MASTER

POLICY ANALYSIS SCREENING SYSTEM (PASS)

DEMONSTRATION:

SAMPLE QUERIES AND TERMINAL INSTRUCTIONS

AMERICAN MANAGEMENT SYSTEMS, INC.

PREPARED FOR:

U.S. DEPARTMENT OF ENERGY
ASSISTANT SECRETARY FOR ENVIRONMENT
OFFICE OF TECHNOLOGY IMPACTS

POLICY ANALYSIS DIVISION

OCTOBER 16, 1979

CONTRACT NUMBER: DE-AC02-79EV10274

AMERICAN MANAGEMENT SYSTEMS, INC.

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American Management Systems, Inc.

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U.S. DEPARTMENT OF ENERGY

Assistant Secretary for Environment
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PREFACE

This document contains the input and output for Policy Analysis Screening System (PASS) demonstration. This demonstration is stored on a portable disk at the Environmental Impacts Division (EID). Any questions regarding PASS should be directed to Ron Matheny of EID at 353-4682.

EQUIPMENT REQUIRED

- A 4014-1 Tektronix Terminal;
- Sykes COM STOR II unit for storing floppy disk; and
- One floppy disk which contains files of test information and graphic displays.

ORDER OF PRESENTATION

<u>SEQUENCE</u>	<u>CONTAINED IN FILE NAMES:</u>
1. Display PASS Banner	PASS
2. Query in How to Use PASS	HELP
3. Query on Energy Consumption from Mid-Range Energy Forecasting System (MEFS) Data Base	MEFS
4. Query on Pollution Projections from Strategic Environmental Assessment System (SEAS) Data Base	SEAS
5. Query on Diesel Auto Regulations	FIND1
6. Query on Diesel Auto Health Effects	FIND2
7. Query on Oil Shale	FIND3
8. Query on SRC	FIND4
9. Query on Acid Rainfall from Energy Environmental Statistics (EES) Data Base	SPECIAL SPECOUT
10. Query on 1990 Electric Generation	PIE
11. Query on Sulfate Concentration	BAR
12. Query on Sulfur Dioxide Emissions	PLOT
13. Query on Generating Capacity Change	MAP
14. End Presentation	STOP

1. Query #1: Call PASS

(Pages of output: 1)

Runstream

enter: .D PASS [RETURN]

WELCOME TO
DOE/OTI'S

POLICY
ANALYSIS
SCREENING
SYSTEM

PPPPPP
P P
P P
PPPPPP
P
P
P

AAAAAA
A A
A A
AAAAAAA
A A
A A
A A

SSSSSS
S S
S
SSSSSS
S S
S S
SSSSSS

SSSSSS
S S
S
SSSSSS
S S
S S
SSSSSS

DEMONSTRATION VERSION

Friday, October 12, 1979, 4:41:34 p.m.

*** NOW AVAILABLE: ENERGY-ENVIRONMENTAL STATISTICS TABLE (EES).
USE THE 'OPEN' COMMAND, THEN REPLY 'EES' WHEN PASS ASKS FOR DATA BASE.

EES STORES VALUES OF 231 ENERGY-ENVIRONMENTAL STATISTICS BY BEA.
YOU CAN TABULATE UP TO 10 OF THEM.

*** GOT A SUGGESTION OF HOW PASS CAN BE IMPROVED?
USE THE SUGGEST COMMAND: ANSWER 'SUGGEST' WHEN PASS ASKS FOR A
COMMAND.

> COMMAND>

2. Query #2: How do I use the system?

(Pages of output: 2)

Runstream

enter: .D HELP [RETURN]

[RETURN]

> COMMAND> HELP

AT THIS LEVEL, PASS ACCEPTS 10 COMMANDS. TYPE ONE AND HIT (RETURN).
COMMANDS: OPEN, FIND, TITLE, REPORT, WORD, ADD, PRINT, HELP, SUGGEST, & STOP.

OPEN OPENS A SPECIAL DATA BASE OF YOUR CHOICE.
CURRENTLY THREE SPECIAL DATA BASES ARE UP.
A FOURTH IS IN THE WORKS.
SEAS CONTAINS OUTPUT OF SEAS MODELS
REFS CONTAINS OUTPUT OF MID-RANGE ENERGY FORECASTS
EES CONTAINS 231 ENERGY-ENVIRONMENTAL STATISTICS BY BEA
RESCO (RESIDUALS COEFFICIENTS) IS NOT UP YET.
ENTER OPEN TO OPEN ONE OF THESE FOUR SPECIAL DATA BASES.

FIND SEARCHES THE ARTICLE INDEX FOR THE TITLES HAVING THE
SAME KEYWORD SET ENTERED BY YOU. TO EXECUTE THIS COM-
MAND THE ARTICLE INDEX MUST BE LOADED. IF YOU WISH, THE
TITLES FOUND CAN BE LISTED ALONG WITH THEIR RESPECTIVE
AUTHOR, DATE, AND ACCESS CODE. IF YOU NEED KEYWORDS,
ENTER 'KEY' TO GET THE KEY COMMAND.

TITLE SEARCHES AND RETRIEVES THE TEXT OF THE ARTICLE DESIRED.
ENTER THE ACCESS CODE OF THE DESIRED ARTICLE. IF YOU
DO NOT KNOW THE ACCESS CODE, HIT THE (BREAK) KEY. THEN,
ENTER 'FIND' AND LIST THE TITLES TO GET THE ACCESS
CODE.

REPORT PRINTS AT YOUR TERMINAL, UNNUMBERED, THE ENTIRE ARTICLE
YOU SPECIFIED IN THE TITLE COMMAND. STOP
THE LISTING BY HITTING THE (BREAK) KEY.

WORD ALLOWS SEARCH, WORD BY WORD, THROUGH THE ARTICLE
YOU SELECTED IN THE TITLE COMMAND, FOR AN OCCURRENCE OF
ANY WORD OR CHARACTER. PASS IS PROGRAMMED TO
LIST NOT ONLY EACH OCCURRENCE OF THE WORD, BUT ALSO THE
LINE PRECEDING IT AND THE NEXT 15 LINES.

ADD ADDS THE CURRENT ARTICLE OR SET OF TABLES TO THE END OF
THE PRINT FILE.

PRINT PRINTS CONTENTS OF THE PRINT FILE BUILT BY ADD COMMANDS
OFF-LINE ON A HIGH-SPEED PRINTER. AFTER YOU TYPE 'PRINT',
PASS PROMPTS YOU FOR PRINT PARAMETERS (BIN, REMOTE, ETC).

STOP STOPS PASS AND RETURNS YOU TO THE SUPERVYLBUR MONITOR.
THE INDEX, PRINT FILE, AND LAST ARTICLE STAY IN WORKING
STORAGE UNDER TEMPORARIES 'INDEX', 'PRINT', & 'ARTICLE'.

HELP PRINTS INSTRUCTIONS AT THE TERMINAL.

RESTART THIS COMMAND IS NOT USED IN RESPONSE TO A PASS PROMPTER.
IT IS ENTERED ONLY UNDER THE CONTROL OF THE SUPERVYLBUR
MONITOR WHEN YOU WANT TO RETURN TO PASS. THE SUPERVYLBUR
MONITOR PROMPT IS SIGNIFIED BY A QUESTION MARK, "?".
THE TEMPORARY ARTICLE AND INDEX FILES ARE LOADED WITH
THE ARTICLE AND INDEX LEFT FROM THE PRECEDING SESSION.

> COMMAND> OPEN

> DATA BASE? REFS, SEAS, EES, OR RESCO> HELP

ENTER THE ABBREVIATION FOR ONE OF PASS'S FOUR SPECIAL DATA BASES:
 NEFS STORES RESULTS OF 21 MID-RANGE ENERGY FORECASTING SYSTEM SCENARIOS.
 SEAS STORES RESULTS OF STRATEGIC ENVIRONMENTAL ASSESSMENT SCENARIOS.
 EES STORES VALUES OF 231 ENERGY-ENVIRONMENTAL STATISTICS BY BEA.
 RESCO STORES RESIDUAL COEFFICIENT VALUES FOR INDUSTRY SECTORS/POLLUTANTS
 ENTER NAME OF ONE OF THE FOUR SPECIAL DATA BASES.

> DATA BASE? NEFS, SEAS, EES, OR RESCO? NEFS
 > CAUTION--CLEARS T ARTICLE. ADD CURRENT T ARTICLE TO T PRINT? Y/N) Y
 > T ARTICLE HAS BEEN ADDED TO PRINT FILE.
 > SCENARIO? HELP

MID-RANGE ENERGY FORECASTING SYSTEM SCENARIOS
 ENTER ONE OF THE FOLLOWING 8-LETTER SCENARIO CODES:

SCENARIO	YEAR	SERIES	SUPPLY CURVE	DEMAND CURVE	OIL PRICE	IMPORT	RUN DATE
A44B111L	1985	A	HIGH	HIGH	15.00		4.02
A44C111L	1990	A	HIGH	HIGH	16.00		4.02
A44D111L	1995	A	HIGH	HIGH	19.50		4.04
B44B111H	1985	B	LOW	HIGH	21.50		3.17
B44C111H	1990	B	LOW	HIGH	23.50		3.17
B44D111H	1995	B	LOW	HIGH	31.50		3.20
C3LB612H	1985	C	MEDIUM	MEDIUM	15.00		3.21
WITH NUCLEAR CONSTRUCTION MORATORIUM							
C3LC612H	1990	C	MEDIUM	MEDIUM	18.50		3.21
WITH NUCLEAR CONSTRUCTION MORATORIUM							
C3LD612H	1995	C	MEDIUM	MEDIUM	23.50		3.21
WITH NUCLEAR CONSTRUCTION MORATORIUM							
C4AB441H	1985	C	MEDIUM	MEDIUM	15.00		4.10
WITH HIGH CAPITAL COSTS							
C4AC441H	1990	C	MEDIUM	MEDIUM	18.50		4.10
WITH HIGH CAPITAL COSTS							
C4AD441H	1995	C	MEDIUM	MEDIUM	23.50		4.10
WITH HIGH CAPITAL COSTS							
C44B111H	1985	C	MEDIUM	MEDIUM	15.00		3.17
C44C111H	1990	C	MEDIUM	MEDIUM	18.50		3.17
C44D111H	1995	C	MEDIUM	MEDIUM	23.50		3.20
D44B111L	1985	D	HIGH	LOW	15.00		3.17
D44C111L	1990	D	HIGH	LOW	15.00		3.17
D44D111L	1995	D	HIGH	LOW	16.50		3.17
E44B111H	1985	E	LOW	LOW	17.00		3.28
E44C111H	1990	E	LOW	LOW	21.00		3.28
E44D111H	1995	E	LOW	LOW	23.50		3.29

ENTER ONE OF THE ABOVE 8-LETTER SCENARIO CODES.

3. Query #3: What are the estimated gross supplies/consumption of energy resources under the Mid-Range Energy Forecasting System (MEFS) scenario for "medium-medium" assumptions, 1995, Series C?

(Pages of output: 2)

Runstream

enter: .D MEFS [RETURN]

[RETURN]

> SCENARIO> C44D111M

> SCENARIO C44D111M IS LOADED INTO T SCEN.

> TABLE NUMBER> HELP

ENTER THE TABLE NUMBER YOU WANT FROM THE FOLLOWING LIST:

TABLE 1 : EXECUTIVE DATA SUMMARY IN STANDARD PHYSICAL UNITS

TABLE 2 : EXECUTIVE DATA SUMMARY IN TRILLIONS OF BTUS

TABLE 3 : EXECUTIVE DATA SUMMARY GROWTH RATES FROM 1977

TABLE 4 : IMPORT SUMMARY

TABLE 5 : OIL AND GAS REGIONAL PRODUCTION SUMMARY

TABLE 6 : DOMESTIC CRUDE REGIONAL PRODUCTION SUMMARY

TABLE 7 : CRUDE REGIONAL DISTRIBUTION SUMMARY

TABLE 8 : GAS REGIONAL DISTRIBUTION SUMMARY

TABLE 9 : GAS REGIONAL/SECTORAL DEMAND SUMMARY

*GAS REGIONAL/SECTORAL SHORTAGE SUMMARY

*GAS REGIONAL SHORTAGE SUMMARY

TABLE 10: EMERGING TECH.-COAL CONVERSIONS BY COAL REGION

TABLE 11: EMERGING TECH.-ENHANCED GAS RECOVERY

TABLE 12: EMERGING TECH.-SHALE & ENHANCED OIL RECOVERY

TABLE 13: EMERGING TECH.-ELECTRICAL GENERATION

TABLE 14: EMERGING TECH.-COAL, OIL CONV. BY UTIL. REG.

TABLE 15: EMERGING TECH.-WASTE CONV. BY UTIL. REG.

TABLE 16: COAL REGIONAL PRODUCTION SUMMARY (BY MINE TYPE)

TABLE 17: COAL REGIONAL PRODUCTION SUMMARY (BY COAL TYPE)

TABLE 18: COAL REGIONAL DEMAND SUMMARY

TABLE 19: SECTORAL/REGIONAL CONSUMPTION SUMMARY

TABLE 20: SECTORAL/REGIONAL CONSUMPTION GROWTH RATE SUMMARY

TABLE 21: REGIONAL CONSUMPTION SUMMARY

TABLE 22: REFINERY CONSUMPTION SUMMARY

TABLE 23: REFINERY PRODUCTION SUMMARY (MB/CD)

TABLE 24: REFINERY PRODUCTION SUMMARY (MMMBTU/YR)

TABLE 25: REGIONAL UTILITY CONSUMPTION SUMMARY

TABLE 26: ELECTRICITY GENERATION SUMMARY

TABLE 27: DEMAND REGION RETAIL PRICE SUMMARY (\$/PHYS UNIT)

TABLE 28: DEMAND REGION RETAIL PRICE SUMMARY (\$/MMBTU)

TABLE 29: DEMAND REGION RETAIL PRICE GROWTH RATE SUMMARY

TABLE 30: DEMAND REGION PRICE TABLE

TABLE 31: UTILITY REGION PRICE TABLE

TABLE 32: REFINERY REGION PRICE TABLE

TABLE 33: OIL REGION WELLHEAD PRICE TABLE

TABLE 34: GAS REGION WELLHEAD PRICE TABLE

TABLE 35: COAL REGION F.O.B. MINE PRICE TABLE

TABLE 36: REPLACEMENT PRICE SUMMARY (\$/PHYS UNIT)

TABLE 37: REPLACEMENT PRICE SUMMARY (\$/MMBTU)

TABLE 38: 1977 EXECUTIVE DATA SUMMARY

TABLE 39: 1977 SECTORAL/REGIONAL CONSUMPTION SUMMARY

TABLE 40: 1977 DEMAND REGION RETAIL PRICE SUMMARY

*SHORTAGE SUMMARIES APPEAR ONLY IN REGULATE RUNS

> TABLE NUMBER> 2

> TABLE 2 HAS BEEN ADDED TO THE END OF T ARTICLE.

> ADD ANOTHER TABLE? Y/N) N
 > COMMAND) REPORT
 > TO STOP THE LISTING, HIT THE (BREAK) KEY.
 TABLE 2

PAGE 2

1995-SERIES C
 MEDIUM SUPPLY CURVE - MEDIUM DEMAND CURVE

OIL IMPORT PRICE: 23.50
 RUN DATE: 3.20

EXECUTIVE DATA SUMMARY

UNITED STATES TOTAL GROSS SUPPLY/CONSUMPTION OF ENERGY RESOURCES ENERGY SOURCES IN TRILLIONS OF BTU'S PER YEAR

SECTOR	COAL	OIL	GAS	TOTAL FOSSIL FUEL	NUCLEAR	HYDRO SOLAR GEO.	TOTAL 6 SECTOR INPUTS	GROSS ELECT. INPUTS	TOTAL 4 SECTOR INPUTS	UTILITY ELECTRIC DISTRIB.	NET FOUR SECTOR INPUTS
DOMESTIC SUPPLY: (COAL,GAS,ELEC.)	41703	23964	17078	82745	12659	3973				15169	
(CRUDE)	41703		14043	55746	12659	3973				14717	
(CO-PRODUCTS/ASSOC. GAS)		20995		20995							
(EMERGING TECH.-ELEC.)		2024	3035	5060							
(SHALE)		945		945						452	
IMPORTS: (CRUDE)	2283-	16360	1572	15649							
(PRODUCTS)		12698		12698							
(LNG)		3661		3661							
(CANADIAN/MEXICAN)			1197	1197							
(COAL)	2283-		375	375							
TOTAL SUPPLY	39420	40324	18650	98394	12659	3973	115026			15169	
GAINS(+)/LOSSES(-)		325-		325-						1456-	
CONSUMPTION: RESIDENTIAL	22	2423	5736	8181			8181	12702	20883	3815	11995
COMMERCIAL	12	2376	2440	4828			4828	11659	16487	3501	8329
INDUSTRIAL	8868	12231	10742	31841			31841	21251	53985	6382	39116
TRANSPORTATION		22827	474	23301			23301	48	23349	14	23316
ELECTRICAL GENERATION	28227	581	220	29028	12659	3973	45660			13713-	
SYNTHETICS	2294	438-	962-	893			893				
TOTAL CONSUMPTION	39423	39999	18650	98072	12659	3973	114704	45660	114704		82756

NOTE: GAS CONSUMPTION IN THE TRANSPORTATION SECTOR INCLUDES NATURAL GAS TRANSPORTATION LOSSES.
 INDUSTRIAL CONSUMPTION INCLUDES REFINERY FUEL CONSUMPTION.
 LOSSES ARE REFINERY CRACKING LOSSES AND ELECTRICITY TRANSMISSION LOSSES.
 HYD/SOL/GEO ENTRY ESTIMATES BTU CONSUMPTION FOR AN EQUIVALENT FOSSIL FUEL PLANT AT 10000 BTU/KWH.
 NUCLEAR ENTRY ESTIMATES BTU CONSUMPTION FOR AN EQUIVALENT FOSSIL FUEL PLANT AT 11000 BTU/KWH.
 SUPPLY/DEMAND IMBALANCES MAY BE DUE TO ERRORS WITHIN THE EQUILIBRATION CONVERGENCE TOLERANCE
 OR AVERAGE BTU CONVERSION OF AGGREGATES.
 TOTAL SUPPLY QUADS NET OF REFINERY CRACKING LOSS: 114.70
 TOTAL GROSS QUADS CONSUMED: 114.70

4. Query #4: What are the projected residual outputs of the top sulfur oxides polluters under the Second National Energy Plan scenario?

(Pages of output: 2)

Runstream

enter: .D SEAS [RETURN]

[RETURN]

> COMMAND> FIND
> KEYWORD SET (IN QUOTES)> '502' INT 'CONCERN' INT 'ENERPROD/' INT 'SCENARIO/' INT 'NEP2H1'
1 LINE IN RANGE
> LIST TITLES ON LINE? Y/N> Y

38. A19 09/27/79 SEAS TABLE 2.2.6: NATIONAL TRENDS IN NET EMISSIONS, BY TOP 10 POLLUTERS OF 1975 - SULFUR OXIDES AUTHOR:
DOE SEAS, NEP2H1

> ANOTHER KEYWORD SET? Y/N> N
> SELECT A TITLE? Y/N> Y
> CAUTION-- ADD CURRENT ARTICLE FILE TO PRINT FILE? Y/N Y
> T ARTICLE HAS BEEN ADDED TO PRINT FILE.
> ACCESS CODE> A19
> ARTICLE A19 IS LOADED INTO T ARTICLE.
> COMMAND> REPORT
> TO STOP THE LISTING, HIT THE <BREAK> KEY.

A19 SEAS TABLE 2.2.6: NATIONAL TRENDS IN NET EMISSIONS, BY TOP TEN INDIVIDUAL POLLUTERS
 OF 1975 - SULFUR OXIDES
 POLLUTAN/ SO2 CONCERNS/ AIRQUAL POLEMIS/ AIRSOX FACCAT/ REFINERY
 ENERPROD/ COALINEL RESINEL ENRESCOM/ DISOILRC ENIN/ COALIN
 DISOILIN DATE/ 1975

DEPARTMENT OF ENERGY, STRATEGIC ENVIRONMENTAL ASSESSMENT SYSTEM
 TABLE 2.2.6 NATIONAL TRENDS IN NET EMISSIONS

SCENARIO: NATIONAL ENERGY PLAN 2
 HIGH WORLD OIL PRICE

BY THE TOP 10 INDIVIDUAL POLLUTERS OF 1975

SULFUR OXIDES

SECTORS	1975			1985			1990			2000		
	NET EMISSIONS IN MILLIONS OF TONS 1975	SECTOR OUTPUT 1975	% OF TOTAL	EMISSION AS A % OF BASE YEAR	SECTOR OUTPUT AS A % OF BASE YEAR	% OF TOTAL	EMISSION AS A % OF BASE YEAR	SECTOR OUTPUT AS A % OF BASE YEAR	% OF TOTAL	EMISSION AS A % OF BASE YEAR	SECTOR OUTPUT AS A % OF BASE YEAR	% OF TOTAL
SULFURIC ACID.....	352,000.0	33.8	1.2%	88.8%	167.0%	1.1%	109.0%	203.0%	1.3%	155.0%	283.0%	1.8%
PETROLEUM REFINING- CATALYTIC	666,000.0	8,570.0	2.2	122.0	133.0	2.9	115.0	125.0	2.6	96.9	104.0	2.1
PETROLEUM REFINING- NON CATALYTIC.....	1737,000.0	19,900.0	2.5	112.0	134.0	3.0	106.0	126.0	2.7	88.8	106.0	2.2
SMELTING U/ROASTER	1460000.0	.7	4.9	28.0	146.0	1.5	30.5	160.0	1.5	32.0	170.0	1.6
SMELTING U/O ROASTER.....	1160000.0	.7	3.9	25.5	135.0	1.1	28.1	148.0	1.1	29.9	157.0	1.2
ELECTRIC-COAL- OLD(SOX)	1880000.0	9,110.0	62.8	77.4	115.0	52.4	78.0	115.0	49.8	73.7	109.0	45.9
ELECTRIC-OIL- OLD(SOX)	1720000.0	3,170.0	5.8	93.0	100.0	5.8	88.1	94.9	5.1	55.6	59.9	3.2
INDUSTRIAL - COAL - OLD.....	1880000.0	1,390.0	6.3	67.7	76.7	4.6	59.7	66.5	3.8	25.6	29.3	1.6
INDUSTRIAL- RESIDUAL OIL-OLD	491,000.0	804.0	1.6	71.7	80.9	1.3	61.6	69.2	1.0	41.7	48.3	.7
COMMERCIAL - OIL	1851,000.0	2,010.0	2.8	69.0	69.0	2.1	42.7	42.7	1.2	29.4	29.4	.8
TOTAL.....	28100000	45,000.0	94.0	74.8	122.0	75.7	73.5	115.0	70.2	65.4	98.1	61.0

NOTE: X1 - THIS INDICATES A MEANINGLESS RESULT DUE TO THE FACT THAT THE AMOUNT OF THE BASE YEAR IS ZERO

> COMMAND>

5. Query #5: What are the applicable EPA particulate regulations for light-duty diesel vehicles?

(Pages of output: 4)

Runstream

enter: .D FIND1 [RETURN]

[RETURN]

[RETURN]

[RETURN]

> COMMAND> FIND
> KEYWORD SET (IN QUOTES)> SET ('DSLAUTO' UN 'DSLLDT') INT 'EPA' INT 'PART'
5 LINES IN RANGE
> LIST TITLES ONLINE? Y/N> Y

12. A6 09/27/79 THE EPA PROGRAM TO ASSESS THE PUBLIC HEALTH SIGNIFICANCE OF DIESEL EMISSIONS, EPA'S CONCERN AUTHOR: EPA
DELBERT S. BARTH AND STANLEY M. BLACKER

14. A7 09/27/79 THE EPA PROGRAM TO ASSESS THE PUBLIC HEALTH SIGNIFICANCE OF DIESEL EMISSIONS, PRESENT AND FUTURE HEALTH
EFFECTS OF RESEARCH AUTHOR: EPA DELBERT S. BARTH AND STANLEY M. BLACKER

16. A8 09/27/79 THE EPA PROGRAM TO ASSESS THE PUBLIC HEALTH SIGNIFICANCE OF DIESEL EMISSIONS, EPA'S RESEARCH RESULTS, A
UGUST 1978 AUTHOR: EPA DELBERT S. BARTH AND STANLEY M. BLACKER

18. A9 09/27/79 ISSUES CONCERNING THE LIGHT DUTY DIESEL, TEXT OF EXECUTIVE SUMMARY, SEPTEMBER 1979 DRAFT AUTHOR: DOE-EU
OFFICE OF TECHNOLOGY IMPACTS, POLICY ANALYSIS DIVISION

22. A11 09/27/79 ISSUES CONCERNING THE LIGHT DUTY DIESEL, OVERVIEW OF SERIOUS REGULATORY HURDLES FACED BY LDD, TABLE 1
OF EXEC. SUMMARY, SEPT. 79 DRAFT AUTHOR: DOE-EU, OFFICE OF TECHNOLOGY IMPACTS, POLICY ANALYSIS DIVISION

> ANOTHER KEYWORD SET? Y/N> N

> SELECT A TITLE? Y/N> Y

> CAUTION-- ADD CURRENT ARTICLE FILE TO PRINT FILE?> N

> ACCESS CODE> A11

> ARTICLE A11 IS LOADED INTO T ARTICLE.

> COMMAND) REPORT
> TO STOP THE LISTING, HIT THE <BREAK> KEY.

ALL ISSUES CONCERNING THE LIGHT DUTY DIESEL, OVERVIEW OF SERIOUS REGULATORY HURDLES FACED BY LDD, TABLE 1 OF EXEC. SUMMARY, SEPT. 79 DRAFT VEHICLE/ DSLAUTO DSLDDT POLEMISS/ AIRPART AIRNOX POLLUTAN/ FINEPART PART NOX MEDIUM/ AIR AGENCY/ EPA FUEL/ DIESEL

DOE-EU, OFFICE OF TECHNOLOGY IMPACTS, POLICY ANALYSIS DIVISION

TABLE 1 OVERVIEW OF SERIOUS REGULATORY HURDLES FACED BY LIGHT DUTY DIESEL (LDD)

STATUS OF REGULATION	STANDARD (1)	
	EMISSION	APPLICABLE MY'S (OR EXPECTED REGULATION PROMULGATION DATE)
EXISTING	- NOX	- MY 1981 AND THEREAFTER (UNLESS WAIVED)
PROPOSED	- LDD PARTICULATES (TOTAL WEIGHT ONLY)	- MY 1981-MY 1982 - MY 1983 (AND THEREAFTER)
MAY BE PROPOSED IN FUTURE	- SPECIFIC PROPERTIES OF PARTICULATES: - RESPIRABLE PARTICULATES (LESS THAN OR EQUAL TO 15 MICRONS) - FINE PARTICULATES (LESS THAN OR EQUAL TO 3-2.5 MICRONS) - CARCINOGENIC OR TOXIC CHEMICAL COMPOUNDS ASSOCIATED WITH PARTICULATES - NOX	- START PROMULGATING IN CALENDAR 1980 - PROMULGATE IN DECEMBER 1980 - PROMULGATE NOT LATER THAN DECEMBER 1985 - PROMULGATE PROBABLY NOT EARLIER THAN CALENDAR 1980, BUT COULD BE EFFECTIVE AS EARLY AS FOR MY 1981 LDDs - MY 1984 AND BEYOND

STANDARD (1)

STATUS OF REGULATION	EMISSION	LIMIT
EXISTING	- NOX	- 1.0 GM/MI
PROPOSED	- LDD PARTICULATES (TOTAL WEIGHT ONLY)	- .6 GM/MI - .2 GM/MI
MAY BE PROPOSED IN FUTURE	- SPECIFIC PROPERTIES OF PARTICULATES	
	- RESPIRABLE PARTICULATES (LESS THAN OR EQUAL TO 15 MICRONS)	- UNKNOWN
	- FINE PARTICULATES (LESS THAN OR EQUAL TO 3-2.5 MICRONS)	- UNKNOWN
	- CARCINOGENIC OR TOXIC CHEMICAL COMPOUNDS ASSOCIATED WITH PARTICULATES	- WILL DEPEND ON RESULTS OF HEALTH EFFECTS RESEARCH RELATED TO POSSIBLE CARCINOGENICITY OR TOXICITY OF LDD PARTICULATES. IN EXTREME CIRCUMSTANCES, EPA COULD WITHHOLD CERTIFICATION FROM MY 1981 DIESELS (2)
	- NOX	- 0.4 GM/MI (DEPENDING ON RE-SEARCH AND CONGRESSIONAL APPROVAL

STANDARD (1)

STATUS OF REGULATION	EMISSION	SUPPORTING PROVISIONS OF CLEAN AIR ACT AS AMENDED (CAA)
EXISTING	- NOX	SEC 202(B)(1) OF CLEAN AIR ACT SPECIFIES NOX LIMITS
PROPOSED	- LDD PARTICULATES (TOTAL WEIGHT ONLY)	SEC 202(A)(3) DIRECTS EPA TO SET MOTOR-VEHICLE PARTICULATE REGULATIONS FOR MY 1981 AND AFTER
MAY BE PROPOSED IN FUTURE	- SPECIFIC PROPERTIES OF PARTICULATES:	
	- RESPIRABLE PARTICULATES (LESS THAN OR EQUAL TO 15 MICRONS)	- SEC 202(A) PROVIDES EPA WITH BROAD MANDATE TO SET VEHICLE EMISSION STANDARDS TO PROTECT PUBLIC HEALTH AND WELFARE AS JUDGED ACHIEVABLE BY CONTROL TECHNOLOGY

- FINE PARTICULATES (LESS THAN OR EQUAL TO 3-2.5 MICRONS)
- CARCINOGENIC OR TOXIC CHEMICAL COMPOUNDS ASSOCIATED WITH PARTICULATES
- SEC 109(D) DIRECTS EPA TO REVIEW AND REVISE NAAQS BY NOT LATER THAN DECEMBER 31, 1980 AND AT NOT LATER THAN 5 YEAR INTERVALS THEREAFTER (NEXT REVISION WOULD BE 1985). THIS MAY RESULT IN EPA ACTIONS REGARDING RE-SPIRABLE PARTICULATES (BY END OF 1980) AND FINE PARTICULATES (BY END OF 1985).
- SEC 214(A) DIRECTS EPA TO STUDY HEALTH EFFECTS OF MOTOR VEHICLE PARTICULATES
- NOX
- SEC 202(A) (PROVISIONS OF PUBLIC LAW 95-95 WHICH DO NOT AMEND THE CLEAN AIR ACT) DIRECTS EPA TO STUDY PUBLIC HEALTH IMPLICATIONS AND TECHNOLOGICAL FEASIBILITY OF ATTAINING A .4 GM/RI NOX STANDARD AND TO REPORT TO CONGRESS BY JULY 1, 1980

FOOTNOTES: (1) SEE TABLES A-2 AND A-3 IN APPENDIX A FOR SPECIFIC WAIVER PROVISIONS ON STANDARDS

(2) A SPECIFIC STANDARD DOES NOT NECESSARILY HAVE TO BE PROMULGATED. CAAA SECS. 202(A)(4)(A) AND 206 REQUIRE EPA TO PLACE THE BURDEN-OF-PROOF ON THE MANUFACTURER TO ESTABLISH THAT AN ENGINE DOES NOT POSE AN "UNREASONABLE RISK" TO HUMAN HEALTH. EPA CAN ENFORCE THIS BY WITHHOLDING CERTIFICATION FOR THE ENGINE.

SOURCE DOCUMENT: "ISSUES CONCERNING THE LIGHT DUTY DIESEL", OFFICE OF THE ASSISTANT SECRETARY FOR ENVIRONMENT, OFFICE OF TECHNOLOGY IMPACTS POLICY ANALYSIS DIVISION, SEPTEMBER 1979 DRAFT

LAST UPDATE: SEPTEMBER 17, 1979

ENTERED BY: LOPER, AMERICAN MANAGEMENT SYSTEMS FOR PAD

> COMMAND>

6. Query #6: What research results does EPA have in the health effects of the exhaust emissions of diesel autos?

What has EPA found with respect to organics?

(Pages of output: 2)

Runstream

enter: .D FIND2 [RETURN]

[RETURN]

> COMMAND> FIND
> NEED HELP? REPLY HELP TO SET UP KEYSETS, OR KEY TO CHOOSE KEYWORDS.
> KEYWORD SET (IN QUOTES)> SET ('DSLAUTO' UN 'DSLDDT') INT 'HEALTH'
> LINES IN RANGE
> LIST TITLES ONLINE? Y/N> Y

12. A6 09/27/79 THE EPA PROGRAM TO ASSESS THE PUBLIC HEALTH SIGNIFICANCE OF DIESEL EMISSIONS, EPA'S CONCERN AUTHOR: EPA
DELBERT S. BARTH AND STANLEY M. BLACKER

14. A7 09/27/79 THE EPA PROGRAM TO ASSESS THE PUBLIC HEALTH SIGNIFICANCE OF DIESEL EMISSIONS, PRESENT AND FUTURE HEALTH
EFFECTS RESEARCH AUTHOR: EPA DELBERT S. BARTH AND STANLEY M. BLACKER

16. A8 09/27/79 THE EPA PROGRAM TO ASSESS THE PUBLIC HEALTH SIGNIFICANCE OF DIESEL EMISSIONS, EPA'S RESEARCH RESULTS, AU
GUST 1978 AUTHOR: EPA DELBERT S. BARTH AND STANLEY M. BLACKER
> ANOTHER KEYWORD SET? Y/N> N
> SELECT A TITLE? Y/N> Y
> CAUTION-- ADD CURRENT ARTICLE FILE TO PRINT FILE? Y/N> Y
> T ARTICLE HAS BEEN ADDED TO PRINT FILE.
> ACCESS CODE> AB
> ARTICLE AB IS LOADED INTO T ARTICLE.
> COMMAND> WORD
> SEARCHWORD> ORGANICS

> STOP LISTING WITH (BREAK) KEY.

THE AROMATIC CONTENT OF THE DIESEL FUEL SEEMED TO HAVE A DIRECT RELATION TO THE RESPONSES WE FOUND IN THE AMES TESTS. WE PRESENTED INFORMATION ON SAMPLE ACTIVITY AS A FUNCTION OF: (A) USING SEVERAL DIFFERENT AMES TESTER STRAINS, (B) STORING THE SAMPLE UNDER VARIOUS CONDITIONS, AND (C) EXTRACTING THE ORGANICS USING TWO DIFFERENT SOLVENTS. WE BRIEFLY MENTIONED THAT WE WERE CONDUCTING ADDITIONAL IN VITRO SCREENING TESTS USING SYSTEMS OTHER THAN THE AMES SYSTEM. WE INDICATED THAT WE FOUND: (A) POSITIVE RESULTS IN THE ENHANCED MITOTIC RECOMBINATION TEST FOR DNA DAMAGE USING YEAST CELLS AND IN THE MAMMALIAN CELL-GENE MUTATION TEST USING MOUSE LYMPHOMA CELLS, (B) A POSSIBLE NEGATIVE RESULT IN THE UNSCHEDULED DNA SYNTHESIS USING WI-38 CELLS DERIVED FROM HUMAN LUNG CELLS, AND (C) NO RESULTS YET ON THE POINT MUTATION USING DROSOPHILA (SEX-LINKED, RECESSIVE LETHAL) AND ON ONCOGENIC TRANSFORMATIONS USING BALB/3T3, A MOUSE FIBROBLAST CELL SYSTEM. NO CONCLUSIONS ON THE POSSIBLE PUBLIC HEALTH IMPLICATIONS WERE DRAWN AT WILLIAMSBURG, BECAUSE THE DATA BASE DID NOT WARRANT ANY CONCLUSIONS. A REPORT ENTITLED "APPLICATION OF BIOASSAY TO CHARACTERIZATION OF DIESEL PARTICULATE EMISSIONS", SUMMARIZING THE MATERIAL PRESENTED AT WILLIAMSBURG, IS AVAILABLE.

ANIMALS ARE EXPOSED TO THE GASEOUS AND PARTICULATE PORTIONS (I.E., THE TOTAL EXHAUST), SIMULTANEOUSLY. THESE CINCINNATI STUDIES ARE OF PARTICULAR IMPORTANCE SINCE APPROXIMATELY 80% OF THE TOTAL HYDROCARBONS EMITTED FROM LIGHT DUTY DIESELS REMAIN IN THE GASEOUS PHASE. THE COMPOSITION OF THE ORGANICS IN THE GASEOUS PHASE ARE BELIEVED TO BE OF LOWER MOLECULAR WEIGHT THAN THE ORGANICS ABSORBED ONTO THE PARTICULATE.

THE CINCINNATI PILOT STUDY HAS BEEN SUMMARIZED IN A DRAFT DOCUMENT THAT WILL BE AVAILABLE IN EARLY JULY. IN SUMMARY, WE ARE FINDING:

- LITTLE OR NO CHANGE IN PULMONARY FUNCTION.
- INCREASED SUSCEPTIBILITY TO RESPIRATORY INFECTION, BUT THIS MAY BE DUE TO THE ELEVATED LEVELS OF NO₂ PRESENT IN THE PARTLY DILUTED EXHAUST.
- PARTICULATES ENTER THE DEEP REGIONS OF THE LUNG OF THE ANIMALS TESTED AND THE RATE OF CLEARANCE IS VERY SLOW, PERMITTING LONG RESIDENCE TIMES FOR THE PARTICULATES IN THE DEEP REGIONS OF THE LUNG.
- NO SIGNIFICANT PATHOLOGICAL CHANGES EITHER IN THE LUNG OR OTHER BODY TISSUES.

7. Query #7: What information does PASS have on oil shale?

What occupational health and safety measures exist for the oil shale process?

(Pages of output: 2)

Runstream

enter: .D FIND3 [RETURN]

[RETURN]

> COMMAND> FIND
 > NEED HELP? REPLY HELP TO SET UP KEYSETS, OR KEY TO CHOOSE KEYWORDS.
 > KEYWORD SET (IN QUOTES)> KEY
 > SEARCHWORD> SHALE
 SHALPROD OIL SHALE PRODUCTION
 SHALEOIL SHALE OIL
 OILSHALE/ OIL SHALE
 OILSHALE OIL SHALE
 > ANOTHER SEARCH? Y/N> N
 > KEYWORD SET (IN QUOTES)> "SHAL"
 11 LINES IN RANGE
 > LIST TITLES ONLINE? Y/N> Y

2. A1 09/25/79 FACT SHEET ON IN-SITU OIL SHALE RETORTING AUTHOR: DOE
 4. A2 09/25/79 FACT SHEET ON MODIFIED IN-SITU OIL SHALE RETORTING AUTHOR: DOE
 6. A3 09/25/79 FACT SHEET ON TOSCO II OIL SHALE RETORTING PROCESS AUTHOR: DOE
 8. A4 09/25/79 ESTIMATED CONTRIBUTION OF POLLUTION CONTROL COSTS TO ENERGY COSTS FOR OIL SHALE AUTHOR: DOE
 74. A37 09/27/79 TECHNOLOGICAL AND ENVIRONMENTAL STATUS OF OIL SHALE AUTHOR: DOE OFFICES OF ENVIRONMENT AND ENERGY TECHNOLOGY
 412. A206 10/09/79 ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS FACT SHEET ON IN-SITU OIL SHALE RETORTING AUTHOR: DOE ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS
 450. A225 10/09/79 ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS FACT SHEET ON SURFACE OIL SHALE MINING AUTHOR: DOE ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS
 452. A226 10/09/79 ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS FACT SHEET ON UNDERGROUND OIL SHALE MINING AUTHOR: DOE ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS
 454. A227 10/09/79 ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS FACT SHEET ON TOSCO II OIL SHALE RETORTING AUTHOR: DOE ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS
 456. A228 10/09/79 ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS FACT SHEET ON MODIFIED IN-SITU OIL SHALE RETORTING AUTHOR: DOE ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS
 522. A261 10/12/79 NEFS SCENARIO A44B111L TABLE 12 EMERGING TECHNOLOGIES- SHALE AND ENHANCED OIL RECOVERY AUTHOR: AUTHOR: DOE NEFS RUN 3/18/79

> ANOTHER KEYWORD SET? Y/N> Y
 > KEYWORD SET (IN QUOTES)> "SHALEOIL"
 1 LINE IN RANGE
 > LIST TITLES ONLINE? Y/N> Y

74. A37 09/27/79 TECHNOLOGICAL AND ENVIRONMENTAL STATUS OF OIL SHALE AUTHOR: DOE OFFICES OF ENVIRONMENT AND ENERGY TECHNOLOGY

> ANOTHER KEYWORD SET? Y/N> N
 > SELECT A TITLE? Y/N> Y
 > CAUTION-- ADD CURRENT ARTICLE FILE TO PRINT FILE? Y/N> Y
 > T ARTICLE HAS BEEN ADDED TO PRINT FILE.
 > ACCESS CODE> A37
 > ARTICLE 37 IS LOADED INTO T ARTICLE

> COMMAND) WORD

> SEARCH) WORD) OCCUPATIONAL HEALTH

> STOP LISTING WITH (BREAK) KEY.

HAS IDENTIFIED SPECIFIC UNCERTAINTIES AND CONCERNS THAT HAVE IMPLICATIONS FOR THE FUTURE ENVIRONMENTAL ACCEPTABILITY OF COMMERCIAL DEVELOPMENT. THESE CONCERNS ARE ASSOCIATED WITH AIR QUALITY, WATER RESOURCES AND QUALITY, LAND DISTURBANCE, ECOLOGICAL EFFECTS, HUMAN HEALTH, OCCUPATIONAL HEALTH AND SAFETY, TRANSPORT AND END USE, SOCIOECONOMICS, AND COMPLIANCE.

AIR QUALITY CONCERNS RELATE TO THE PRODUCTION OF BOTH CRITERIA POLLUTANTS (E.G., CARBON MONOXIDE, NITROGEN OXIDES, SULFUR DIOXIDE, HYDROCARBONS, PARTICULATE MATTER, PHOTOCHEMICAL OXIDANTS) AND NON-CRITERIA POLLUTANTS (E.G., TRACE METALS, POLYAROMATIC HYDROCARBONS) FROM SURFACE AND UNDERGROUND RETORTING, PARTICULATE MATTER AND NON-CRITERIA POLLUTANTS ASSOCIATED WITH DUSTS FROM MINING AND CRUSHING OF RAW SHALE AND RESUSPENSION OF DISPOSED SPENT SHALE, THE GEOGRAPHICAL TRANSPORT OF THESE MATERIALS AS INFLUENCED BY DIFFERENCES IN TERRAIN AND CLIMATE, AND EFFECTIVE CONTROL OR ELIMINATION OF THESE POLLUTANTS.

PRINCIPAL UNCERTAINTIES ASSOCIATED WITH WATER RESOURCES AND QUALITY ARE CENTERED ON THE LEACHING OF INORGANIC AND ORGANIC POLLUTANTS FROM DISPOSED OR RUBBILIZED SHALE INTO SURFACE AND GROUNDWATERS, THE EFFECTS ON WATER RESOURCES, AND THE TREATMENT AVAILABLE FOR HEALTH EFFECT STUDIES. BIOLOGICAL CHARACTERIZATION OF OIL-SHALE-DERIVED FUELS AND THEIR COMBUSTION PRODUCTS IS INCOMPLETE. HEALTH EFFECTS RESEARCH IS ONGOING AND CONTINUING.

OCCUPATIONAL HEALTH AND SAFETY

THE OCCUPATIONAL WORK FORCE WILL BE EXPOSED TO A UNIQUE ENVIRONMENT LARGELY UNCHARACTERIZED IN TERMS OF REQUIRED INDUSTRIAL HYGIENE AND SAFETY ANALYSES. THE MINERS WILL BE SUBJECT TO EXPOSURE TO POSSIBLE TOXIC MATERIALS. PROVEN HEALTH PROTECTIVE MEASURES DO NOT EXIST FOR IN SITU OPERATIONS. QUANTITATIVE RISK ESTIMATES FOR CHRONIC LOW-LEVEL EXPOSURES (VIA INHALATION OR SKIN CONTAMINATION) TO THE COMPLEX SPECTRUM OF TOXIC INORGANIC AND ORGANIC CONSTITUENTS OF THE DUSTS, VAPORS, AND GASES ARE POORLY DEFINED WITH RESPECT TO BOTH MALIGNANT AND NON-MALIGNANT DISEASES. THE DEGREE OF VENTILATION REQUIRED IN IN SITU MINES IS NOT DEFINED; INDIVIDUAL DOSE MONITORS FOR THE UNCHARACTERIZED ORGANIC RESIDUALS ARE NOT AVAILABLE; GUIDELINES FOR A HYGIENE PROGRAM HAVE NOT BEEN ESTABLISHED; ANALYSES OF RISKS HAVE NOT BEEN PERFORMED; AND CONTROLS FOR INHALATION PROTECTION FROM OTHER INDUSTRIES WILL HAVE TO BE ADAPTED TO THE OIL SHALE INDUSTRY.

> ANOTHER SEARCH? Y/N) N

8. Query #8: What are the water pollution effects of SRC?

Since DOE is planning an SRC-2 plant in Morgantown, West Virginia, what are the water pollution problems in West Virginia?

(Pages of output: 2)

Runstream

enter: .D FIND4 [RETURN]

[RETURN]

> COMMAND> FIND
 > NEED HELP? REPLY HELP TO SET UP KEYSETS, OR KEY TO CHOOSE KEYWORDS.
 > KEYWORD SET (IN QUOTES)> KEY
 > SEARCHWORD> SRC
 SRC SOLVENT REFINED COAL
 NGASRC NATURAL GAS
 > ANOTHER SEARCH? Y/N> N
 > KEYWORD SET (IN QUOTES)> " SRC "
 1 LINE IN RANGE
 > LIST TITLES ONLINE? Y/N> Y

414. A207 10/09/79 ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS FACT SHEET ON LIQUEFACTION-SOLVENT REFINED COAL
 II AUTHOR: DOE ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS

> ANOTHER KEYWORD SET? Y/N> N
 > SELECT A TITLE? Y/N> Y
 > CAUTION-- ADD CURRENT ARTICLE FILE TO PRINT FILE? Y/N> Y
 > T ARTICLE HAS BEEN ADDED TO PRINT FILE.
 > ACCESS CODE> A207
 > ARTICLE A207 IS LOADED INTO T ARTICLE.
 > COMMAND> WORD
 > SEARCHWORD> WATER POLLUTANT
 > STOP LISTING WITH (BREAK) KEY.

NICKEL	4.6X10 ¹¹ -4
LEAD	4.8X10 ¹¹ -4
POLYNUCLEAR ORGANIC MATERIAL	1X10 ¹¹ -9

WATER POLLUTANTS
 NO DIRECT DISCHARGE INTO ANY WATERCOURSE

SOLID WASTE	TONS
DRY TON EQUIVALENT	28,000

ENERGY PRODUCT	EQUIVALENT BARRELS

SYNCRUDE (SRC II)	111,000
EQUIVALENT SOLID COAL	111,000
AT 0.2 - 0.5 % SULFUR	
FROM SRC I)	

*INCLUDES SOLID WASTE FROM MINE BURIAL AND TAILINGS POND.

> ANOTHER SEARCH? Y/N> N
 > COMMAND> FIND
 > NEED HELP? REPLY HELP TO SET UP KEYSETS, OR KEY TO CHOOSE KEYWORDS.
 > KEYWORD SET (IN QUOTES)> "W" INT "WATER" INT "POLLUTANT"
 9 LINES IN RANGE
 > LIST TITLES ONLINE? Y/N>

> ANOTHER KEYWORD SET? Y/N>
 > KEYWORD SET (IN QUOTES)>
 4 LINES IN RANGE

> LIST TITLES ONLINE? Y/N) Y

120. A60 09/27/79 WATER QUALITY AND AVAILABILITY - WEST VIRGINIA (FROM RIIA FIRST ANNUAL REPORT) AUTHOR: ASEP-OTI-RAD (BNL)
428. A214 10/09/79 ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS FACT SHEET ON SURFACE COAL MINING-EASTERN AUTHO
R: DOE ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS
432. A216 10/09/79 ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS FACT SHEET ON UNDERGROUND COAL MINING-EASTERN A
UTHOR: DOE ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS
438. A219 10/09/79 ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS FACT SHEET ON COAL POWER PLANT - EASTERN COAL A
UTHOR: DOE ENVIRONMENTAL DATA FOR ENERGY TECHNOLOGY POLICY ANALYSIS

> ANOTHER KEYWORD SET? Y/N) N
> SELECT A TITLE? Y/N) Y
> CAUTION-- ADD CURRENT ARTICLE FILE TO PRINT FILE? Y/N) Y
> T ARTICLE HAS BEEN ADDED TO PRINT FILE.
> ACCESS CODE) A60
> ARTICLE A60 IS LOADED INTO T ARTICLE.
> COMMAND) REPORT
> TO STOP THE LISTING, HIT THE (BREAK) KEY.
1A60 WATER QUALITY AND AVAILABILITY - WEST VIRGINIA (FROM RIIA FIRST
ANNUAL REPORT)
STATE/ UV MEDIUM/ WATER POLLUTAN/ IRON PHOSPHOR DISSOLVE FACCAT/
UNDER SURFACE

ASEP-OTI-RAD (BNL)

- SEASONAL LOW-FLOW PROBLEMS INDICATED FOR ASA 206
(POTOMAC)
- COMBINED MINING AND UTILITY DISCHARGES MAY LEAD TO
WATER QUALITY VIOLATIONS IN ASA 502 (UPPER OHIO)
WATER-FOR-ENERGY PROBLEMS ARE INDICATED IN TWO OF THE FOUR
ASA'S CONTAINED IN THE STATE OF WEST VIRGINIA. ASA 206 (POTO-
MAC) IS PROJECTED TO HAVE PROBLEMS DURING SEASONAL LOW FLOW PER-
IODS ASSOCIATED WITH THE OPERATION AND DEVELOPMENT OF WATER CON-
SUMPTIVE STEAM-ELECTRIC GENERATING FACILITIES.
IN ASA 502 (UPPER OHIO), ENERGY DEVELOPMENT OF ALL TYPES,
FUELED BY THE BASIN'S LARGE RESERVES OF COAL, IS PROJECTED TO
INCREASE SUBSTANTIALLY OVER THE NEXT DECADE. INCREASED INDUS-
TRIAL GROWTH, BEYOND THAT REFLECTED IN THE MANUFACTURING PRO-
JECTIONS USED IN THIS ANALYSIS, IS ALSO POSSIBLE AS A RESULT
OF PROJECTED DEVELOPMENT IN THE COAL-RICH UPPER OHIO MAINSTREAM.
COMBINED MINING AND UTILITY DISCHARGES MAY VIOLATE TOTAL DIS-
SOLVED SOLIDS AND PHOSPHORUS CRITERIA EVEN IF EFFLUENT GUIDE-
LINES ARE MET. ENERGY-RELATED DISCHARGES OF METALS, PARTICU-
LARLY IRON, WILL BE REDUCED, BUT BACKGROUND VIOLATIONS MAY RE-
MAIN.
SEVERE WATER SHORTAGES DURING LOW FLOW PERIODS, THAT ARE
NOT REVEALED AS PROBLEMS AT THE ASA LEVEL, EXIST ALONG THE
LOWER MONONGAHELA RIVER (WITHIN ASA 501), AND ARE POSSIBLE ON
SEVERAL OTHER TRIBUTARIES.

FROM PAGE 3-40 OF RIIA DOCUMENT

SOURCE: REGIONAL ISSUE IDENTIFICATION AND ASSESSMENT. FIRST
ANNUAL REPORT. FINAL DRAFT JULY 1979.
LAST UPDATE: 9/14/79
ENTERED BY: USRE HOLLENBECK

9. Query #9: In what areas in the United States have there been more than one day when Acid rainfall exceeded National Air Quality Standards?

Was Boston one of those areas?

Provide me with data so I can run a regression to test the relationship among:

Population 1975
Oil Production
Number of Oil
Oil Consumption (Distillate)
Sulfate Violations of NAAQS
Acid Violations of NAAQS

EXTRACTION

(Pages of output: 2)

Runstream

enter: .D SPECIAL [RETURN]
[RETURN]

RESULTS

(Pages of output: 4)

Runstream

enter: .D SPECOUT [RETURN]

> COMMAND> OPEN
 > DATA BASE? MEFS, BEAS, EES, OR RESCO? EES
 > CAUTION--EES CLEAR T ARTICLE. ADD CURRENT T ARTICLE TO PRINT FILE? Y/N? Y
 > T ARTICLE HAS BEEN ADDED TO PRINT FILE.
 > WANT LONG BEA NAMES? Y/N? Y
 > NEED HELP? REPLY 'HELP' TO NEXT QUESTION.
 NEED A KEYWORD? REPLY 'KEY'

> DATA ELEMENT> KEY
 > SCAN KEYWORDS FOR THE ONES YOU WANT.
 > ENTER CHARACTERS OR A WORD TO SEARCH ON? OIL

KEYWORD	ADDRESS	DEFINITION
OILPROD	01TH 02 004	CRUDE OIL PRODUCTION
OILNUM	04TH 05 031	NUMBER OF IN-SERVICE OIL PLANTS
DISTCAP	05TH 25 019	CRUDE OIL DISTILLATION CAPACITY
CRUDEIN	05TH 29 055	CRUDE OIL INPUT TO OIL REFINING
NCASIN	05TH 30 064	NATURAL GAS INPUT TO OIL REFINING
DISTOUT	05TH 31 073	DISTILLATE OIL OUTPUT FROM OIL REFINING
RESOUT	05TH 32 082	RESIDUAL OIL OUTPUT FROM OIL REFINING
GASOUT	05TH 33 091	GASOLINE OUTPUT FROM OIL REFINING
ORGOUT	05TH 34 100	OTHER ORGANIC OUTPUT FROM OIL REFINING
DISTINEL	05TH 35 109	DISTILLATE OIL INPUT TO ELECTRIC GENERATION
RESINEL	05TH 36 118	RESIDUAL OIL INPUT TO ELECTRIC GENERATION
DISOILMI	09TH 08 058	DISTILLATE OIL - MISC. DEMAND
RESOILMI	09TH 09 067	RESIDUAL OIL - MISC. DEMAND
DISOILRC	09TH 11 085	DISTILLATE OIL - RESIDENTIAL AND COMMERCIAL DEMAND
DISOILIN	09TH 12 094	DISTILLATE OIL - INDUSTRIAL DEMAND
DISOILTR	09TH 13 103	DISTILLATE OIL - TRANSPORTATION DEMAND
RESOILRC	09TH 14 112	RESIDUAL OIL - RESIDENTIAL AND COMMERCIAL DEMAND
RESOILIN	09TH 15 121	RESIDUAL OIL - INDUSTRIAL DEMAND
RESOILTR	09TH 16 130	RESIDUAL OIL - TRANSPORTATION DEMAND

> SEARCH ANOTHER? Y/N? Y
 > ENTER CHARACTERS OR A WORD TO SEARCH ON? ACID

KEYWORD	ADDRESS	DEFINITION
ACIDUIOL	07TH 09 067	NO. ANNUAL VIOLATIONS OF NAAQS: ACID RAINFALL

> SEARCH ANOTHER? Y/N? N

> DATA ELEMENT> POP75

THINKING...PLEASE STAND BY...
 > KEYWORD POP75 IS NOW TABULATED IN T ARTICLE.

> ADD ANOTHER KEYWORD? Y/N? Y

> DATA ELEMENT> OILPROD

THINKING...PLEASE STAND BY...
 > KEYWORD OILPROD IS NOW TABULATED IN T ARTICLE.

> ADD ANOTHER KEYWORD? Y/N? Y

> DATA ELEMENT> OILNUM

THINKING...PLEASE STAND BY...
 > KEYWORD OILNUM IS NOW TABULATED IN T ARTICLE.

> ADD ANOTHER KEYWORD? Y/N? Y

> DATA ELEMENT> DISOILRC

THINKING...PLEASE STAND BY...
 > KEYWORD DISOILRC IS NOW TABULATED IN T ARTICLE.

> ADD ANOTHER KEYWORD? Y/N? Y

> DATA ELEMENT> DISOILIN

THINKING...PLEASE STAND BY...
 > KEYWORD DISOILIN IS NOW TABULATED IN T ARTICLE.

> ADD ANOTHER KEYWORD? Y/N? Y

> DATA ELEMENT> DISOILTR

> THINKING...PLEASE STAND BY...

> KEYWORD DISOILTR IS NOW TABULATED IN T ARTICLE.
 > ADD ANOTHER KEYWORD? Y/N) Y
 > DATA ELEMENT) DISOILMI
 THINKING...PLEASE STAND BY...
 > KEYWORD DISOILMI IS NOW TABULATED IN T ARTICLE.
 > ADD ANOTHER KEYWORD? Y/N) Y
 > DATA ELEMENT) KEY
 > SCAN KEYWORDS FOR THE ONES YOU WANT.
 > ENTER CHARACTERS OR A WORD TO SEARCH ON) SULF
 KEYWORD ADDRESS DEFINITION
 .....
 SULVIOL 07TH 08 05B NO. ANNUAL VIOLATIONS OF NAAQS: SULFATE
 > SEARCH ANOTHER? Y/N) N
 > DATA ELEMENT) RESOILRC
 THINKING...PLEASE STAND BY...
 > KEYWORD RESOILRC IS NOW TABULATED IN T ARTICLE.
 > ADD ANOTHER KEYWORD? Y/N) Y
 > DATA ELEMENT) SULVIOL
 THINKING...PLEASE STAND BY...
 > KEYWORD SULVIOL IS NOW TABULATED IN T ARTICLE.
 > ADD ANOTHER KEYWORD? Y/N) Y
 > DATA ELEMENT) ACIDVIOL
 THINKING...PLEASE STAND BY...
 > KEYWORD ACIDVIOL IS NOW TABULATED IN T ARTICLE.
 > ADD ANOTHER KEYWORD? Y/N) Y
 > ONLY 10 KEYWORDS CAN BE TABULATED.
 TO CHECK RESULTS, USE COMMANDS REPORT, WORD, OR ADD/PRINT.
 > PLEASE STANDBY FOR FINAL EDITING...

> COMMAND) REPORT
> TO STOP THE LISTING, HIT THE <BREAK> KEY.

SELECTED ENERGY-ENVIRONMENTAL STATISTICS TABLE
DATA SOURCE: URBAN SYSTEMS RESEARCH AND ENGINEERING
DATE PREPARED: October 12, 1979

BEA	BEA NAME	POP75	TOILPROD	TOILNUM	DISOILRC	DISOILIN	DISOILTW	DISOILMI	RESOILRC	SULVIOL	ACIDVIOL
001	BANGOR, MAINE	3439		15	16	2	4	861	4	1	1
002	PORTLAND-SOUTH	7988		22	38	4	6	1343	9	1	1
003	BURLINGTON, VE	5361		25	23	3	4	762	2	2	1
004	BOSTON, MASS.	65070		112	296	24	51	12686	127	1	2
005	HARTFORD, CONN	30444		40	106	13	16	2422	31	2	2
006	ALBANY-SCHENEC	13891		28	39	6	5	1439	21	2	2
007	SYRACUSE, N.Y.	14772		6	38	6	4	1287	23	2	1
008	ROCHESTER, N.Y	10289		12	26	5	2	257	16	3	1
009	BUFFALO, N.Y.	17832	14505		45	9	6	512	26	2	1
010	ERIE, PA.	4794	7612	1	8	5	3	189	2	3	1
011	WILLIAMSPORT,	4406	164	8	8	4	3	185	2	3	2
012	BINGHAMTON, N.	7778	167		18	4	3	162	9	1	1
013	WILKES-BARRE-H	7136		4	12	5	4	449	3	2	1
014	NEW YORK, N.Y.	181367		243	512	89	100	13733	270	3	2
015	PHILADELPHIA,	74593		141	167	64	57	9356	44	2	2
016	HARRISBURG, PA	18060		23	32	16	16	1494	8	3	1
017	BALTIMORE, MD.	27761		71	47	23	25	2165	12	1	2
018	WASHINGTON, D.	32662		49	48	10	18	5815	36	999	999
019	STAUNTON, VA.	4332		2	4	4	4	97	1		
020	ROANOKE, VA.	8869		4	10	11	10	56	1	1	1
021	RICHMOND, VA.	10761		8	13	10	10	505	2	1	1
022	NORFOLK-PORTSM	13009		17	15	6	10	3459	1	1	
023	RALEIGH, N.C.	17531		15	16	16	12	1671	2	1	
024	WILMINGTON, N.	5208		4	4	5	5	1056		1	1
025	GREENSBORO-WIN	12191		3	11	22	10	24	2	2	1
026	CHARLOTTE, N.C	16100		18	14	16	17	377	2	1	1
027	ASHEVILLE, N.C	4158			4	5	4	150		1	2
028	GREENVILLE, S.	9040		4	5	6	7	53		1	1
029	COLUMBIA, S.C.	6739		16	3	5	4	529		1	1
030	FLORENCE, S.C.	4397		16	2	4	3	60		1	
031	CHARLESTON, S.	4819		12	2	2	3	661		3	
032	AUGUSTA, GA.	4698		13	1	5	3	221		1	1
033	SAVANNAH, GA.	4226		12	1	6	5	130		2	
034	JACKSONVILLE,	12097		56	3	10	17	1106		2	
035	ORLANDO, FLA.	11864	152	31	3	7	8	696		1	1
036	MIAMI, FLA.	30520	26026	92	9	16	26	1016		1	
037	TAMPA-ST. PETE	24007	3401	64	6	16	18	613	2	1	1
038	TALLAHASSEE, F	3985		14	1	4	4	282		2	
039	PENSACOLA, FLA	4315	256822	1	1	5	3	1042		2	1
040	MONTGOMERY, AL	7373			2	4	11	4054		1	1
041	ALBANY, GA.	4900		3	1	6	4	112	1	1	
042	MACON, GA.	5212		2	1	6	4	183	1	1	1
043	COLUMBUS, GA.-	4790			1	2	3	435		2	1
044	ALANTA, GA.	26043		9	6	18	30	403	4	1	1
045	BIRMINGHAM, AL	18198	432		6	16	24	1527		2	1
046	MEMPHIS, TENN.	17920		27	5	15	25	1402		1	
047	HUNTSVILLE, AL	7034			2	4	6	1146		1	
048	CHATTANOOGA, T	7902			2	6	8	59		1	1

049	NASHVILLE, TEN	15626x	1922x	x	4x	9x	17x	894x	x	2x	1x
050	KNOXVILLE, TEN	9880x	4265x	x	2x	8x	10x	96x	x	2x	1x
051	BRISTOL, VA.-T	8178x	17x	x	5x	8x	8x	75x	x	2x	1x
052	HUNTINGTON-ASH	13723x	12772x	10x	5x	10x	18x	390x	1x	2x	x
053	LEXINGTON, KY	8248x	14593x	5x	2x	5x	5x	110x	x	1x	1x
054	LOUISVILLE, KY	12698x	138x	x	7x	7x	13x	797x	1x	2x	2x
055	EVANSVILLE, IN	7924x	109521x	13x	9x	9x	8x	209x	1x	2x	1x
056	TERRA HAUTE, I	2502x	10714x	14x	4x	2x	3x	188x	1x	2x	1x
057	SPRINGFIELD, I	4978x	4268x	20x	5x	4x	5x	309x	3x	2x	1x
058	CHAMPAIGN-URBA	3907x	3210x	8x	5x	3x	3x	378x	2x	1x	1x
059	LAFAYETTE-WEST	2569x	x	x	5x	2x	3x	129x	1x	3x	1x
060	INDIANAPOLIS,	16868x	x	12x	29x	10x	21x	1220x	3x	3x	1x
061	ANDERSON, IND.	5538x	x	x	9x	5x	4x	204x	1x	1x	1x
062	CINCINNATI, OH	19178x	5x	23x	19x	12x	17x	525x	x	2x	1x
063	DAYTON, OHIO	11677x	7x	32x	9x	5x	7x	884x	x	2x	1x
064	COLUMBUS, OHIO	18617x	13773x	1x	14x	11x	15x	925x	1x	1x	x
065	CLARKSBURG, U.	3527x	5114x	x	1x	2x	3x	131x	x	1x	1x
066	PITTSBURGH, PA	36733x	2172x	29x	59x	46x	32x	1549x	16x	2x	1x
067	YOUNGSTOWN-WAR	7857x	1037x	3x	8x	6x	6x	195x	1x	3x	1x
068	CLEVELAND, OHI	41899x	24449x	23x	33x	25x	35x	1128x	1x	2x	1x
069	LIMA, OHIO	2801x	x	2x	2x	2x	2x	46x	x	1x	1x
070	TOLEDO, OHIO	10944x	36x	13x	10x	6x	11x	242x	x	1x	1x
071	DETROIT, MICH.	52613x	7143x	60x	85x	14x	81x	2623x	3x	3x	x
072	SAGINAW, MICH.	8791x	5350x	54x	13x	3x	4x	847x	x	2x	x
073	GRAND RAPIDS,	11946x	53738x	31x	19x	5x	7x	473x	1x	2x	1x
074	LANSING, MICH.	10713x	34979x	12x	18x	5x	5x	715x	1x	3x	1x
075	FORT WAYNE, IN	6187x	63x	11x	10x	5x	7x	213x	1x	1x	1x
076	SOUTH BEND, IN	7695x	x	11x	13x	6x	6x	246x	1x	2x	1x
077	CHICAGO, ILL.	82032x	x	108x	99x	40x	88x	3813x	43x	2x	2x
078	PEORIA, ILL.	6637x	268x	4x	7x	4x	6x	180x	4x	1x	1x
079	DAVENPORT-ROCK	6106x	x	21x	6x	5x	6x	224x	2x	2x	x
080	CEDAR RAPIDS,	3359x	x	13x	3x	3x	3x	62x	x	1x	x
081	DUBUQUE, IOWA	3088x	x	25x	4x	4x	2x	55x	x	1x	x
082	ROCKFORD, ILL.	5573x	x	14x	7x	3x	3x	127x	2x	1x	1x
083	MADISON, WIS.	4882x	x	9x	11x	2x	3x	318x	1x	1x	1x
084	MILWAUKEE, WIS	21247x	x	19x	46x	7x	14x	842x	2x	1x	1x
085	APPLETON-OSHKO	9809x	x	24x	19x	6x	6x	646x	1x	1x	x
086	WAUSAU, WIS.	3885x	x	6x	8x	3x	3x	111x	1x	x	1x
087	DULUTH-SUPERIO	4347x	x	25x	8x	8x	5x	291x	x	1x	x
088	EAU CLAIRE, WI	2406x	x	20x	6x	1x	1x	73x	x	2x	1x
089	LA CROSSE, WIS	2865x	x	17x	6x	2x	2x	176x	x	1x	x
090	ROCHESTER, MIN	2618x	x	24x	5x	3x	1x	36x	x	2x	x
091	MINNEAPOLIS-ST	30802x	x	138x	63x	19x	29x	776x	3x	1x	x
092	GRAND FORKS, N	2361x	x	29x	4x	4x	3x	277x	x	999x	x
093	MINOT, N.D.	1884x	119645x	8x	3x	4x	3x	308x	x	999x	x
094	GREAT FALLS, M	2366x	32187x	x	2x	2x	5x	256x	x	999x	x
095	BILLINGS, MONT	3961x	449235x	1x	3x	4x	8x	109x	x	999x	x
096	BISMARCK, N.D.	1495x	38684x	6x	2x	5x	2x	227x	x	999x	x
097	FARGO-MOORHEAD	3518x	x	19x	6x	6x	4x	271x	x	999x	x
098	ABERDEEN, S.D.	1389x	x	14x	2x	4x	1x	26x	x	999x	x
099	SIOUX FALLS, S	3736x	x	39x	6x	7x	3x	73x	x	999x	x
100	RAPID CITY, S.	2509x	40285x	17x	4x	5x	2x	363x	x	999x	x
101	SCOTTSBLUFF, N	1072x	23987x	5x	1x	4x	2x	43x	x	999x	x
102	GRAND ISLAND,	3355x	12991x	28x	2x	12x	5x	109x	x	999x	x
103	SIOUX CITY, IO	4600x	x	44x	4x	13x	5x	105x	x	999x	x
104	FORT DODGE, IO	2673x	x	45x	2x	4x	3x	46x	x	1x	x
105	WATERLOO, IOWA	4312x	x	45x	9x	5x	4x	66x	x	1x	x
106	DES MOINES, IO	8135x	x	61x	8x	8x	10x	197x	x	1x	x
107	OMAHA, NEBR.-I	8539x	x	29x	6x	10x	17x	573x	x	999x	1x
108	LINCOLN, NEBR.	3407x	221x	14x	3x	8x	5x	174x	x	999x	x
109	SALINA, KANS.	3509x	199166x	9x	1x	8x	8x	55x	x	999x	x

110 WICHITA, KANS. *	7352*	148737*	8*	2*	8*	7*	178*	*	999*	*
111 KANSAS CITY, M *	23306*	8800*	39*	12*	15*	31*	1287*	3*	999*	1*
112 COLUMBIA, MO. *	4228*	*	18*	3*	4*	3*	205*	1*	1*	*
113 QUINCY, ILL. *	3002*	145*	15*	3*	3*	3*	54*	1*	1*	*
114 ST. LOUIS, MO. *	31120*	88702*	36*	25*	18*	29*	1687*	8*	1*	*
115 PADUCAH, KY. *	5926*	*	10*	3*	4*	5*	114*	1*	1*	*
116 SPRINGFIELD, M *	9215*	10202*	8*	4*	7*	8*	172*	1*	999*	*
117 LITTLE ROCK-MO *	9813*	*	23*	2*	9*	19*	807*	*	1*	*
118 FORT SMITH, AR *	3152*	1*	*	1*	2*	4*	135*	*	1*	*
119 TULSA, OKLA. *	10814*	147606*	3*	3*	7*	13*	206*	*	1*	*
120 OKLAHOMA CITY, *	12791*	578793*	11*	4*	7*	15*	771*	*	1*	*
121 WICHITA FALLS, *	4577*	330976*	3*	1*	3*	3*	1878*	*	1*	1*
122 AMARILLO, TEX. *	4537*	205159*	*	1*	5*	11*	323*	*	999*	*
123 LUBBOCK, TEX. *	3551*	1190915*	*	1*	4*	4*	323*	*	2*	*
124 ODESSA, TEX. *	3308*	2171855*	*	1*	4*	3*	318*	*	2*	*
125 ABILENE, TEX. *	2811*	824745*	*	1*	3*	4*	609*	*	2*	*
126 SAN ANGELO, TE *	1314*	67547*	*	*	1*	1*	396*	*	2*	*
127 DALLAS, TEX. *	29349*	232928*	*	8*	12*	50*	2222*	1*	1*	1*
128 KILLEEN-TEMPLE *	4734*	2110*	*	1*	2*	6*	4380*	*	2*	*
129 AUSTIN, TEX. *	6880*	21344*	*	2*	4*	5*	837*	*	2*	*
130 TYLER, TEX. *	6119*	897162*	*	1*	4*	11*	91*	*	2*	*
131 TEXARKANA, TEX *	3512*	46744*	4*	1*	3*	5*	125*	*	1*	*
132 SHREVEPORT, LA *	4691*	195012*	*	*	5*	6*	1224*	*	2*	1*
133 MONROE, LA. *	5489*	195452*	7*	1*	6*	7*	755*	*	1*	*
134 GREENVILLE, MI *	5004*	79590*	1*	2*	6*	5*	122*	*	1*	*
135 JACKSON, MISS. *	5474*	32014*	1*	4*	5*	6*	309*	*	1*	*
136 MERIDAN, MISS. *	4107*	206465*	7*	2*	5*	5*	275*	*	1*	*
137 MOBILE, ALA. *	7861*	34424*	4*	3*	5*	14*	1115*	*	1*	*
138 NEW ORLEANS, L *	22751*	2575748*	5*	3*	29*	49*	985*	*	2*	*
139 LAKE CHARLES, *	7744*	1071569*	1*	1*	16*	13*	6380*	*	2*	*
140 BEAUMONT-PORT *	3982*	71713*	*	1*	2*	6*	188*	*	2*	1*
141 HOUSTON, TEX. *	27061*	945694*	2*	7*	15*	48*	775*	1*	2*	*
142 SAN ANTONIO, T *	13704*	229412*	*	3*	6*	14*	6411*	*	1*	*
143 CORPUS CHRISTI *	5487*	483816*	*	1*	4*	8*	1564*	*	1*	*
144 MCALLEN-PHARR- *	4441*	47686*	1*	1*	3*	6*	117*	*	1*	*
145 EL PASO, TEX. *	7868*	539120*	9*	1*	7*	11*	2597*	*	999*	*
146 ALBUQUERQUE, M *	6696*	15679*	1*	1*	3*	10*	402*	*	999*	*
147 COLORADO SPRIN *	5899*	3851*	15*	2*	3*	5*	1607*	*	999*	*
148 DENVER, COL. *	17796*	85983*	8*	7*	9*	16*	1129*	1*	999*	*
149 GRAND JUNCTION *	2910*	227012*	1*	1*	3*	3*	90*	*	999*	*
150 CHEYENNE, WYO. *	2593*	416015*	*	5*	8*	16*	547*	1*	999*	*
151 SALT LAKE CITY *	12259*	243846*	1*	11*	9*	26*	2972*	3*	999*	*
152 IDAHO FALLS, I *	3461*	*	4*	7*	5*	6*	328*	*	999*	*
153 BUTTE, MONT. *	2569*	*	1*	3*	3*	7*	43*	*	999*	*
154 SPOKANE, WASH. *	7338*	*	4*	10*	6*	10*	260*	3*	999*	*
155 SEATTLE-EVERET *	24130*	*	7*	27*	19*	25*	1909*	11*	999*	*
156 YAKIMA, WASH. *	4319*	*	*	4*	4*	6*	82*	2*	999*	*
157 PORTLAND, ORE. *	17983*	*	14*	17*	12*	30*	429*	11*	999*	*
158 EUGENE, ORE. *	6174*	*	1*	6*	3*	12*	354*	3*	999*	*
159 BOISE CITY, ID *	3202*	*	*	6*	3*	4*	770*	*	999*	*
160 RENO, NEV. *	2604*	*	19*	1*	3*	3*	116*	*	999*	*
161 LAS VEGAS, NEV *	3862*	9780*	3*	2*	1*	3*	386*	*	999*	*
162 PHOENIX, ARIZ. *	16799*	3882*	38*	2*	12*	15*	266*	*	999*	*
163 TUCSON, ARIZ. *	5788*	*	18*	1*	6*	7*	179*	*	999*	1*
164 SAN DIEGO, CAL *	16091*	*	29*	1*	3*	7*	7577*	1*	2*	*
165 LOS ANGELES-LO *	108860*	1017236*	116*	6*	31*	79*	5451*	5*	1*	*
166 FRESNO, CALIF. *	11256*	772609*	2*	1*	9*	10*	662*	*	1*	*
167 STOCKTON, CALI *	7102*	*	*	*	4*	6*	393*	*	1*	*
168 SACRAMENTO, CA *	12369*	62*	6*	1*	4*	12*	1244*	1*	1*	*
169 REDDING, CALIF *	1990*	*	4*	*	1*	3*	47*	*	1*	*
170 EUPEKA, CALIF. *	1308*	*	3*	*	1*	2*	23*	*	1*	*

171 SAN FRANCISCO- X	543102	828002	402	32	102	582	53722	32	12	2
172 ANCHORAGE, ALA X	35462	4403612	282	162	82	102	32662	2	9992	9992
173 HONOLULU, HAWA X	87242	2	542	12	42	102	14062	2	9992	9992
> COMMAND>										

10. Query #10: I would like to see the 1990 EIA Series C scenario giving a percentage breakdown of electric generation by fuel type.

(Pages of output: 1)

Runstream

enter: .D PIE [RETURN]

*1990 SERIES C SCENARIO
ELECTRIC GENERATION BY FUEL TYPE
PERCENTAGE*

11. Query #11: What are the 1990 estimates of imported versus local sulfate concentrations by Federal region?

(Pages of output: 1)

Runstream

enter: .D BAR [RETURN]

FIGURE A-9

*IMPORT VS. LOCAL SULFATE
BY FEDERAL REGION
1990*

12. Query #12: What are the forecasts from 1972-1995 of sulfur dioxide emissions in Region III?

(Pages of output: 1)

Runstream

enter: .D PLOT [RETURN]

FIGURE 3-5

SULFUR DIOXIDE EMISSIONS IN REGION III

13. Query #13: What will the estimated change in electrical generating capacity be in California from 1975-1990?

(Pages of output: 1)

Runstream

enter: .D MAP [RETURN]

FIGURE 9-4

GENERATING CAPACITY CHANGE IN MW 1975-90

FROM PAGE 9-5

14. Query #14: I would like to end this session.

(Pages of output: 1)

Runstream

enter: .D STOP

> COMMAND> STOP
THANKS FOR USING PASS...RETURNING TO SUPERWYLBUR MONITOR***
?

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