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LBL Publications

Title

Recon Training Materials

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Author

Lawrence Berkeley National Laboratory

Publication Date

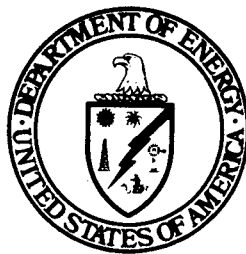
1978

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PUB. 231 Rev. 2

C.1



Department of Energy

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MAY 30 1979

LIBRARY AND
DOCUMENTS SECTION

RECON TRAINING MATERIALS

For Reference

Not to be taken from this room

PUB-231 Rev. 2
C.1

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Terminal Commands

Document Delivery

Evaluation Questionnaire

RECON COMMANDS -- SELECTED SLIDE TEXTS

BEGIN ! (Shift of 1)

- BEGINS NEW SESSION
- CLEARS SET HISTORY
- STARTS SET NUMBERING AT SET 1
- PROMPTS FOR PRINTOUT ADDRESS
- GIVES MENU OF FILE NUMBERS

PRINTOUT ADDRESS IS FOR IDENTIFICATION ONLY
PRINTOUT WILL BE SENT TO PASSWORD ADDRESS
DIAL-UP USERS:

- SEND ONE LINE AT A TIME
- PRESS RETURN KEY TO SEND
- AFTER LAST LINE, TYPE ONE BLANK
AT BEGINNING OF LINE
- PRESS RETURN KEY TO SEND

EXPAND " (Shift of 2 on some terminals)
" AQUATIC ORGANISMS

EXPAND shows a portion of the index,
usually 5 entries before your term and about
15 entries after it.

EXPANDING an E-number that shows RELATED TERMS
produces a display of thesaurus related terms.

" E6
IT=AQUATIC ORGANISMS

			CIT	RT
	R0000	IT=AQUATIC ORGANISMS	428	13
2	R0001	IT=CRUSTACEANS	252	11
2	R0002	IT=FISHES	2523	16
2	R0003	IT=PLANKTON	689	10
3	R0004	IT=ANIMALS	372	19
3	R0005	IT=AQUATIC ECOSYSTEMS	1756	14

SELECT # (Shift of 3)

Direct method (1 step)

- 1 #THERMAL POLLUTION
- 2 #THERMAL EFFLUENTS

Indirect method (2 steps)

"AQUATIC ORGANISMS"

"E6

- 3 #R5 (fishes, including its
narrower terms

Indirect method

"R4 (CRUSTACEANS)
#R6:R8

- 4 IT=LOBSTERS
- 5 IT=PRAWNS
- 6 IT=SHRIMP

This method provides individual sets, whereas
#R6-R8 or #R2, R6-R8, R10 would provide
one set.

SELECT #

Direct method, with prefix

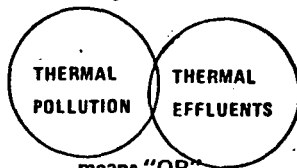
#SD=AQUATIC ORGANISMS (to retrieve articles
where this term was indexed, but not
articles where it was up-posted from
PLANKTON and other narrower terms)

- 7 SD=AQUATIC ORGANISMS

COMBINE \$ (Shift of 4)

8 \$1 + 2

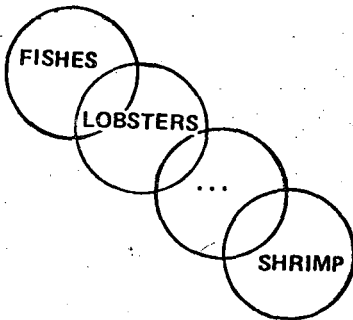
"OR" logic



+ means "OR"
"OR" logic broadens
"OR" is for alternatives

COMBINE \$

9 \$3-7/+



To COMBINE a range of set numbers,
use a slash with the Boolean operator:

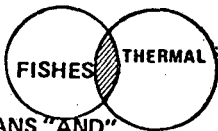
\$3-7/+

Do not forget the slash:

\$3-7 means COMBINE 3 NOT 7

COMBINE \$

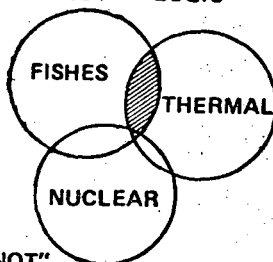
10 \$8 * 9 "AND" LOGIC



* MEANS "AND"
"AND" LOGIC NARROWS
"AND" IS FOR CO-OCCURRENCE

COMBINE \$

- 11 #NC = 210000 Nuclear power plants
12 #NC = 220000 Nuclear reactor technology
13 \$ 10-11-12 "NOT" LOGIC



- MEANS "NOT"
"NOT" LOGIC NARROWS
"NOT" IS FOR EXCLUSION

Set history

- 1 IT=THERMAL POLLUTION
- 2 IT=THERMAL EFFLUENTS
- 3 IT=FISHES
- 4 IT=LOBSTERS
- 5 IT=PRAWNS
- 6 IT=SHRIMP
- 7 SD=AQUATIC ORGANISMS
- 8 1+2 (thermal pollution or thermal effluents)
- 9 3-7/+ (Lobsters, fishes, shrimp)
- 10 8*9 (Thermal pollution AND fishes, etc.)
- 11 NC=210000 (nuclear power reactors)
- 12 NC=220000 (nuclear reactor technology)
- 13 10-11-12 (set 10 excluding nuclear reactors)

DISPLAY % (Shift of 5)

% setnumber [/format [range]]

FORMATS:

- 0 (fullest format)
- 1 (accession number only)
- 2 (citation and descriptors: DEFAULT)
- 3 (titles and accession numbers, several to a page; good for a quick look)
- 4 (brief citation without descriptors)
- 5 (citation and abstract, without descriptors)
- 6 (citation, abstract and descriptors)

DISPLAY %

% setnumber [/format [/range]]

- %11 default format 2; first citation in set 11
%11;0 format 2, with one page turn
%11/3;0;0 format 3 (titles), with two page turns
%11/4/8-25;0;0 format 4 (short), starting from citation # 8 in set 11, with two page turns
%11/0;0;0 format 0 (longest), first citation, with two page turns

DISPLAY %

SPECIAL USES

% VOLUME DOCUMENTTYPE CITATIONNUMBER / FORMAT
 % VOLUME ? CITATIONNUMBER / FORMAT
 % 7783582/0 DIRECT DISPLAY, TO SHOW FULL CITATION
 (FOR AN ITEM SEEN IN AN INCOMPLETE FORMAT
 SUCH AS FORMAT 3)
 LEADING ZEROES NOT REQUIRED
 % - DISPLAY PREVIOUS CITATION (NOT POSSIBLE IN
 FORMAT 3)
 % E SHOW LAST EXPAND DISPLAY (A FAST METHOD)
 % R SHOW LAST RELATED TERM DISPLAY
 % FA SHOW FIRST ABSTRACT IN CURRENT SET
 % FP SHOW FIRST PAGE OF CURRENT MULTI-PAGE
 CITATION

PRINT &

& SETNUMBER [/ FORMAT [/ RANGE]] PRINTS DESIGNATED ITEMS
 OFFLINE. THEY ARE SENT
 TO PASSWORD ADDRESS.
 & 2 PRINT CITATIONS FROM SET 2 IN DEFAULT
 FORMAT 2, DEFAULT QUANTITY 200
 & 2 / 0 PRINT CITATIONS FROM SET 2 IN FULL
 FORMAT 0, DEFAULT QUANTITY 200
 & 2 / 0 / 201 - 352 PRINT REMAINING CITATIONS FROM
 SET 2 IN FORMAT 0
 & 2 / 2 / 10-50 PRINT ITEMS 10 THROUGH 50 IN FORMAT 2
 (WHERE THE FIRST 9 ITEMS HAD BEEN
 DISPLAYED ONLINE AND WERE NOT NEEDED)

KEEP (

KEEP saves specific citations that you choose,
 in set 99.
 KEEP is used for scanning and weeding, to edit
 a near-perfect set of citations.
 (KEEP the citation you just displayed (for
 one-at-a-time formats 0,2,5,6)
 (7/1-4 KEEP set 7, first 4 citations
 (78.8291 KEEP citation 8921 from volume 78.
 (For several-at-a-time Formats 3,4)

LIMIT)

LIMIT reduces search sets by various parameters.

) setnumber / volume [/ document type [/ number range]

)2/76-79 LIMITS set 2 to volumes 76 through 79

)2/ALL/R,U,X LIMITS set 2 to REPORTS (all volumes)

document type U = REPORT ANALYTICS

document type X = PROGRESS REPORTS

LIMIT can be used to update a previous search.

If the previous search produced citation # 5819

in volume 78 as the first (latest) citation,

redo the search exactly the same.

If result is set 10,

11)10/78/ALL/5820-999999 (to get the rest of volume 78)

12)10/79 (to get volume 79)

13 \$11+12

LIMIT ALL)ALL

)ALL 77-79 LIMITS all succeeding sets

)NO CANCELS previous LIMIT ALL commands

LIMIT ALL requires a lot of computer processing.

We do not recommend using LIMIT ALL.

DISPLAY SETS @

DISPLAY SETS SHOWS YOUR SET HISTORY
 IN A CONCISE FORM.

USE DISPLAY SETS WHENEVER YOU ARE
 DISCONNECTED AND LOG IN AGAIN, TO SEE
 IF YOU CAN CONTINUE YOUR SEARCH

END =

= ENDS YOUR SESSION

= STOP ENDS DIALUP SESSIONS.

LOOK

L

LOOK allows you to search within an established set
for something that is not indexed.

LOOK

- provides full Boolean logic (* + -)
- allows searching by order
- searches in unindexed fields

LOOK

L

Examples

L

Setnumber / fields / 'search expression'

- 1 #SILICON SOLAR CELLS
- 2 L1/A,T/'SILICON RIBBON' + 'SILICON DISC'
(adjacency is expressed simply as an ordinary phrase)
- 3 L1/A,T/'SILICON : RIBBON'
(here, SILICON precedes RIBBON, but there may be
intervening words or sentences)
- 4 L1/A,T/'SILICON' * 'RIBBON'
(here, SILICON AND RIBBON are sought in the abstract
or title)
- 5 L1/A,T/'SILICON' * ('RIBBON' + 'DISC')
(here, a combined statement asks for SILICON AND
either RIBBON or DISC(s). Note that "DISC" is
actually truncated; it could retrieve DISCO or DISCUSS,
DISCHARGE or DISCOLOR, DISCONTINUITY or DISCRETE.
- 6 L1/A,T/'SILICON' * ('RIBBON' + ' DISC ' + ' DISCS ')
(this is safer, avoiding truncating the short word
DISC on either end)

LOOK

L

SET	DESCRIPTOR	CIT
1	NC=14	1392
2	IT=SILICON SOLAR CELLS	103
3	2/A,T/'SILICON' * ('RIBBON' + 'DISC')	17
4	2/A,T/'SILICON' * ('RIBBON' + ' DISC ' + ' DISCS ')	15
5	2/A,T/'SILICON RIBBON' + 'SILICON DISC'	10
6	2/A,T/'SILICON : RIBBON'	15

RECON REMINDER

COMMAND KEYS

COMMAND →	BEGIN	EXPAND	SELECT	COMBINE	DISPLAY set	PRINT	KEEP	LIMIT	PAGE		DISPLAY SET
Operand(s) →		term	term	set nos.	ITEM +	set	set	set/range/type	+	END	HISTORY
Symbol →	!	"	#	\$	%	&	(	)	Ø	=	@

Command keys are depressed while holding down the SHIFT key. All commands must be transmitted by using the INT, RETURN or CARRIAGE RETURN key.

!	BEGIN	Begins search process. Initiates address request. Dial-up users terminate address with blank on new line.
"	EXPAND	Displays various searchable dictionaries, such as subject (index term) or author, e.g., "AU=SMITH, K. To directly display thesaurus related terms, enter "(thesaurus term). For more info, use ?EXP as command.
#	SELECT	Selects terms from EXPAND display by using E numbers; e.g., #e6. Selects terms directly, e.g., #WATER QUALITY. For more info, use ?SEL as command.
\$	COMBINE	Combines sets in Boolean logic + = OR; * = AND; - = NOT. Be careful that the logic you ask for is the logic you want. For more info, use ?COM.
%	DISPLAY	Displays search results. (Use %set no./format or for single items, e.g., %76.1242.) For more info, use ?DIS as command; use ?FORMAT for discussion of formats. Once search display has begun, use % to advance, %- to back up.
&	PRINT	Causes search results to be printed at ORNL and mailed to user. Same formats as DISPLAY. To dump items from screen directly on terminal printer, press the OUT button; if printer stops before all material is printed, press OUT button again. To stop printer, press MASTER CLEAR. (Note: Dial-up RECON terminals simply use Display command.)
Ø	PAGE	Turns page. Ø- backs up page.
@	DISPLAY SETS	Displays list of sets that have been created.
(	KEEP	Transfers items to <u>set 99</u> for later use; for more info, use ?KEEP.
)	LIMIT	Limits sets to citations of a specified volume range, type of document, and/or citation number range, e.g.,)5/76-78. For more info, use ?LIM.
?COVERAGE		Gives coverage of available files.
?HELP		Initiates <u>On-Line Help Package</u> . For human help, contact FTS 624-5381 or 615/574-5381
L	LOOK	Searches within an established set for words or phrases occurring in title or abstract. For more info, use ?LOOK L4/a,t/'brown hair' + 'blue eyes'
=	END	Ends a work session. It does not disconnect the terminal from the computer but does erase all sets. (Note: Dial-up RECON users enter =STOP to disconnect from the computer.)
=STOP	END STOP	

DOCUMENT DELIVERY BY THE DOE'S TECHNICAL INFORMATION CENTER

The Department of Energy's Technical Information Center (TIC) tries to include sufficient information on document availability with each citation to allow users of the TIC data bases to obtain the complete document. TIC usually cannot provide copies of non-report publications cited in the TIC data bases since, except for reports, TIC has not been responsible for retaining a copy of each document included in the data bases. TIC is also receiving an increasing amount of input from outside sources, and thus does not receive the document itself. If you are unable to locate a copy of a document you want, TIC personnel will be glad to try to help you find one. Please write the Publications Request Section, TIC, or the people mentioned below.

- a. Journals — TIC usually retains the Journals received for two years. Julia Daniel, Journal Desk (FTS 850-4271), can tell you whether TIC has the journal issue you need.
- b. Conferences — TIC tries to obtain a copy of the proceedings for all conferences cited in the data bases. Doris McGinnis, Publications Acquisitions (FTS 850-4271), can help you with conference questions.
- c. Books and other non-report publications — TIC is presently retaining most of these publications. Mrs. McGinnis can help you determine whether TIC has what you need.
- d. Reports — Reports should be requested from TIC on form DOE-540. TIC has limited stock of DOE reports; however, if TIC has a stock of printed copies, a copy can be provided free of charge. Non-DOE reports should be requested from sales agencies. The publication, "How to Obtain Research and Development Reports," is available from the Publications Request Section.

Date _____

EVALUATION Questionnaire

Department of Energy / RECON Training Workshop

Level of Experience (please check all that are applicable):

- _____ Experienced on RECON
 _____ Experienced on other systems
 _____ Little or no experience on RECON
 _____ Little or no experience on other systems

Subject specialty (e.g., energy, environment, physics, etc.):

PLEASE RATE THE FOLLOWING ITEMS ON THE SCALE OF 1-5 AS SHOWN. ALL RESPONSES ARE ANONYMOUS. SPACE FOR COMMENTS IS GIVEN AT THE END OF THE QUESTIONNAIRE.

I. Program Segments

1. Data base presentations:
 2. Time allotted to each data base

	<u>too little</u>					<u>too much</u>
EDB	1	2	3	4	5	
NSA	1	2	3	4	5	
GAP	1	2	3	4	5	
WRA	1	2	3	4	5	
ESI	1	2	3	4	5	
EIA	1	2	3	4	5	
NSIC	1	2	3	4	5	
RIP	1	2	3	4	5	
WRE	1	2	3	4	5	
Referral Files(NER)	1	2	3	4	5	

Comments about particular presentations (Space for general workshop comments is provided on the reverse side.):

3. RECON System presentations:

4. Time allotted to each presentation: too little too much
 1 2 3 4 5

Comments about a particular presentation:

RECON Workshop evaluation, page 2

5. The data base search samples:
6. How valuable were the samples?
7. The sample searches were:

<u>not very</u>		<u>very</u>		
1	2	3	4	5
<u>too few</u>		<u>too many</u>		
1	2	3	4	5
<u>too difficult</u>		<u>too easy</u>		
1	2	3	4	5

II. General Workshop Content

1. Taken as a whole, the workshop was:

<u>too elementary</u>	<u>too advanced</u>			
1	2	3	4	5
2. Length of the workshop (2 1/2 days)

<u>too short</u>	<u>too long</u>			
1	2	3	4	5
3. The coverage was:

<u>too theoretical</u>	<u>too practical</u>			
1	2	3	4	5
4. The level was:

<u>too general</u>	<u>too specific</u>			
1	2	3	4	5
5. The content will be useful to me in my job:

<u>not useful</u>	<u>very useful</u>			
1	2	3	4	5
6. The audiovisual aids were:

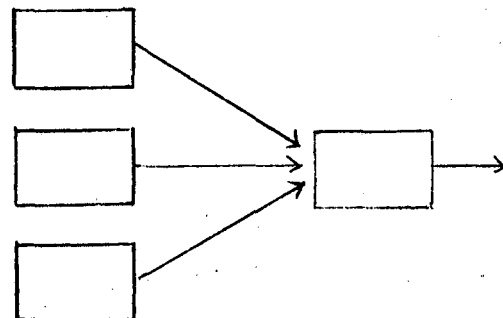
<u>hard to see</u>	<u>easy to see</u>			
1	2	3	4	5
7. Question answering
Time allotted to this segment was

<u>too little</u>	<u>too much</u>			
1	2	3	4	5
8. Hands-on terminal experience was

<u>not useful</u>	<u>very useful</u>			
1	2	3	4	5

III. Comments: _____

SEARCH STRATEGY MODELS



BUILDING BLOCKS SEARCH STRATEGY

CORROSION & BIOFOULING IN OCEAN THERMAL ENERGY PLANTS

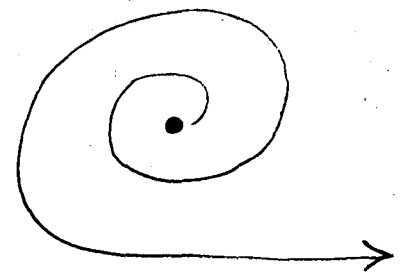
1	#NC=140800	<i>(Ocean thermal gradient power plants, under solar energy which is NC=140000)</i>	420 Postings
2	#OCEAN THERMAL POWER PLANTS		434 Postings
3	#OCEAN THERMAL ENERGY CONVERSION		64 Postings
4	#CORROSION	<i>(Sets 5 through 8 are all Related Terms to CORROSION)</i>	2416 Postings
5	#CORROSION PROTECTION		618 Postings
6	#CORROSION RESISTANCE		651 Postings
7	#CORROSIVE EFFECTS		929 Postings
8	#FOULING	<i>(includes biological fouling)</i>	183 Postings
9	\$ 1-3/+ * 4-8/+		32 Postings

* postings are approximate



SUCCESSIVE FRACTIONS SEARCH STRATEGY
STRIP MINING FOR COAL: ENVIRONMENTAL EFFECTS, AND RECLAMATION
IN THE WEST

1	#NC=01	(Coal, everything about it, almost)	32730 Postings
2	#ENVIRONMENTAL EFFECTS		11018 Postings
3	#LAND RECLAMATION		1032 Postings
4	\$1 * (2 + 3)		2201 Postings
5	#NC=010900	(Coal, environmental aspects)	2172 Postings
6	\$4 + 5		3150 Postings
7	#ROCKY MOUNTAIN REGION	(All States in Region VIII)	1243 Postings
8	\$ 6 * 7		258 Postings
9	#SURFACE MINING		1472 Postings
10	\$ 8 * 9		116 Postings



PEARL GROWING STRATEGY

COATINGS FOR SOLAR COLLECTORS, ESPECIALLY SELECTIVE SURFACE COATINGS.

THE COUNTRY'S EXPERT IS NASA'S GLENN McDONALD

1 #AU=MCDONALD, G.E.

13 Postings

%1

DIS 1/2/000001-000013//1 PAGE 1
 7000053689 ED8-78-10 14.100
 (ERDA /NASA/1060--77/1)Black chrome on
 commercially electroplated tin as a
 solar selective coating\
 McDonald,G.E.\
 National Aeronautics and Space
 Administration, Cleveland, Ohio (USA) ,
 Lewis Research Center\
 1977\
 CONF-770953--9 \ NASA-TM--73799
 14.1000\
 BLACK COATINGS:TINCHROMIUM OXIDES:IT3\
 ELECTRODEPOSITED COATINGS\ELECTROPLATING
 PERMISSIVITY:Q1,Q2,Q3\INFRARED RADIATION\
 OPTICAL PROPERTIES \ OPTIMIZATION \
 REFLECTIVITY: Q1, Q2, Q3 \ SPECTRALLY
 SELECTIVE SURFACES: T2 \ TIN \ VISIBLE
 RADIATION\

2 #BLACK COATINGS

47 Postings

3 #SPECTRALLY SELECTIVE SURFACES

282 Postings

4 \$ 2 * 3

30 Postings

5 #SOLAR COLLECTORS

2263 Postings

6 \$ 5 * (2 + 3)

131 Postings

7 #NC=141000 (Solar collectors & concentrators)

2808 Postings

8 \$ 7 * (2 + 3)

264 Postings

"(COATINGS)

9 #ANTIREFLECTION COATINGS

255 Postings

10 #ELECTRODEPOSITED COATINGS

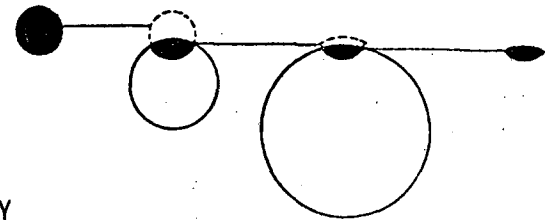
71 Postings

11 #SURFACE COATING

501 Postings

12 \$ (5 + 7) * (2 + 3 + 9 + 10 + 11)

354 Postings



GEM CUTTING SEARCH STRATEGY
STRIP MINING FOR COAL: ENVIRONMENTAL EFFECTS AND RECLAMATION IN
THE WEST

1	#SURFACE MINING	1472 Postings
2	#ROCKY MOUNTAIN REGION (All states in Region VIII)	1243 Postings
3	\$1 * 2 (The first chip is made)	184 Postings
4	#ENVIRONMENTAL EFFECTS	11018 Postings
5	#LAND RECLAMATION	1032 Postings
6	#NC=010900 (Coal, environmental effects)	2172 Postings
7	\$3 * 4 + 3 * 5 + 3 * 6 (The next chip, from what's left)	137 Postings
8	#NC=01 (Coal, everything just about)	32730 Postings
9	#COAL	13958 Postings
10	#COAL MINING	3763 Postings
11	\$7 * 8 + 7 * 9 + 7 * 10 (The final chip, the gem is cut)	131 Postings

RECON Data Bases

EDB

ERDA Energy Data Base (TIC)

TIC SUBJECT SPECIALISTS

<u>Section Chief</u>	<u>Subject Responsibility</u>	<u>Subject Category Code</u>	
Mary C. Grissom Telephone: FTS 626-1175 Comm. 615/576-1175	COAL AND COAL PRODUCTS	010000	
	PETROLEUM	020000	
	NATURAL GAS	030000	
	OIL SHALES AND TAR SANDS	040000	
	FISSION FUELS	050000	
	HYDROGEN	080000	
	OTHER SYNTHETIC AND NATURAL FUELS	090000	
	CHEMISTRY	400000	
	Lila B. Smith Telephone: FTS 626-1170 Comm. 615/576-1170	FUSION FUELS	060000
		SOLAR ENERGY	140000
GEOTHERMAL ENERGY		150000	
MHD GENERATORS		300100	
EHD GENERATORS		300200	
FUEL CELLS		300500	
INSTRUMENTATION		440000	
MAGNETIC FUSION ENERGY		700000	
Robert C. Kelly Telephone: FTS 626-1163 Comm. 615/576-1163		ISOTOPE AND RADIATION SOURCE TECHNOLOGY	070000
	HYDRO ENERGY	130000	
	ELECTRIC POWER ENGINEERING	200000	
	ENERGY STORAGE	250000	
	ENERGY CONVERSION	300000	
	ENERGY CONSERVATION, CONSUMPTION, AND UTILIZATION	320000	
	ADVANCED AUTOMOTIVE PROPULSION SYSTEMS	330000	
	ENGINEERING	420000	
	PARTICLE ACCELERATORS	430000	
	EXPLOSIONS AND EXPLOSIVES	450000	
	Henry D. Raleigh Telephone: FTS 626-1169 Comm. 615/576-1169	TIDAL POWER	160000
WIND POWER		170000	
NUCLEAR POWER PLANTS		210000	
NUCLEAR REACTOR TECHNOLOGY		220000	
Charles E. Stuber Telephone: FTS 626-1178 Comm. 615/576-1178	BATTERIES	250900	
	MATERIALS	360000	
	PHYSICS RESEARCH	640000	
	NUCLEAR PHYSICS	651000	
Lee M. Thompson Telephone: FTS 626-1158 Comm. 615/576-1158	ENERGY MANAGEMENT AND POLICY	290000	

<u>Section Chief</u>	<u>Subject Responsibility</u>	<u>Subject Category Code</u>
Sidney F. Lanier	ENVIRONMENTAL SCIENCES, ATMOSPHERIC	500000
Telephone:	ENVIRONMENTAL SCIENCES, TERRESTRIAL	510000
FTS 626-1166	ENVIRONMENTAL SCIENCES, AQUATIC	520000
Comm. 615/576-1166	ENVIRONMENTAL-SOCIAL ASPECTS OF ENERGY TECHNOLOGIES	530000
	BIOMEDICAL SCIENCES, BASIC STUDIES	550000
	BIOMEDICAL SCIENCES, APPLIED STUDIES	560000
	HEALTH AND SAFETY	570000
	GEOSCIENCES	580000

Nancy Hardin - Problem of obtaining books, journals, and conferences

Telephone:
FTS 626-1278
Comm. 615/576-1278

Hannah Mayfield - Problem of obtaining reports

Telephone:
FTS 626-1301
Comm. 615/576-1301

Dora H. Moneyhun - Problems with data base content

Telephone:
FTS 626-1157
Comm. 615/576-1157

Leon Yount - Problems with hardware

Telephone:
FTS 624-5391
Comm. 615/574-5391

NSA

Nuclear Science Abstracts (TIC)

EXAMPLES OF INCONSISTENCY IN NSA DATA BASE DUE TO CHANGING THESAURI

Present Terminology	Other descriptors or combination of descriptors
ALUMINIUM	ALUMINUM
RADIATION SYNDROME	RADIATION SICKNESS
PHYSICAL RADIATION EFFECTS BIOLOGICAL RADIATION EFFECTS CHEMICAL RADIATION EFFECTS	RADIATION EFFECTS (early thesaurus had no breakdown)
GE SEMICONDUCTOR DETECTORS	SEMICONDUCTOR COUNTERS + GERMANIUM
LI-DRIFTED GE DETECTORS HIGH-PURITY GE DETECTORS	SOLID STATE COUNTERS + GERMANIUM
MULTIWIRE PROPORTIONAL CHAMBERS	MULTI-WIRE PROPORTIONAL COUNTERS MULTIWIRE PROPORTIONAL CHAMBERS MULTIWIRE PROPORTIONAL COUNTERS PROPORTIONAL COUNTERS + POSITION-SENSITIVE DETECTORS
CHEMICAL ANALYSIS	DETERMINATION QUANTITATIVE ANALYSIS QUALITATIVE ANALYSIS (different time span for these terms)
RADIOACTIVE WASTES	WASTE SOLUTIONS
RADIOACTIVE WASTE PROCESSING	WASTE PROCESSING
RADIOACTIVE WASTE DISPOSAL	WASTE DISPOSAL
RADIOACTIVE WASTE MANAGEMENT	WASTE MANAGEMENT
RADIOACTIVE WASTE STORAGE	WASTE STORAGE
NUCLEAR FUELS	FUELS
SPENT FUELS	SPENT FUEL ELEMENTS
REACTOR CORES	REACTOR CORE
CONTROL ROD WORTHS	CONTROL ROD WORTH
FUEL ELEMENT FAILURE	FUEL ELEMENTS + FAILURE

BWR TYPE REACTORS

PWR TYPE REACTORS

ZERO POWER REACTORS

LMFBR TYPE REACTORS

PROTON REACTIONS

ION-ATOM COLLISIONS

PION-PROTON INTERACTIONS

BOILING WATER REACTORS
BWR-TYPE REACTOR

PRESSURIZED WATER REACTORS
PWR
PWR-TYPE REACTOR

CRITICAL ASSEMBLIES

LMFBR
LIQUID METAL COOLED REACTORS +
FBR TYPE REACTORS

PROTON BEAMS +
NUCLEAR REACTIONS

ION COLLISIONS

PION BEAMS + PROTONS +
INTERACTIONS

NSC

Nuclear Safety Information Center

NSIC CATEGORY SCOPE NOTES

Brief scope notes are presented below on each of NSIC's 22 subject categories.

1. General Safety Considerations

Covers the safety aspects of radiation policy, codes and standards, economics and cost studies, socio/philosophical considerations, forecasts, public policy, public attitudes, radiation in perspective, safety principles and philosophy, insurance and liability, legalistics, benefit vs risk, probability of accidents, plant availability, concepts of reliability, nuclear emergencies, concepts of quality assurance, etc.

2. Siting of Nuclear Facilities

Includes the following subjects related to any type of nuclear facility: Characteristics of the site and environs, economics of site selection, seismology, geology, seismic design of plant, environmental effects of site preparation and construction, effects on site of flooding or tornado protection, population density, power transmission effects on area, etc.

3. Transportation and Handling of Radioactive Materials

Covers shipping containers, shipping regulations, safety analysis reports for packaging (SARP), criticality safety in transit, transportation accidents, design of tiedowns, shipping condition (impact, fire, vibration, etc.), heat-transfer capability of shipping containers, etc.

4. Aerospace Safety (Inactive ~1970)

Covers safety considerations unique to nuclear systems used in aerospace vehicles - launch and re-entry problems only.

5. Heat Transfer and Thermal Hydraulics

Deals with all aspects of heat transfer and fluid flow with emphasis on postulated reactor accidents, including: Burnout and critical heat flux, fission product decay heat, blowdown, hydrodynamic effects, thermal-mechanical effects, flow blockage, thermal-hydraulic modeling, two phase flow, thermophysical properties of fuels and coolants, etc. Also includes equipment involved in these processes.

6. Reactor Transients, Kinetics, and Stability

Includes studies (analytical and experimental) in which the transient behavior of reactors and criticality accidents are examined. Deals, for example, with reactivity effects due to voids, temperature, Doppler coefficient, etc; calculational methods, mathematical models, computer codes, and physical data which may have a direct bearing on reactor dynamic behavior; and design studies concerned with nuclear stability and the understanding of potential kinetics safety problems.

7. Fission Product Release, Transport, and Removal

Includes the release from fuel and movement of fission products within the facility; the physical and chemical characterization of the released radio-nuclides; and removal mechanisms such as deposition, adsorption, filtration, fallout, plateout, etc.

8. Sources of Energy Release Under Accident Conditions

Covers nuclear, Wigner, and gamma energies; energy released by chemical reactions; metal-water reactions; pyrophoric reactions; metal fires; and all other types of energy that might be released as a result of a nuclear accident (e.g., steam-engendered explosion).

9. Nuclear Instrumentation, Controls, and Safety Systems

Includes the design, fabrication, and application of components, modules, equipment, and all portions of monitoring, control, and safety systems for nuclear processes. Encompasses all devices and techniques used for surveillance and to measure, monitor, indicate, record, alarm, control, and regulate physical variables. Also covers the performance requirements for I&C hardware and systems; the related standards, specifications, codes, and guides; and the concepts of reliability, availability, maintenance, and testing in relation to I&C systems and components.

10. Electrical Power Systems

Covers all aspects of the generation, distribution, and transmission of electrical power associated with a nuclear facility. Deals with routine and emergency means of supplying electrical power to and within nuclear facilities of all kinds. Considers the reliability, availability, economics, and stability of the electrical power system and the related effects on the safety and operation of the nuclear facility.

11. Containment of Nuclear Facilities

Includes all aspects of the containment of radioactivity at all types of nuclear facilities. Barriers considered include fuel cladding, piping, pressure vessels, containment vessels, and reactor buildings. Major concerns are design considerations, structural integrity, quality assurance, materials properties, and radiation damage to materials.

12. Plant Safety Features - Reactor

Covers all engineered safety features of reactors (except containment) that are designed to minimize the consequences of an accident in a nuclear facility. Includes systems for reducing temperature and pressure, emergency core cooling, containment spray, hydrogen recombination, emergency boration system, auxiliary feedwater system, main steam isolation valves, standby gas treatment, core isolation cooling, low pressure coolant injection, core spray, etc.

13. Plant Safety Features - Nonreactor

Deals with all safety information related to the nuclear fission fuel cycle that is external to the reactor, and therefore not characterized into one of the other categories. Included are the safety considerations of fuel reprocessing, mining, milling, enrichment, fuel fabrication, fuel storage and handling outside a reactor facility, hot cell activities, and isotope processing.

14. Radionuclide Release, Disposal, Treatment and Management
(Inactive Sept. 1973)

The following subjects are included as related to any type of nuclear facility: Controlled release from a facility, effluent control schemes; procedures and limits for release of low level wastes and for burial; waste treatment; long-term storage of high level wastes; waste management, etc.

15. Environmental Surveys, Monitoring and Radiation Dose Measurements
(Inactive Sept. 1973)

Deals with the following Health Physics Topics related to any type of nuclear facility: Environmental monitoring and personnel monitoring during accidental or routine releases of radionuclides both on and off site, monitoring of external exposure to population groups off site, monitoring techniques and instrument applications, personnel exposure to radiation, and environmental operating reports.

16. Meteorological Considerations

Includes diffusion and deposition of radioactive material near the earth's surface, atmospheric transport, and fallout. Also includes the general considerations of meteorological processes that adversely affect the environment such as tornadoes, floods, damaging winds, etc., and possible micrometeorological effects of very large energy generation centers.

17. Operational Safety and Experience

Covers operating experience at all types of nuclear facilities. Reportable incidents during facility construction are found in both Category 17 and 18. Includes the following: Personnel exposures, periodic operating reports, reportable events, routine and abnormal releases from a facility, design modifications, backfit items, licensing correspondence for a facility with an operating license, fuel handling and storage in a reactor facility, inservice inspection.

18. Design, Construction and Licensing

Includes the following topics relating to nuclear facilities not yet licensed to operate: Research and development programs, general descriptions of reactors, design studies, licensing correspondence, construction problems (also in Category 17), responses to NRC questions, and safety analysis reports and amendments.

19. Internal Exposure Effects on Humans Due to Radioactivity in the Environment (Inactive Sept. 1973)

Includes the following topics: Metabolic effects and hazards to humans from radioactivity or toxic wastes in the environs irregardless of source with emphasis on internal exposure; data on maximum permissible concentrations in air, water or food; and environmental operating reports.

20. Effects of Thermal Modifications on Ecological Systems (Inactive Sept. 1973)

Includes the following topics: Thermal pollution of water bodies; influence of heat on uptake of radionuclides and transport in the biosphere; consideration of other cooling devices such as cooling towers, ponds, etc; beneficial use of waste heat; and environmental operating reports.

21. Radiation Effects on Ecological Systems (Inactive Sept. 1973)

Includes the following: Effects of radiation or radioactivity on natural populations of organisms in the environment; effects of radiation or radioactivity on mortality, longevity, reproduction and other functions of plants and animals; cycling of radionuclides in the environment such as through the food chain, and environmental operating reports.

22. Safeguards of Nuclear Materials

Includes the topics of theft or diversion of nuclear materials, safeguards research and rule-making, protection against sabotage, non-proliferation, and consideration of postulated malevolent nuclear acts.

RIP

Research in Progress (TIC)

RESEARCH IN PROGRESS DATA BASE

OVERVIEW OF THE RIP DATA BASE	2
Source	2
Subject Coverage	3
Years of Coverage	3
Restrictions	3
RIP COMPLETE UNIT RECORD	4
DESCRIPTION OF UNIT RECORD DATA ELEMENTS	6
Accession Number	6
Title	6
Investigators	6
Phone	6
Zip Code	6
Research Organization	6
Research Organization Type	7
Contract Number	7
Duration	7
Manpower	7
Location of Work	7
Country Code	7
Sponsor	8
Sponsor Type Code	8
Contract Officer	9
Funding	9
Total Funding	9
Co-Operator	9
Description	9
Subject Categories	10
Subject Indexing	10
Publications	11
File Number	11
Source Ind	11

1/19/78

Subject Coverage

The scope of interest includes all energy sources, fossil, nuclear, and unconventional; electric power generation, transmission, distribution, and storage; energy conservation and utilization, including heating, cooling, lighting, industrial processes, transportation, agriculture, etc.; economic and legal aspects; environmental and health effects; resource exploration, mining, processing and reserve studies; and basic and applied research and engineering development.

Years of Coverage

In general, project records will be maintained for one past year, the current year, and all future years.

Restrictions

There are no restrictions on access to this file.

1/19/78

	<u>SEARCHABLE</u>	<u>PRINTABLE IN FORMATS</u>	<u>ABBREVIATIONS</u>	<u>EXAMPLES</u>
		0 1 2 3 4 5 6		
Accession Number	X	X X X X X X X	direct access	%77?2345
Title	X	X X X X X X	look command	
Investigator	X	X X X X X	IV	IV=Butler, D.R.
Phone		X X X X		
Research Organization	X	X X X X X	RE	RE=Chevron
Research Organization Division		X X X X		
Zip Code	X	X X X X	ZC	ZC=37
Research Organization Code	X		RO	RO=9502909
Research Organization Type	X		RT	RT=U
Contract Number	X	X X X X	CN	CN=EX-76-C-01-2321
Duration		X X X X		
Manpower				
Location of Work	X	X X X X	LC	LC=KY
Country Code	X		CO	CO=US
Sponsor Code	X		SC	SC=9501919
Sponsor Name	X	X X X X X	SN	SN=Exxon
Sponsor	X		SP	SP=TVA
Contract Officer	X	X X X X	CT	CT=Sandquist, G.M.

RIP COMPLETE UNIT RECORD

(continued on RIP 5)

1/19/78

SEARCHABLEPRINTABLE IN FORMATSABBREVIATIONSEXAMPLES

		0	1	2	3	4	5	6		
Address		X		X			X	X		
Funding		X		X			X	X		
Total Funding		X		X			X	X		
Cooperator		X						X		
Description	X	X					X	X	look command	
Subject Category	X	X		X		X	X	X	NC	NC=010400
Subject Terms (manual and computer assigned)	X	X		X			X	X	IT	IT=COAL
Subject Descriptor	X	X		X			X	X	SD	SD=COAL
Major Descriptors	X							X	MD	MD=coal gasification/ economics
Publications		X						X		
File Number								X		
Source Ind								X		

RIP COMPLETE UNIT RECORD (continued)

DESCRIPTION OF UNIT RECORD DATA ELEMENTS

1/19/78

Accession Number

The accession number is a sequential number assigned to each record in the form 77X2356.

Title

The title field is searchable by a free text searching technique (look command) after a set is formed through the use of some index.

Investigators

All investigators associated with the research project are searchable, e.g., IV=Jones, A.

Phone

The telephone number of the principal investigator is displayed in the record.

Zip Code

The zip code for the principal investigator is displayed in the record and the first two digits of the code are searchable, e.g., ZP=30.

Research Organization

The name and address of the agency, university, or firm conducting the research are included in the record and are searchable using either (a) a seven-digit code (TID-4585) is used as an authority) or (b) words in the research organization name and address. To retrieve research projects in progress at Chevron Resources, Inc., San Francisco, Calif. Geothermal Div., select (a) RO=9504279 or (b) RE=CHEVRON and RE=GEOTHERMAL and combine the resulting sets.

1/19/78

Research Organization Type

The type of organization doing the research is searchable using a two letter code, e.g., RT=CU. Codes used for the organization types are:

CU	Colleges and Universities	ST	Regional/state/local government
IN	Industry	MM	Multi-types
NA	Nonprofit organizations	US	Federal Government agency
		XX	Other

Contract Number

The contract number or project number assigned to the project by the sponsoring agency is searchable, e.g., CN=EX-76-C-01-2321.

Duration

The years covered by the research are given in the form 06/73 - 06/77; the field is not searchable.

Manpower

The number of technical personnel assigned to the project is included in the record in the form 3;2;4 corresponding to manpower for 1976, 1977, and 1978.

Location of Work

The country or state where the research is performed is searchable. Names of countries are spelled out; the approved zip code abbreviations are used for the states, e.g., LC=Canada, or LC=TN.

Country Code

The country sponsoring the work is given and searchable using the approved country codes used in all TIC-produced fields, e.g., CO=US.

1/19/78

Sponsor

The agency or organization sponsoring the research can be searched using (a) a seven-digit code (TID-4585 is used as an authority), (b) words in the sponsoring agency name and address, or (c) if the organization is a government agency, abbreviations or acronyms. To retrieve research projects sponsored by the Tennessee Valley Authority one could (a) #SC=6170500; #SC=6170600; #SC=6171000; #SC=6172000; #SC=6172700; #SC=6173000; #SC=617400 and combine the resulting sets; (b) #SN=Tennessee; #SN=Valley and combine the resulting sets; or (c) #SP=TVA. Acronyms used in the sponsor field are:

AG	Department of Agriculture	FF	Federally Funded R&D Centers
DOC	Department of Commerce	HEW	Health, Education & Welfare
DOD	Department of Defense	HUD	Department of Housing & Urban Development
DOS	Department of State	INT	Department of Interior
DOT	Department of Transportation	MG	Miscellaneous government agencies
EPA	Environmental Protection Agency	NASA	National Aeronautics and Space Administration
ERDA	Energy Research and Development Administration	NSF	National Science Foundation
FEA	Federal Energy Agency	TVA	Tennessee Valley Authority

Sponsor Type Code

The type of organization sponsoring the research can be searched, e.g., SP=US corresponds to all federally funded research. The following codes are used:

1/19/78

CU	college and university
IN	industry
NP	nonprofit laboratory
ST	state and local government
TA	trade association
US	Federal Government agency
XX	Other

Contract Officer

The contract officer's name and address may be included in the record and is searchable, e.g., CT=Anderson, O.

Funding

The amount of money awarded to do the research is in the record but not searchable. Example 0;3;0 refers to no known funding in 1976; \$3000 for 1977; no known funding for 1978.

Total Funding

The total amount of money awarded for a given project is given as \$72.8K representing \$72,800.

Co-Operator

Organization(s) that provides time and/or resources toward the project but does not conduct, supervise, or fund the research.

Description

A short description of the research project is given and is searchable using the look command.

1/19/78

Subject Categories

The same subject category scheme used in the energy data base (EDB) file and the general and practical information file (GAP) is also used for the RIP file. There are three levels of categorization, for example

010000 COAL (represents all coal citations)

010400 COAL PROCESSING (represents coal processing by any method, including gasification, liquefaction, etc.)

010405 COAL LIQUEFACTION (represents liquefaction only)

Each level is searchable, e.g., NC=010405. Many documents are assigned more than one category; both primary and secondary categories are searchable. A complete list of the categories is available from TIC as TID-4584.

Subject Indexing

There are three types of indexing terms used in the RIP file, (1) indexers assign descriptors using the DOE subject thesaurus (TID-7000) as an authority, (2) a computer upposts all broader descriptors automatically for each of the indexer assigned descriptors, and (3) free terms or uncontrolled terms may be assigned to allow for greater specificity, especially with respect to geographic locations. If a select command is given with no prefix, the resulting set will consist of all terms assigned by indexers, all computer-assigned terms, and all free terms. If one wants only the records to which an indexer-assigned descriptor has been applied; then the prefix SD must be used. For example #COAL will result in a set containing all manually assigned and computer-assigned indexing; however, #SD=COAL will result in a set containing only the records to which coal was assigned by an indexer using the thesaurus.

1/19/78

The descriptors tagged by TIC indexers for use in the subject indexes for printed publications are searchable. By using this index major concepts can be retrieved, e.g., MD=COAL GASIFICATION/ECONOMICS. Use of the expand command is recommended.

Publications

Up to four publications resulting from a research project may be referenced in a record.

File Number

Internal use only

Source Ind

Internal use only

WRA

WATER RESOURCES ABSTRACTS

FIELDS AND GROUPS

- 01 NATURE OF WATER (433)
 - A Properties (133)
 - B Aqueous solutions and suspensions (242)

- 02 WATER CYCLE (46,142)
 - A General (3096)
 - B Precipitation (2682)
 - C Snow, ice, and frost (3151)
 - D Evaporation and transpiration (1582)
 - E Streamflow and runoff (5940)
 - F Groundwater (5217)
 - G Water in soils (5600)
 - H Lakes (6517)
 - I Water in plants (2446)
 - J Erosion and sedimentation (5809)
 - K Chemical processes (5106)
 - L Estuaries (7896)

- 03 WATER SUPPLY AND AUGMENTATION AND CONSERVATION (13,338)
 - A Saline water conversion (1911)
 - B Water yield improvement (1732)
 - C Use of water of impaired quality (1243)
 - D Conservation in domestic and municipal use (1470)
 - E Conservation in industry (1909)
 - F Conservation in agriculture (5570)

- 04 WATER QUANTITY MANAGEMENT AND CONTROL (19,533)
 - A Control of water on the surface (11,512)
 - B Groundwater management (5467)
 - C Effect's on water of man's non-water activities (1837)
 - D Watershed protection (1960)

- 05 WATER QUALITY MANAGEMENT AND PROTECTION (64,298)
 - A Identification of pollutants (12,028)
 - B Sources of pollution (14,652)
 - C Effects of pollution (17,775)
 - D Waste treatment processes (18,057)
 - E Ultimate disposal of wastes (3394)
 - F Water treatment and quality alteration (2804)
 - G Water quality control (15,720)

FIELDS and GROUPS - Continued

- 06 WATER RESOURCES PLANNING (29,766)
 - A Techniques of Planning (3544)
 - B Evaluation process (6433)
 - C Cost allocation, cost sharing, pricing/repayment (2089)
 - D Water demand (1723)
 - E Water law and institutions (15,170)
 - F Nonstructural alternatives (1405)
 - G Ecologic impact of water development (4020)

- 07 RESOURCES DATA
 - A Network design (661)
 - B Data acquisition (5373)
 - C Evaluation, processing, and publication (6599)

- 08 ENGINEERING WORKS (11,376)
 - A Structures (2263)
 - B Hydraulics (4250)
 - C Hydraulic machinery (1608)
 - D Soil mechanics (979)
 - E Rock mechanics and geology (522)
 - F Concrete (469)
 - G Materials (1363)
 - H Rapid excavation (208)
 - I Fisheries (1057)

- 09 MANPOWER, GRANTS AND FACILITIES (403)
 - A Education - extramural (213)
 - B Education - in-house (19)
 - C Research facilities (59)
 - D Grants, contracts, and research act allotments (228)

- 10 SCIENTIFIC AND TECHNICAL INFORMATION (1255)
 - A Acquisition and processing (85)
 - B Reference and retrieval (135)
 - C Secondary publication and distribution (652)
 - D Specialized information center services (84)
 - E Translations (4)
 - F Preparation of reviews (418)

THESAURUS/VOCABULARY CONSIDERATIONS

1) Abbreviations - spell out most terms

For example,

for:

use:

pH

Hydrogen ion concentration

Cu

Copper

PCBs

Polychlorinated biphenyls

TVA

Tennessee Valley Authority

WI

Wisconsin

However, watch out for exceptions:

Dichloro-diphenyl-trichloro-ethane

DDT

Escherichia coli

E. coli

2) Unusual word construction

for:

use:

power plants

Powerplants

wastewater

Waste water

seawater

Sea water

feedlots

Feed lots

and inconsistent descriptor construction:

Rainfall simulators

Simulated rainfall

3) Parenthetical comments - must be included when selecting keywords:

Water management (applied)

Future planning (projected)

Waste water (pollution)

Water consumption (except consumptive
use)

Social behavior (animal)

- 4) Popular vs scientific names - most plants and animals are listed by their popular name, such as gastropods, worms, mollusks, copepods, maple trees, and nematodes.

But watch for exceptions; for:

use:

blue-green algae
green algae
red algae

Cyanophyta
Chlorophyta
Rhodophyta

- 5) Ambiguous Thesaurus cross-references

for:

use:

algal blooms
groundwater pollution
sewage sludge disposal

Eutrophication
Water pollution
Sewage disposal

(Note, however, that Sludge disposal is also a term)

- 6) Concepts represented by a multitude of Thesaurus keywords

- a) Estuaries, Estuarine environment
- b) Rain, Rainfall, Raindrops, Rain water, Drizzle, Impact (rainfall), Rainfall disposition, Rainfall intensity, Precipitation (atmospheric), Precipitation intensity, Excessive precipitation, Cloudbursts, etc.
- c) Running waters, Lotic environment
- d) Vegetation establishment, Revegetation
- e) Weather data, Meteorological data
- f) Conifers, Coniferous trees, Coniferous forests
- g) Methodology, Analytical techniques, Testing, Testing procedures, Laboratory tests

- h) Sediments, Sedimentation, Sediment transport, Bottom sediments, Coarse sediments, Lake sediments, Silts, Unconsolidated sediments, Sediment load, Suspended solids, Sediment distribution
 - i) Basins, River basins, Watersheds (basins)
 - j) Model studies, Mathematical models, Computer models, Simulation analysis, Hydraulic models, Theoretical analysis
 - k) Water pollution, Water quality, Water pollution sources, Water pollution effects, Waste water (pollution)
 - l) Water pollution control, Water quality control, Water pollution treatment, Pollution abatement
 - m) Sewage disposal, Waste water disposal, Waste disposal, Ultimate disposal, Waste dumps, Waste disposal wells, Sludge disposal
 - n) Sewage, Sewage effluents, Effluents, Industrial wastes, Municipal wastes, Solid wastes, Domestic wastes, Wastes, Sludge, Sewage sludge, Liquid wastes
 - o) Sewage treatment, Waste water treatment, Waste treatment, Treatment facilities, Sludge treatment, Sludge digestion
 - p) Planning, Long-term planning, Short-term planning, Future planning (projected), Alternate planning, Alternative planning, Comprehensive planning, Project planning
- 7) Hierarchical relationships - for best retrieval, use all appropriate narrower terms, as well as the broader classification.

For example, use: Fish, Bottom fish, Rough fish, Freshwater fish, Carp, Catfishes, Bullheads, etc.

also scientific name -

- 8) Broad concepts - a broad concept such as "freshwater" is best searched by excluding ocean and marine terms.

- 9) Geographical considerations - expand geographical names and use all possible variations.

Example: Lake Tahoe, Lake Tahoe Basin, Tahoe Basin, Lake Tahoe (CA), Lake Tahoe (NV), Lake Tahoe (CA, NV), Lake Tahoe (NV, CA)

Also, abstracts keyworded Lake Mendota (WI) will not necessarily be retrievable by the broader term Wisconsin.

WRA SEARCH: EFFECT OF THERMAL EFFLUENTS ON FRESHWATER FISH

SET HISTORY

SET	DESCRIPTOR	CIT
1	IT=THERMAL EFFLUENTS.....	12
2	IT=THERMAL POLLUTION.....	2245
3	IT=HEATED WATER.....	758
4	IT=HYDROELECTRIC POWERPLANTS.....	41
5	IT=AQUATIC ORGANISMS.....	51
6	IT=FISHES.....	146
7	IT=FISH.....	2932
8	IT=TROUT.....	536
9	IT=BASS.....	231
10	IT=FISH FARMING.....	296
11	IT=FISH AND WILDLIFE.....	21
12	IT=BROOK TROUT.....	167
13	IT=CARP.....	481
14	IT=EELS.....	88
15	IT=FRESHWATER FISH.....	689

-MORE-

SET HISTORY

SET	DESCRIPTOR	CIT
16	IT=PERCHES.....	124
17	IT=PIKES.....	116
18	IT=STRIPED BASS.....	79
19	IT=BROWN TROUT.....	113
20	IT=RAINBOW TROUT.....	552
21	1-3/+ <i>Thermal effluents</i>	<u>2463</u>
22	6+8-20/+ <i>"OR in" small sets</i>	2738
23	21*22 <i>"AND in" separately</i>	217
24	21*6 <i>error</i>	4
25	21*7 <i>"AND in" separately</i>	226
26	23+24 <i>error</i>	217
27	23+25.....	<u>396</u>
28	23*25.....	47
29	IT=POWERPLANTS.....	840
30	IT=ELECTRIC POWERPLANTS.....	367
31	IT=HYDROELECTRIC POWERPLANTS.....	41
32	27*29+27*30+27*31.....	<u>80</u>

ENTER:Z32/3/10-30;0;0

>PROCESSING<

DIS 32/3/000010-000030//10

<ACCESSION NO.> 77R0011643

<TITLE> SUSCEPTIBILITY OF THREADFIN
SHAD TO IMPINGEMENT,

<ACCESSION NO.> 77R0011269

<TITLE> A STUDY OF THE FISH COMMUNITY
IN THE VICINITY OF A THERMAL
DISCHARGE IN THE JAMES RIVER,
VIRGINIA,

<ACCESSION NO.> 77R0011147

<TITLE> SUMMARY OF RECAPTURES OF FISH
TAGGED AT TWO POWER PLANTS BETWEEN
1972 AND 1974,

<ACCESSION NO.> 77R0010468

<TITLE> WASTE HEAT UTILIZATION FROM
THERMAL POWER PLANT IN NEW YORK
STATE,

WRA Search: Logging Roads and Erosion Control

ENTER:14

>PROCESSING<

BEGIN SESSION 0004---FILE 04 WAS SELECTED
?WRA WATER RESOURCES ABSTRACTS (WRSIC)
(129,048 ITEMS, THROUGH 11:23)

TEXT SEARCH NOW ON TITLE + ABSTRACT
THIS FILE IS TAKEN FROM "SELECTED WATER
RESOURCES ABSTRACTS", AN ABSTRACTING
JOURNAL PUBLISHED BY THE DEPARTMENT OF
THE INTERIOR, WATER RESOURCES SCIENTIFIC
INFORMATION CENTER. (WRSIC)

SUBJECT MATTER INCLUDES PERTINENT ITEMS
OF LEGISLATION, ENVIRONMENTAL EFFECTS
ARTICLES, WILDLIFE MANAGEMENT ETC.

AVAILABLE INDEXES INCLUDE--

AU= PERSONAL AUTHOR
IT= INDEX TERMS, SUBJECT CATEGORY
CA= CORPORATE AUTHOR
NC= WRSIC CATEGORY CODE NUMBERS
(USE ?NCO ETC. FOR LISTING OF CODES)

CONTACT: LOU LULICH, WRSIC.

ENTER:#forest.management;#lumbering;#forest roads

>PROCESSING<

1 510 IT=FOREST MANAGEMENT
2 233 IT=LUMBERING
3 4 IT=FOREST ROADS

ENTER:#roads;#road construction;#lossing roads

>PROCESSING<

4 390 IT=ROADS
5 324 IT=ROAD CONSTRUCTION
6 8 IT=LOGGING ROADS

ENTER:#1-6/+

>PROCESSING<

7 1261 1-6/+

ENTER:#erosion;#soil erosion;#sediment control

>PROCESSING<

8 2515 IT=EROSION
9 772 IT=SOIL EROSION
10 439 IT=SEDIMENT CONTROL

ENTER:#nc=02J;#nc=04D

>PROCESSING<

11 5904 NC=02J
12 2022 NC=04D

ENTER:#7*8+7*9+7*10+7*11+7*12

>PROCESSING<

13 280 7*8+7*9+7*10+7*11+7*12

ENTER:113/a,t/'lossing:road' + 'lossing truck'
 >PROCESSING<
 LOOK: 20 RECS SRCHED, 2 HITS/CONT?
 ?LO9 TEXT SEARCH COMMAND INSTRUCTIONS

YOU MAY EITHER STOP OR CONTINUE THE
 LINEAR SEARCH. IF YOU CONTINUE, 20 MORE
 DOCUMENTS WILL BE SEARCHED FOR THE TEXT
 YOU HAVE SPECIFIED. IF YOU STOP, A SET
 CONSISTING OF THE DOCUMENTS ALREADY SEL-
 ECTED WILL BE CREATED AND ADDED TO YOUR
 SET HISTORY.

YOU MAY ENTER ANY RECON COMMAND AT
 THIS POINT, BUT ANYTHING EXCEPT YES WILL
 TERMINATE THE TEXT SEARCH.

ENTER: YES TO CONTINUE THE SEARCH.

ENTER: NO TO TERMINATE THE SEARCH.

* ?+, ?-

ENTER:yesyesyesyesyes
 >PROCESSING<
 LOOK: 40 RECS SRCHED, 3 HITS/CONT?
 LOOK: 60 RECS SRCHED, 4 HITS/CONT?
 LOOK: 80 RECS SRCHED, 6 HITS/CONT?
 LOOK: 100 RECS SRCHED, 9 HITS/CONT?
 LOOK: 120 RECS SRCHED, 11 HITS/CONT?
 ENTER:yesyesyesyesyes
 >PROCESSING<
 LOOK: 140 RECS SRCHED, 14 HITS/CONT?
 LOOK: 160 RECS SRCHED, 16 HITS/CONT?
 LOOK: 180 RECS SRCHED, 20 HITS/CONT?
 LOOK: 200 RECS SRCHED, 22 HITS/CONT?
 LOOK: 220 RECS SRCHED, 27 HITS/CONT?
 ENTER:yesyesyes
 >PROCESSING<
 LOOK: 240 RECS SRCHED, 31 HITS/CONT?
 LOOK: 260 RECS SRCHED, 31 HITS/CONT?
 14 34 13/A,T/'LOGGING:ROAD' + 'LOG

ENTER:Z14;0;0

>PROCESSING<

DIS 14/2/000001-000034//1 PAGE 1

<ACCESSION NO.> 78R0010990

<TITLE> SOIL EROSION IN THE EASTERN
FOREST

<AUTHOR> PATRIC, J. H.

<CORP AUTH> NORTHEASTERN FOREST
EXPERIMENT STATION, BROOMALL, PA.

<PUB DESC> JOURNAL OF FORESTRY, VOL 74,
NO 10, OCTOBER, 1976, 5 FIG, 3 TAB,
64 REF.

<KEYWORDS> FORESTS, *EROSION, TIMBER
HARVEST, LOGGING ROADS, STREAM
CHANNELS, *LUMBERING, *SOIL EROSION,
*EASTERN UNITED STATES(FORESTS).

DIS 14/2/000001-000034//2 PAGE 1

<ACCESSION NO.> 78R0010987

<TITLE> SOIL EROSION AND ITS CONTROL IN
EASTERN WOODLANDS

<AUTHOR> PATRIC, J. H.

<CORP AUTH> NORTHEASTERN FOREST
EXPERIMENT STATION, BROOMALL, PA.

<PUB DESC> NORTHERN LOGGER AND TIMBER
PROCESSOR 25(11), 1977, P 4, P 5, P
22, P 23, P 31. 17 REF.

<KEYWORDS> EROSION, *EROSION CONTROL,
OVERLAND FLOW, WATER QUALITY, LOGGING
ROADS, *SOIL EROSION, FORESTS, FOREST
MANAGEMENT, *APPALACHIAN MOUNTAIN
REGION.

DIS 14/2/000001-000034//3 PAGE 1

<ACCESSION NO.> 77R0009725

<TITLE> LOGGING ROADS AND PROTECTION OF
WATER QUALITY.

<CORP AUTH> ARNOLD, ARNOLD AND
ASSOCIATES, SEATTLE, WASH.) AND DAMES
AND MOORE, SEATTLE, WASH.

<AVAIL> AVAILABLE FROM THE NATIONAL
TECHNICAL INFORMATION SERVICE,
SPRINGFIELD, VA 22161 AS PB-243 703,
IN PAPER COPY, IN MICROFICHE.
ENVIRONMENTAL PROTECTION AGENCY,
REGION X, SEATTLE, WASH., WATER DIV.
REPORT EPA 910/9-75-007, MARCH, 1975.
312 P, 42 FIG, 128 REF, 16 TAB.

<KEYWORDS> *WATER QUALITY, *ROADS,
*LUMBERING, *REVIEWS, FOREST
MANAGEMENT, *ROAD CONSTRUCTION,
MAINTENANCE, EROSION CONTROL, WATER
POLLUTION SOURCES, PACIFIC NORTHWEST
U.S., WATER QUALITY CONTROL,
PLANNING, ROAD DESIGN, CHEMICALS.

WRA Search on use of CAGES for bioassay under field conditions

(a chance to use the LOOK command)

14

```
...
ENTER:#bioassay:#bioassays:$1+2
>PROCESSING<
  1    2572 IT=BIOASSAY
  2     57 IT=BIOASSAYS
  3    2606 1+2
ENTER:#fish:#fishes:#on-site tests:#on-site investigations
>PROCESSING<
  4    2932 IT=FISH
  5     146 IT=FISHES
  6     626 IT=ON-SITE TESTS
  7    1944 IT=ON-SITE INVESTIGATIONS
ENTER:#field tests:#field investigations:#field data
>PROCESSING<
  8     143 IT=FIELD TESTS
  9      45 IT=FIELD INVESTIGATIONS
 10     25 IT=FIELD DATA
ENTER:#on-site data collections
>PROCESSING<
 11     839 IT=ON-SITE DATA COLLECTIONS
ENTER:$3*4+3*5+3*6+3*7+3*8+3*9+3*10+3*11
>PROCESSING<
 12     326 3*4+3*5+3*6+3*7+3*8+3*9+3*10
ENTER:look12/a,t// case / + / cases
>PROCESSING<
LOOK:   20 RECS SRCHED,      1 HITS/CONT?
?LO9   TEXT SEARCH COMMAND INSTRUCTIONS
```

YOU MAY EITHER STOP OR CONTINUE THE
LINEAR SEARCH. IF YOU CONTINUE, 20 MORE
DOCUMENTS WILL BE SEARCHED FOR THE TEXT
YOU HAVE SPECIFIED. IF YOU STOP, A SET
CONSISTING OF THE DOCUMENTS ALREADY SEL-
ECTED WILL BE CREATED AND ADDED TO YOUR
SET HISTORY.

YOU MAY ENTER ANY RECON COMMAND AT
THIS POINT, BUT ANYTHING EXCEPT YES WILL
TERMINATE THE TEXT SEARCH.

ENTER: YES TO CONTINUE THE SEARCH.

ENTER: NO TO TERMINATE THE SEARCH.

* ?+, ?-

```
ENTER:yes;yes;yes;yes;yes
>PROCESSING<
LOOK:   40 RECS SRCHED,      1 HITS/CONT?
LOOK:   60 RECS SRCHED,      2 HITS/CONT?
LOOK:   80 RECS SRCHED,      6 HITS/CONT?
LOOK:  100 RECS SRCHED,      6 HITS/CONT?
LOOK:  120 RECS SRCHED,      6 HITS/CONT?
ENTER:yes;yes;yes;yes;yes
>PROCESSING<
```

LOOK: 140 RECS SRCHED, 7 HITS/CONT?
LOOK: 160 RECS SRCHED, 7 HITS/CONT?
LOOK: 180 RECS SRCHED, 7 HITS/CONT?
LOOK: 200 RECS SRCHED, 7 HITS/CONT?
LOOK: 220 RECS SRCHED, 8 HITS/CONT?

ENTER: Yes; Yes; Yes; Yes; Yes

>PROCESSING<

LOOK: 240 RECS SRCHED, 8 HITS/CONT?
LOOK: 260 RECS SRCHED, 9 HITS/CONT?
LOOK: 280 RECS SRCHED, 9 HITS/CONT?
LOOK: 300 RECS SRCHED, 9 HITS/CONT?
LOOK: 320 RECS SRCHED, 9 HITS/CONT?

ENTER: Yes

>PROCESSING<

13 9 12/A,T// CAGE / + / CAGES /

ENTER: %13/3;0

>PROCESSING<

DIS 13/3/000001-000009//1

<ACCESSION NO.> 78R0006047

<TITLE> PHYTOPLANKTON GROWTH,
DISSIPATION AND SUCCESSION IN
ESTUARINE ENVIRONMENTS

<ACCESSION NO.> 77R0007723

<TITLE> MOBILE FISH CAGE AND DEPTH
DISTRIBUTION STUDIES, COLUMBIA AND
SNAKE RIVERS,

<ACCESSION NO.> 77R0005893

<TITLE> PLEXIGLAS CAGES FOR THE STUDY
OF BIOLOGICAL EFFECTS OF INDUSTRIAL
EFFLUENTS,

<ACCESSION NO.> 77R0005786

<TITLE> DISSOLVED GAS SUPERSATURATION
IN THE COLUMBIA RIVER SYSTEM:
SALMONID BIOASSAY AND DEPTH
DISTRIBUTION STUDIES, 1973 AND 1974,

DIS 13/3/000001-000009//5

<ACCESSION NO.> 77R0004443

<TITLE> TOLERANCE OF SALMONID EGGS,
JUVENILES AND SQUAWFISH TO
SUPERSATURATED NITROGEN,

<ACCESSION NO.> 77R0004417

<TITLE> DISSOLVED GAS SUPERSATURATION:
LIVE CAGE BIOASSAYS OF ROCK ISLAND
DAM, WASHINGTON,

<ACCESSION NO.> 75R0009155

<TITLE> BIOASSAY METHODS OF THE
NATIONAL SWEDISH ENVIRONMENT
PROTECTION BOARD,

<ACCESSION NO.> 73R0015084

<TITLE> SIMPLE APPARATUS FOR CONDUCTING
ACUTE TOXICITY BIOASSAYS UNDER FIELD
CONDITIONS,

213/0

PRINT 13/0/000001-000009 ACCEPTED

ENTER:=stop

>PROCESSING<

13/3/000001-000009 ON 01-17-79

Search Problems

RECON PRACTICE SESSION

The topic: ECONOMICS OF SOLAR HEATING FOR HOMES

1. Identify concepts. It looks as if there are three distinct concepts: ECONOMICS, SOLAR HEATING, and HOMES
2. Expand and translate concepts. Each concept needs to be expressed in terms of the Energy Data Base Thesaurus. So each concept should be looked up. From a quick look, you may decide to take some of the following terms for the different concepts.

ECONOMICS

COST

BUDGETS

FINANCING

SOLAR SPACE HEATING

SOLAR HEATING SYSTEMS

PASSIVE SOLAR HEATING SYSTEMS

HOUSES

3. Now you are ready to approach the terminal. Let's skip the Logon procedure, and start with the BEGIN command. Type ! to begin your session. Now the system will ask for some identification to print at the top of any search results you may obtain. Type a line or two, then type A BLANK LINE (one blank will do), followed by a RETURN. This will tell the system that you are done. Choose data base 1 -- EDB. Just enter a 1 and press RETURN.
4. EXPAND ECONOMICS. Then EXPAND again, on the number (usually E6) where ECONOMICS shows. There must be a number showing under the RT (Related Terms) column at the right.
5. SELECT from the resulting display the R-numbers you wish to include.
6. Now EXPAND SOLAR HEATING SYSTEMS.
7. SELECT from the E display SOLAR HEATING SYSTEMS.
8. EXPAND from the E number of SOLAR HEATING SYSTEMS, to see its related terms.
9. SELECT any terms you consider appropriate.

10. COMBINE all of the SOLAR HEATING terms into one set. They are alternative expressions for related concepts, so what logic will you use?
11. Since you decided to use only the term HOUSES for the third concept, you might just SELECT it directly now.
12. Now you are ready to COMBINE all three concepts: the ECONOMIC set, the SOLAR HEATING set, and the HOUSES set. Since you wish to find the co-occurrence of all three of these ideas in the same citation, what logic will you use?
13. This is your resulting set. To check how well your planning has worked out, DISPLAY several items. Use format 3 to see several titles.

% __/3

14. PAGE forward to see further citations.

0

15. Directly DISPLAY a promising item, using its reference number. The format is %vv.nnnnn/f where vv is the volume, . indicates any document type, and f equals the format. Use format 0.
16. Terminate your search using the END command (but don't use =STOP unless no one else is going to use the terminal).

=

RECON PRACTICE SESSION II

The Topic: Predicting World Energy Needs

1. Identify concepts. Here there are three basic concepts:

PREDICTION WORLD ENERGY

2. Expand and translate concepts. Again, each concept has to be expressed in terms of the thesaurus that is used for the data base. Looking in the Energy Data Base thesaurus, you find that Prediction leads to the term FORECASTING. World is not listed, but World-Wide Fallout leads to GLOBAL FALLOUT. And looking near that term, you find GLOBAL ASPECTS. (In practice, you should use the names of appropriate countries, too.) For Energy, some rather broad terms may lead to the kind of general works this question seeks.

3. Formulate strategy. Your strategy will be to SELECT appropriate terms, COMBINE them into logical groups, and DISPLAY the results. The logical groups are these:

FORECASTING and GLOBAL ASPECTS and ENERGY SOURCES or
ENERGY SUPPLIES

Note that the term ENERGY SOURCES has a great number of narrower terms, including fossil fuels, petroleum, biomass and many others; all of these also appear under ENERGY SOURCES so it is very easy to do a comprehensive search here.

Now, start up your search in the Energy Data Base in the short way:

4. Type !1 to begin your session. This will bypass the address information, and put you directly into the Energy Data Base. (Remember that if you do this in practice, the resulting printout will be unlabeled. It is better to enter an address.)
5. SELECT several of the terms you have chosen, using STACKING to send several commands at once.
6. SELECT the rest of the terms, using STACKING
7. COMBINE FORECASTING and GLOBAL ASPECTS, using AND logic.
COMBINE this intermediate set successively with ENERGY SOURCES, then ENERGY SUPPLIES. (e.g. \$5*3+5*4)
8. DISPLAY several pages worth of citations in FORMAT 3 (titles and numbers).
Use stacking to do all this with one transmission.

9. From the citations you have seen, choose two or three for which you would like to see the full citation; DISPLAY the full citation for each item in FORMAT 2, 6 or 0; STACK two or three DISPLAY commands when you send them to RECON.
10. LIMIT your set to BOOKS that have been added to the Energy Data Base in 1978 or 1979
11. KEEP this limited set.
12. EXPAND to find all publications by AMORY LOVINS.
13. SELECT this author.
14. DISPLAY several items in format 4, using STACKING with page command.
15. KEEP this author's citations.
16. Terminate your search using the END command. (but don't use END STOP =STOP unless no one else is going to use the terminal).

RECON PRACTICE SESSION III

The Topic: How can corn cobs be used as energy-producing biomass?

1. Identify concepts. Here there are two:

CORN COBS ENERGY PRODUCTION

BIOMASS

2. Expand and translate concepts. Corn, and corncobs, are not found in the thesaurus; however, MAIZE is. Energy production is not found, but ENERGY SOURCES is. Since ENERGY SOURCES is a broader term to MAIZE, it will retrieve all the same citations; however, those where ENERGY SOURCES was originally applied by an indexer can be retrieved by using SD=ENERGY SOURCES. In the Subject Categories list there are several categories indexed under Biomass. We will use several. The cobs will be found using title search and LOOK command.

3. The concept groups now look like this:

MAIZE

SD=ENERGY SOURCES

TL=COB

NC=140504 (Biomass conversion)

TL=COBS

NC=299002 (Biomass energy, Energy Policy)

(LOOK for ' COB')

NC=090222 (Biomass fuels, Alcohols)

4. BEGIN your search in the short way.
5. SELECT MAIZE.
6. SELECT TL=COB and TL=COBS, using stacking.
7. COMBINE these.
8. DISPLAY the results.
9. SELECT SD=ENERGY SOURCES and the categories above.
10. COMBINE MAIZE with each category (e.g. \$1*5+1*6+1*7+1*8)
11. COMBINE using NOT logic to remove the items you have seen, with TL=COB, COBS.
12. Now write a LOOK command to find ' COB' in the resultant set. (L10/a,t/' cob')
13. Did you find additional items? If so, display them.
14. If you want to, use NOT logic to exclude the set you have looked at, and use another LOOK command to see if there are more corn cobs in EDB. (I found a few more, but they were mostly on uptake of radioactivity or uptake of pollutants).

This report was done with support from the Department of Energy. Any conclusions or opinions expressed in this report represent solely those of the author(s) and not necessarily those of The Regents of the University of California, the Lawrence Berkeley Laboratory or the Department of Energy.

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