	2	1616 MWe
Refineries	2	29,000 barrels per stream day (BPSD)
Oil Shale	3	60,000 BPSD
Gas Plant	3	465,000,000 standard cubic feet per day (SCFD)
Total	<u>38</u>	

4. Total (1976-1979) Energy Permits Issed by Category

Uranium mine/mill	10	4500 TPD mill; 1,795,000 TPY mine
Coal mine	22	125,000,000 (TPY)
Power plant	6	5110 megawatts, electricity (MWe)
Refineries	4	49,000 BPSD
Oil Shale	5	66,000 BPSD
Coal plant	3	-
Gas plants	6	522,000,000 SCFD
Total	<u>56</u>	

Table 5 continued

5. Comparison of PSD Permitted Capacity (1979) with Existing Production (1978)

Coal Mines		
1978 production	100 million tons per year	
PSD permitted in 1979	<u>114</u>	
Total	<u>214</u>	
Power plant capacity		
1978 production	19,100 MWe	
PSD permitted in 1979	<u>1,610</u>	
Total	<u>20,710</u>	
Uranium activity (U ₃ O ₈)		
1978 production	8,000 tons per year	
PSD permitted in 1979	<u>2,500</u>	
Total	<u>10,500</u>	

Energy PSD Actions 1st Quarter 1980

1. PSD Actions

8 permits issued	
<u>12</u> non-applicability determinations	
<u>20</u>	

2. PSD Permits issued by category

Coal mine	3	4.2 million tpy
Power plants	2	440 MWe
Compressor station	2	---
Coal preparation plant	1	---

TABLE 6

Summary of NPDES Actions

	<u>1979</u>	<u>1st Quarter</u> <u>1980</u>	<u>Pending</u>
Colorado	19	5	23
Montana	4	7	4
North Dakota	4	0	1
South Dakota	1	0	1
Utah	4	0	12
Wyoming	<u>30</u>	<u>3</u>	<u>1</u>
	62	15	42

TABLE 7

Energy NPDES Activity Details - 1979 and 1st Quarter 1980

A. NPDES Permits Issued

	<u>1979</u>		<u>1st Quarter 1980</u>	
	<u>New</u>	<u>Renewed</u>	<u>New</u>	<u>Renewed</u>
Delegated States*	35	22	7	8
EPA States**	4	1	0	0
Total	<u>62</u>		<u>15</u>	

B. Permits Issued by category

	<u>1979</u>	<u>1st Quarter 1980</u>
Uranium	7	0
Coal Mines	19	6
Power plants	17	6
Refineries	3	0
Oil Shale	2	0
Oil and gas	<u>14</u>	<u>3</u>
Total	<u>62</u>	<u>15</u>

C. Permits Pending by category

	<u>Backlog</u>	<u>Additional Permits Due to expire by 10-1-80</u>
Uranium mines	8	0
Coal mines	23	7
Power plants	1	4
Refineries	1	4
Oil Shale	2	0
Oil and gas	<u>7</u>	<u>177 (oil wells)</u>
Total	<u>42</u>	<u>192</u>

*Delegated States are Colorado, Montana, North Dakota and Wyoming

**EPA States are Utah and South Dakota

TABLE 8

Summary of 404 Actions

	<u>1979</u>	<u>1st Quarter</u> <u>1980</u>	<u>Pending</u>
Colorado	1	0	0
Montana	4	2	4
North Dakota	3	0	1
South Dakota	1	0	0
Utah	0	0	1
Wyoming	<u>2</u>	<u>0</u>	<u>0</u>
Total	11	2	6

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TABLE 9

Permit Concurrences by Category

	<u>1979</u>	<u>1st Quarter</u> <u>1980</u>	<u>Pending</u>
Pipeline	3	1	3
Transmission	3	0	1
Fill/riprap	3	0	2
Mine	1	0	0
Erosion control	0	1	0
Pumpstation/intake	<u>1</u>	<u>0</u>	<u>0</u>
TOTAL	<u>11</u>	<u>2</u>	<u>6</u>

TABLE 10
Commerical Synthetic Fuel Activities

A. Oil Shale

<u>Project</u>	<u>Size</u>	<u>Regulatory Status</u>	<u>State</u>
Colony	47,000 BPD	PSD permit (7-11-79)	CO
Union	9,000 BPD	PSD permit (7-31-79)	CO
C-b tract	5,000 BPD	PSD permit (12-15-77)	CO
C-a tract	1,000 BPD	PSD permit (12-15-77)	CO
Paraho	5,000 BPD	PSD inactive	CO
Chevron	100,000 BPD	preliminary meeting	CO
Exxon	60,000 BPD	preliminary meeting	CO
Superior	17,000 BPD	preliminary meeting	CO
NUSR	50,000 to 200,000 BPD	preliminary meeting	CO
Geokinetics	2,000 BPD	preliminary meeting	UT
C-b tract	85,000 BPD	preliminary meeting	CO

B. Coal Gasification

Great Plains Project	125,000,000 SCFD	PSD Permit (11/78)	ND
Texaco	250,000,000 SCFD	feasibility study	WY
Tenneco	250,000,000 SCFD	feasibility study	MT
Exxon		feasibility study	WY
Washington Energy Co.	250,000,000 SCFD	feasibility study	MT
Northern Resources Inc	5,000,000 SCFD	preliminary meeting	MT
Mountain Fuel	250,000,000 SCFD	preliminary meeting	UT
Panhandle Eastern	250,000,000 SCFD	preliminary meeting	WY
Rocky Mtn Energy	125,000,000 SCFD	preliminary meeting	WY

C. Coal Liquefaction

Nokota	48,000 BPD methanol	announced plans	ND
W.R. Grace	35,000 BPD methanol	preliminary meeting	CO
Dreyer Bros., Inc.	30,000 BPD fuel oil	preliminary meeting	MO
Minnkota	20,000 BPD OE, 60% gas, 40% methanol	feasibility study	ND

Appendix 1

Energy EIS Reviews - 1979, 1st Quarter 1980, and Pending

	<u>Title</u>	<u>Draft</u>	<u>Final</u>	<u>Rating*</u>	<u>State</u>
<u>1979</u>					
1.	Development of Coal Resources in South Central Wyoming	X		ER 2	WY
2.	Development of Coal Resources in Central Utah	X		ER 2	UT
3.	Eastern Powder River Basin Region of Wyoming	X		ER 2	WY
4.	Split Rock Uranium Mill	X		ER 3	WY
5.	Highland Uranium Solution Mining		X	1	WY
6.	Big Sky Mine-Peabody Coal	X		EU-1	MT
7.	Federal Coal Management Program	X		ER 2	Regional
8.	Colstrip Project	X		EU 1	MT
9.	Gas Hills Uranium Mill	X		LO 2	WY
10.	Edgemont Uranium Mine	X		LO 2	SD
11.	Moab Uranium Mill		X	1	UT
12.	Coal Creek Mine		X	1	WY
13.	White Mesa Uranium Mill	X		ER 2	UT
14.	North Dakota-Saskatchewan Intertie	X		LO 2	ND
15.	Transmission line-Lake City to Creede		X	1	CO
16.	Shooting Canyon Uranium Mill	X		ER 2	UT
17.	Proposed Coal Leasing-Carbon Basin	X		ER 2	WY
18.	Spring Creek Mine-Big Horn Co.		X	1	MT
19.	Morton Ranch Uranium Mill		X	1	WY
20.	Development of Coal Resources in Southcentral Wyoming		X	2	WY
21.	Pronghorn Mine -Consolidated Coal Co.		X	1	WY
22.	Eastern Powder River Basin Coal Region		X	2	WY
23.	Yampa Project Transmission Line	X		LO 2	CO
24.	West Central Colorado Coal		X	2	CO
25.	Homestake Mining -Pitch Project		X	2	CO
26.	Federal Coal Management Program		X	2	Regional
27.	Development of Coal Resources in Southern Utah		X	2	UT
28.	Development of Coal Resources in Central Utah		X	2	UT
29.	Superior Oil Co. Land Exchange	X		ER 2	CO
30.	Craig Unit 3	X		LO 2	CO
31.	Northern Powder River Basin Coal and Pearl Mine	X		ER 2	MT
32.	Intermountain Power Project	X		LO 2	UT
33.	Emery Power Plant, Units 3 and 4	X		ER 2	UT
34.	C&NW Coal Line Project	X		EU 2	WY
35.	Proposed Coal Leasing-Carbon Basin		X	2	WY

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Appendix 1 (Continued)

36. Colstrip Project	X	1	MT
37. Caballo Mine-Campbell Co.	X	1	WY
38. Big Sky Mine - Rosebud Co	X	1	MT
39. North Dakota -Saskatchewan Intertie	X	1	ND
40. Emery Power Plant, Units 3 and 4	X	2	UT
41. Intermountain Power Project	X	2	UT

<u>Title</u>	<u>Draft</u>	<u>Final</u>	<u>Rating*</u>	<u>State</u>
<u>1st Quarter 1980</u>				
1. Missouri Basin Power Project - Laramie River Power Plant		X	2	WY
2. Craig Station - Unit 3		X	1	CO
3. Northern Powder River Basin Coal		X	1	MT
4. Yampa Project Transmission line		X	1	CO

Pending

<u>Title</u>	<u>Draft</u>	<u>Estimated Date</u>	<u>State</u>
1. MAPCO - pipeline	X	5-30-80	CO UT WY

*EPA EIS Rating System

o Draft EIS

Environmental Impact of Action

- LO - Lack of Objections
- ER - Environmental Reservations
- EU - Environmentally Unsatisfactory

Adequacy of EIS Information

- 1. Adequate description
- 2. Insufficient information
- 3. Inadequate

o Final EIS

Environmental Impact of Action

- 1. No comment
- 2. Comments sent/Final EIS is satisfactory
- 3. Environmental reservations sent to agency
- 4. Environmentally unsatisfactory - CEQ referral

Appendix 2

PSD Actions - 1979, 1st Quarter 1980, and Pending

<u>Project Name</u>	<u>Type</u>	<u>State</u>
<u>1979</u>		
1. Cotter Corp.	Uranium mill	CO
2. Wymo Fuels, Inc.	Coal Mine	WY
3. Consol/MobilPronghorn	Coal Mine	WY
4. PROCON	Refinery modification	CO
5. Uranium Resources and Development Co.	Uranium mine	UT
6. Delzer	Coal Mine	WY
7. Pioneer Nuclear, Inc.	Uranium Mine	WY
8. Northern Energy Resources Co.	Coal Mine	MT
9. Kerr McGee	Coal Mine	WY
10. Colowyo Coal Co.	Coal Mine	CO
11. U. S. Steel	Coal Mine	CO
12. Energy Fuels Nuclear, Inc.	Uranium Mill	UT
13. Sheridan Enterprises	Coal Mine	WY
14. Colony Development	Oil Shale	CO
15. Union Oil Co.	Oil Shale	CO
16. Shell Oil Co. Buckskin	Coal Mine	WY
17. Peabody Coal Co.	Coal Mine	WY
18. Chevron Oil Co.	Refinery modification	WY
19. ARCO	Coal Mine	WY
20. Great Plains Resources	Coal Mine	WY
21. Mobil Oil Co.	Coal Mine	WY
22. Montana Power Co.	Power Plant	MT
23. Little America Refinery Co.	Refinery modification	WY
24. Occidental Oil Shale	Oil Shale	CO
25. United Nuclear Corp.	Uranium mine and mill	WY
26. Pioneer Uravan	Uranium mill	CO
27. Pacific Gas & Electric	Coal mine	UT
28. Carter Mining Co	Coal mine	WY
29. Carter Mining Co	Coal mine	WY
30. Capstan Mining Co	Coal mine	CO
31. Coastal States Energy	Coal mine	UT
32. Energy fuels	Coal Mine	CO
33. Western Gas Processors*	Gas plant	ND
34. United Power Assoc*	Power plant	ND
35. Gulf Oil*	Coal mine	WY
36. Continental Oil Co*	Coal mine	WY
37. Centurion Nuclear Inc*	Uranium mine	WY
38. AMOCO*	Gas plant	WY

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Appendix 2 (Continued)

1st Quarter 1980

1. Colorado Ute	Power plant	CO
2. Colorado Inter state Gas Co	Comp. station	CO
3. Energy Transp. Co.*	Coal prep. plant	WY
4. FMC Skull Point Mine	Coal mine	WY
5. Shell Oil*	Coal mine	WY
6. Univ. of WY*	Power plant	WY
7. CO Interstate Gas*	Compressor sta.	WY
8. Knife River Coal Co.*	Coal mine	ND

PENDING

<u>Project</u>	<u>Type</u>	<u>Estimated Decision Date</u>	<u>State</u>
1. Warner Valley	Power plant	10/31/80	UT
2. Emery 3 and 4	Power plant	02/15/80	UT
3. Paraho	Oil shale	On hold	CO
4. Gary Refinery	Refinery modification	?	CO
5. Intermountain Power	Power plant	12/13/70 proposed	UT
6. Colorado Interstate Gas	Compressor Station	03/31/80 proposed	CO
7. Platte River Power Authority	Power plant	02/20/80 proposed	CO
8. Malmstrom Air Force Base	Power plant industry	05/1/80 target	MT
9. AMOCO	Refinery modification	On hold	UT
10. Panhandle Eastern Pipeline Co.	Compressor station	4/80/80 proposed	CO
11. WESRECO	Refinery modification	3/21/80 proposed	UT
12. Shell Oil Co	Gas plant	?	MT
13. Martin Marietta	Power plant-industry	5/1/80 target	UT
14. Deseret Transmission Inc.	Power plant	?	UT

*State Issued Permit

Appendix 3

NPDES Actions - 1979 and 1st Quarter 1980

<u>COMPANY</u>	<u>TYPE</u>	<u>RENEWAL (R) NEW APPLICATION (N)</u>	<u>STATE</u>
<u>1979</u>			
1. Cotter	uranium/radium/vanadium(U-RA-V)	N	CO
2. Capstan	Coal Mine	N	CO
3. Chimney Rock	Coal Mine	N	CO
4. H-G Coal	"		CO
5. Northern	"	N	CO
6. Palisade	"	N	CO
7. Roadside	"	N	CO
8. Rockcastle	"	R	CO
9. Sun Coal	"	N	CO
10. Sunlight	"	N	CO
11. Occidental	Crude Petroleum	R	CO
	Natural Gas		
12. Occidental	Natural Gas	N	CO
13. Gary Western	Petroleum Refining	R	CO
14. COLO Ute	Power Plant	R	CO
15. COLO Ute	"	R	CO
16. Public Service	"	R	CO
17. S. COLO Power	"	R	CO
18. S. COLO Power	"	R	CO
19. Trinidad City	"	R	CO
20. Decker	Coal Mine	R	MT
21. Spring Creek	Coal Mine	N	MT
22. MT Power	Power Plant	R	MT
23. USBOR	Power Plant	R	MT
24. Westland Oil	Petroleum Refining	R	ND
25. Basin Electric	Power Plant	R	ND
26. United Power	Power Plant	R	ND
27. USCOE	"	R	ND
28. USCOE(Ft.Randall)	"		SD
29. Energy Fuels	U-RA-V	N	UT
30. URADCO	"	N	UT
31. Price River	Coal	N	UT
32. Husky Oil	Petroleum Refining	N	UT
33. Centurion Nuc.	U-RA-V	N	WY
34. Cotter Corp.	"	N	WY
35. Pathfinder	"	N	WY
36. Pioneer-Bear Cr.	"	N	WY
37. Amax - Belle Ayr	Coal Mine	R	WY
38. Arch - Seminole #2	Coal Mine	R	WY
39. Atlantic Richfield	"	N	WY
40. Kerr McGee	"	N	WY
41. Medicine Bow	"	R	WY
42. Shell	"	N	WY

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Appendix 3 (Continued)

1979 Continued

43. Wyodak Resources	"	R	WY
44. Agnew-Sullivan	Pet., Nat. Gas	N	WY
45. Amer-Beryllium	"	N	WY
46. Ant Hills	"	N	WY
47. Beren	"	N	WY
48. RG(Berry)	"	N	WY
49. Buttes	"	N	WY
50. Diamond B	"	N	WY
51. Exeter	"	N	WY
52. Fenix & Scisson	"	N	WY
53. Grace	"	N	WY
54. McMurray	"	R	WY
55. Shell	"	N	WY
56. Terra Resources	"	N	WY
57. Texas American	"	N	WY
58. Basin Electric	Power Plant	R	WY
59. USBOR (Glendo)	"	R	WY
60. USBOR (Guernsey)	"	R	WY
61. USBOR (Seminole)	"	R	WY
62. USBOR (Shoshone)	"	R	WY

1st Quarter 1980

1. Dorchester	Coal Mine	N	CO
2. National King	"	N	CO
3. Sackett	"	N	CO
4. Sewantee	"	N	CO
5. Sun Coal	"	N	CO
6. Westmoreland	"	R	MT
7. Montana Power	Power Plant	R	MT
8. Montana-Dakota	"	R	MT
9. USBOR	"	R	MT
10. USBOR	"	R	MT
11. USCOE	"	R	MT
12. USCOE	"	R	MT
13. Buttes	Petr., Nat. Gas	N	WY
14. Buttes	"	N	WY
15. Exxon	"	R	WY

Appendix 4

404 Actions - 1979 and 1st Quarter 1980, and Pending

<u>Project</u>	<u>Type</u>	<u>State</u>
<u>1979</u>		
1. Western Slope Carbon Hawks Nest Mine	Mine	CO
2. MT Power Co	Overhead Transmission Line	MT
3. MT Power Co	Overhead Transmission Line	MT
4. Great Falls Gas	Gas line	MT
5. Great Falls Gas	Gas line	MT
6. Ottertail Power	Fill, riprap	ND
7. Basin Electric Power	Fill	ND
8. United Power Association	Hardpoint	ND
9. Electric Power Corporation	Transmission Line	SD
10. Tenneco Oil	Pump Station, Intake	WY
11. Northern Rockies Pipeline Company	Pipeline	WY

1st Quarter 1980

1. Shell Oil Co	Submerged Pipeline	MT
2. Montana Dakota Utilities	Erosion Control	MT

PENDING

<u>Project</u>	<u>Type</u>	<u>Estimated Decision Date</u>	<u>Stat</u>
1. Northern Tier Pipeline (3)	Crude Oil Line	5/80	MT
4. Hill County Electric Corporation.	Transmission Line	5/80	MT
5. Empire Energy	Riprap	5/80	UT
6. United Power Assoc	Riprap	5/80	ND

GLOSSARY

BEJ	best engineering judgment -- a determination of the best hazardous waste disposal
BPDOE	barrels per day, oil equivalent -- a measure of production for synthetic fuels expressed in terms of petroleum
BPSD	barrels per stream day -- a measure of the daily production of oil from a particular facility
BPT	best practical treatment -- a determination of the best wastewater pollution control technology which is reasonably applied to an existing facility
Delegated	delegated, non-delegated -- most EPA programs are designed to be managed by the States. States which request delegation and which have the needed authorities to run a program "equivalent" to the Federal program may receive delegation.
DOI	Department of the Interior
DIS	environmental impact statement
	review -- National Environmental Policy Act requires Federal agencies to evaluate impact of their actions on the environment, sometimes requiring preparation of a full-blown EIS which is then reviewed in draft form by Federal, State and local agencies with appropriate expertise. Comments of reviewing agencies must be addressed in final EIS.
	dEIS -- draft
	fEIS -- final
	Pre-EIS scoping -- meeting or communications among agencies, project sponsors and others before a draft EIS is prepared. Aim is to "red-flag" potential trouble areas in EIS to avoid prolonged conflicts among agencies and others over particulars in an impact statement.
	Programmatic EIS -- covers a nationwide program; is not site- or project-specific

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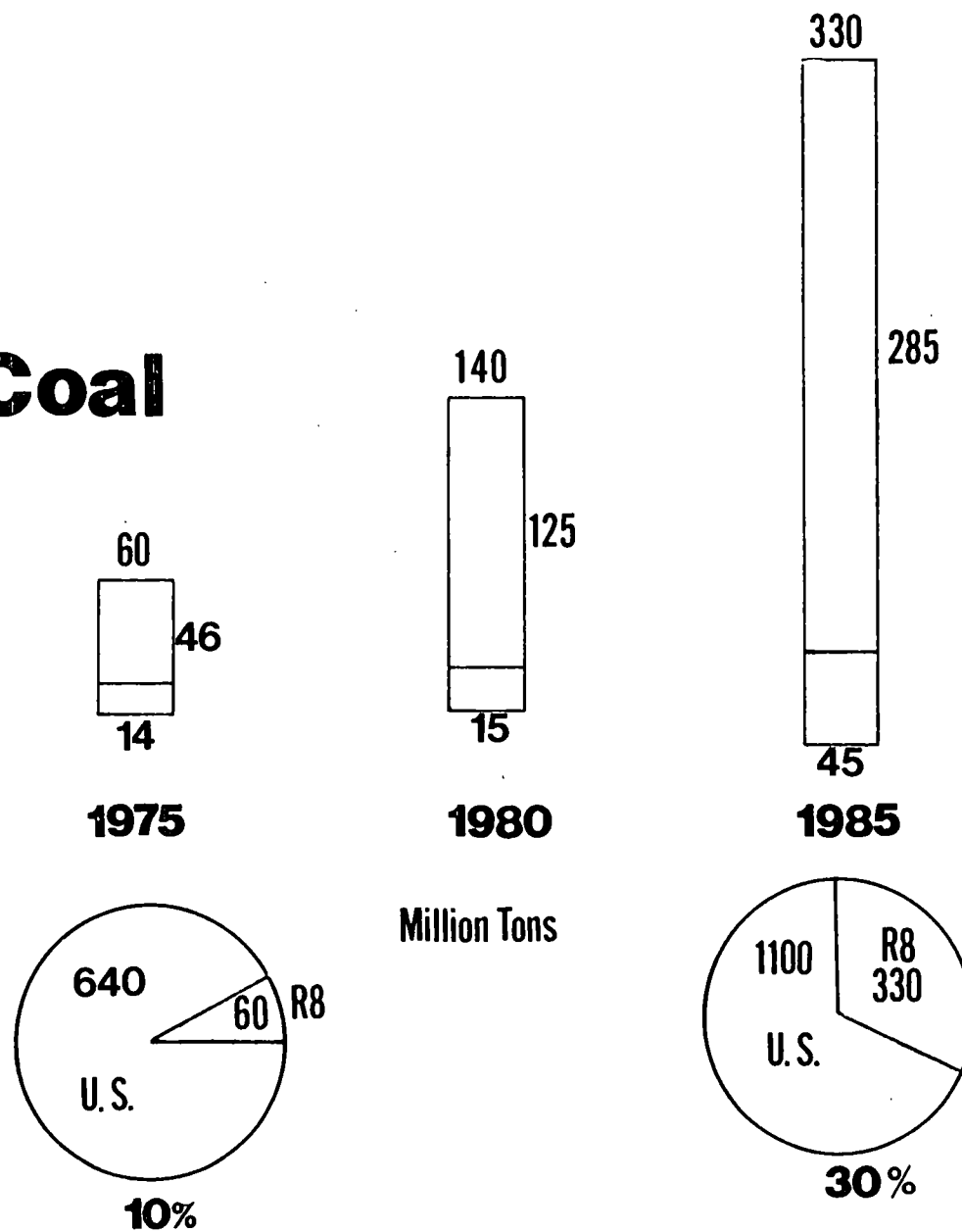
Induced Synfuels Industry	an industry consisting of plants which produce oil and gas from coal and/or oil shale. The industry receives economic subsidies.
MWE	megawatts, electricity -- a measure of the power generation capacity of power plants
NOx	nitrogen oxides -- a criteria pollutant subject to National standards. Power production and heating account for approximately 56 percent of NOx emissions nationally. Measured as NO ₂ in ambient air. . . as NOx in stack emissions.
NPDES permits	permits to discharge wastewater into the waters of the U.S., regulated under the National Pollutant Discharge Elimination System of the Clean Water Act. System limits amount of various pollutants which can be discharged, carries monitoring requirements and penalties for violations.
Population-induced power plants	power plants which are constructed to supply electricity to the people who move to an area either work at a synthetic fuel facility or to provide community services
Population-induced sewage treatment plants	sewage treatment plants which are constructed to treat the wastewater for the people who move to an area to either work at synthetic fuel facilities or to provide community services.
PSD review	pre-construction review of new sources seeking to locate in areas where air is already cleaner than required by National standards. Pollution limits (increments) are far more stringent than National standards since they are designed to "prevent significant deterioration" of air quality. Class I is the most restrictive, Class III the least. All classes are more protective of air quality than the secondary National Standards.
SCFD	standard cubic feet per day -- a measure of gases
SO ₂	sulfur dioxide -- a criteria pollutant subject to national standards and PSD review. Power production and heating account for approximately 80 percent of SO ₂ emissions nationally.
TPD	tons per day -- common measure of mining production
TPY	tons per year -- common measure of mining production

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U-RA-V	Uranium-radium-vanadium -- in this report, term indicates mine which may produce any of these closely associated elements.
USBOR	United States Bureau of Reclamation, now called the U.S. Water and Power Resource Service
USCOE	United States Army Corps of Engineers. In addition to project construction responsibilities, shares enforcement of Clean Water Act section 404 with EPA.
404	Section of the Clean Water Act -- regulates dredging of waterways and disposal of dredge materials. Also regulates placement of fill material on or near waterways. Permits are issued by Corps of Engineers with EPA review.

FIGURE - 1 -

Coal



Power Plant Capacity

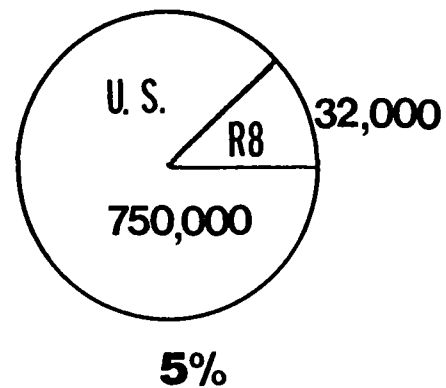
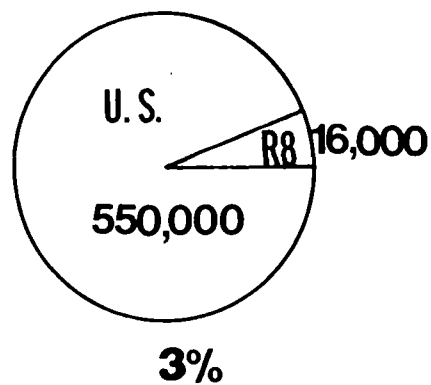
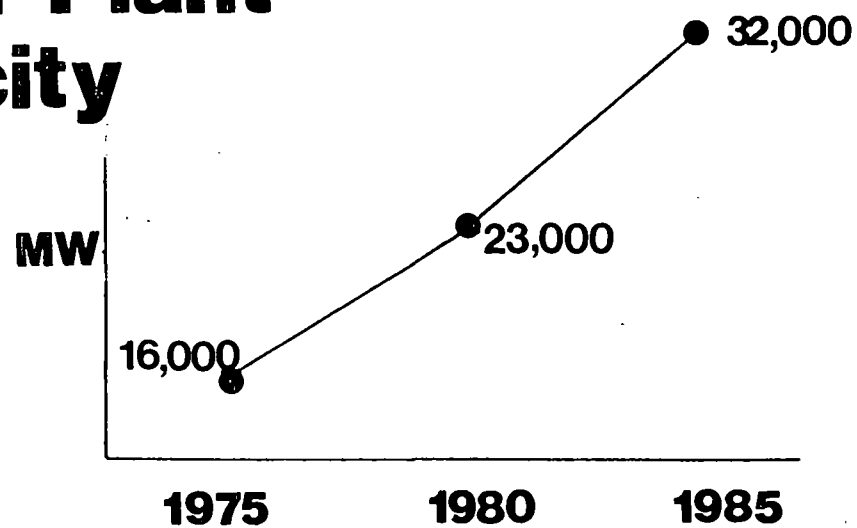
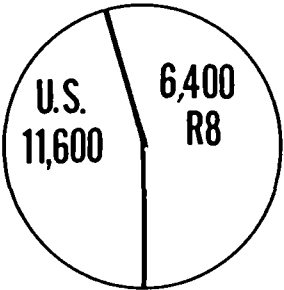
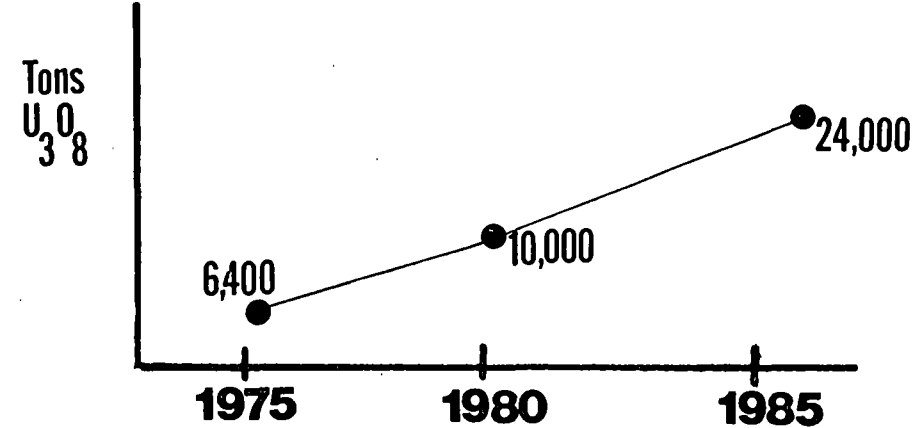
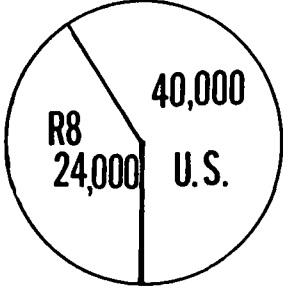


FIGURE - 2 -

Uranium



55%

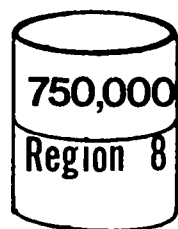


60%

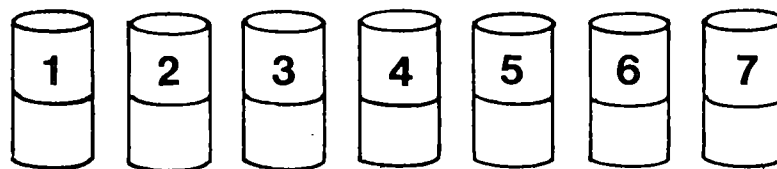
FIGURE - 3 -

Oil Shale

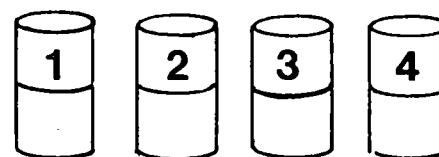
1979



Industry



President



1990

