

RESOURCE RECOVERY AND WASTE REDUCTION

Current Reports

This list (SW-536.1) was compiled
by the Resource Recovery Division
for the Office of Solid Waste

U.S. ENVIRONMENTAL PROTECTION AGENCY

1977

(Inside pages are recyclable)

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RESOURCE RECOVERY AND WASTE REDUCTION

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The following information is a compilation of published and unpublished resource recovery and waste reduction information. Most have recently been developed by the U.S. Environmental Protection Agency. Unless otherwise stated, for copies, please write to:

Solid Waste Information
U.S. Environmental Protection Agency
Cincinnati, Ohio 45268
(Order blank on inside back cover)

For technical assistance or other information, please contact the nearest EPA Regional Office. For your convenience, a list is provided on the inside front cover.

I. OVERVIEW

General Information

- 390+ DECISION-MAKER'S GUIDE IN SOLID WASTE MANAGEMENT. Environmental Protection Agency, 1976. 158 p.
A series of two- to five-page discussions of approximately thirty solid waste management topics including resource recovery and separate collection.
- 353 RESOURCE RECOVERY AND SOURCE REDUCTION: SECOND REPORT TO CONGRESS. Environmental Protection Agency, March 1974. 112 p.
Presents findings from EPA studies about resource recovery and source reduction.
- 448 RESOURCE RECOVERY AND WASTE REDUCTION: THIRD REPORT TO CONGRESS. Environmental Protection Agency, 1975. 96 p.
Examines policy issues, reviews technological progress, summarizes city and States activities, and reviews EPA studies and investigations for 1974.
- 600 RESOURCE RECOVERY AND WASTE REDUCTION: FOURTH REPORT TO CONGRESS. Environmental Protection Agency. January 1977. (In preparation)
Examines policy issues, updates solid waste generation and recycle estimates, reviews technological developments, and summarizes city, State and Federal Government activities in R&D, Guidelines and implementation of resource recovery and waste reduction programs during 1975-76.

+The number at left is the number for ordering publications from the above addresses.

- 344 RECYCLING AND THE CONSUMER. Environmental Protection Agency, 1974. 12 p.
An introduction to recycling and source reduction and what the individual can do to promote them.
- 403 RECYCLING AND THE CONSUMER. Environmental Protection Agency, 1974.
Two-sided sheet with information about recycling as well as illustrations of five recyclable materials which can be made into a mobile.
- 445 A SOLID WASTE ESTIMATION PROCEDURE: MATERIAL FLOWS APPROACH. Smith, Fred. 1975. 56 p.
Presents estimates of household and commercial solid waste generation.
- 378 ENERGY CONSERVATION THROUGH IMPROVED SOLID WASTE MANAGEMENT. Lowe, R.A., Appendices by M. Loube and F.A. Smith, April 1974. 39 p. ERRATA SHEET. 1976. 4 p.
Summarizes the potential energy conservation benefits from source reduction, energy recovery, materials recycling, and improved solid waste collection. Summarizes energy recovery technologies. Summarizes energy recovery activity in communities around the country. Summarizes the amount of energy potentially available from solid waste management.
- 482 RESOURCE RECOVERY PLANT COST ESTIMATES: A COMPARATIVE EVALUATION OF FOUR RECENT DRY-SHREDDING DESIGNS. Smith, Frank. October 1975. 20 p.
A standardized evaluation of cost estimates for four dry-shredding facilities.
- 443 COMPARATIVE ESTIMATES OF POST-CONSUMER SOLID WASTE. Smith, Frank. 1975. 18 p.
Presents a comparison of the quantity and composition of municipal solid waste.
- 432 NATIONWIDE SURVEY OF WASTE REDUCTION AND RESOURCE RECOVERY ACTIVITIES. McEwen, L. 1976.
A summary of progress in resource recovery projects throughout the United States. Updated periodically.
- BASELINE FORECASTS OF RESOURCE RECOVERY. Midwest Research Institute. March 1975. 376 p. Distributed by the National Technical Information Service, U.S. Department of Commerce, Springfield, Va. 22151. Publication No. PB-245 924.
Forecasts to 1990 the quantity of waste generation, the recovery of resources from municipal solid waste, the recovery of specific materials in solid waste, the total recoverable quantity of seven specific materials and the sources of generation for residential, commercial, and industrial wastes.

ENERGY IN SOLID WASTE; A CITIZEN GUIDE TO SAVING. Citizens Advisory Committee on Environmental Quality. 1975. 38 p. Distributed by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. No. 4000-00319. \$1.25/copy, 25% discount on orders of 100 or more. Discusses ways citizens can reduce waste generation and facilitate the recovery, recycling and reuse of resources in solid waste.

- 560 EPA AND MUNICIPAL RESOURCE RECOVERY. Meyers, S. Reprinted from NCRR Bulletin, Summer 1976.
Review of EPA's role in relation to municipal resource recovery.
- 505 WASTE REDUCTION AND RESOURCE RECOVERY: THERE IS ROOM FOR BOTH. Humber, N. Reprinted from Waste Age, November 1975.
Defines terms and explains how resource recovery, source separation and waste reduction can work together.
- 501 RESOURCE RECOVERY: THE INDUSTRY AND ITS CAPACITY. Hopper R. 1976.
A survey of the resource recovery industry and its ability to meet the rising demand for resource recovery processing equipment. (See also #539 below)
- 539 THE RESOURCE RECOVERY INDUSTRY. Hopper, R. and C. Ganotis. Reprinted from Environmental Science & Technology, May 1976.
Presents a profile of the resource recovery industry and its projections for the future. This journal article is a summary of # 501 above.
- 498 THE QUANTITY AND COMPOSITION OF POST-CONSUMER SOLID WASTE: MATERIAL FLOW ESTIMATES FOR 1973 and BASELINE FUTURE PROJECTIONS. 5 pg. Smith, Frank. Reprinted from Waste Age, March 1976.
Presents EPA's estimates of household and commercial waste generation and recycling for 1973, both in terms of material composition and product sources.
- 570 A REVIEW OF ENERGY RECOVERY TECHNOLOGIES. Levy, S.J. and S.A. Lingle. Reprinted from Waste Age, November 1976.
Current status of development of energy recovery from solid waste.

Planning for Resource Recovery

RESOURCE RECOVERY PLANT IMPLEMENTATION: GUIDES FOR MUNICIPAL OFFICIALS.

A series of publications covering all aspects of the planning and procurement process for resource recovery.

- 533 PLANNING AND OVERVIEW. Lowe, R.A. and A. Shilepsky. 1976. 34 p.
Discusses three major steps--study, selection, and procurement--leading to implementation of resource recovery with emphasis on significant issues and problems.

- 550 TECHNOLOGIES. Levy, S.J. and H.G. Rigo. 1976. 81 p.
A review of various technologies available to
recover energy and resources from municipal
solid waste.
- 496 RISKS AND CONTRACTS. Randol, R. 1976. 52 p.
Examines risks in resource recovery and possible
risk allocations. Case studies of contractual
arrangements in Milwaukee, Nashville, and Bridgeport.
- 499 MARKETS. Garbe, Y., and S.J. Levy. 1976. 47 p.
Discusses the markets for energy and material products
recovered from municipal solid waste.
- 493 ACCOUNTING FORMAT. Sussman, D. 1976. 17 p.
Presents a standardized accounting procedure for
resource recovery facilities.
- 471 FINANCING. Randol, R. 1975. 20 p.
Discusses alternatives for financing resource recovery
facilities.
- 495 PROCUREMENT. Shilepsky, A. 1976. 66 p.
Discusses the process of preparing a Request for
Proposals and evaluating the responses.
- 470 FURTHER ASSISTANCE. Hawkins, D. 1975. 29 p.
Provides sources for information on resource recovery.
- 505 WASTE REDUCTION AND RESOURCE RECOVERY: THERE IS ROOM FOR BOTH.
Humber, N. Reprinted from Waste Age, November 1975.
(See Overview - General Information for description.)
- 466 RESOURCE RECOVERY: CAREFUL SYSTEM PLANNING AND MATERIALS MARKET
ANALYSIS ESSENTIAL. Humber, N. In Solid Waste Management
Today . . . Bringing About Municipal Change. Reprinted
from Nation's Cities, April 1975.
Discusses major considerations which must be studied
before undertaking resource recovery--technology, markets,
procurement, intergovernmental relations, financing.
- 567 RESOURCE RECOVERY PLANNING: AN OVERVIEW OF THE IMPLEMENTATION
PROCESS. National League of Cities. 1976.
A brief discussion of issues to assist local officials
in preparing and mobilizing the investigation of local
resource recovery opportunities. This is a short version
of #533 above.

- 552 RESOURCE RECOVERY RFP AND CONTRACT SUMMARIES. Hawkins, D. 1976
54 p.
Summaries of 12 requests for proposals (RFP's), 5 contracts and
a letter of intent issued by cities, counties and states
for resource recovery projects.

II. WASTE REDUCTION

General Information

SOURCE REDUCTION FACT SHEET.

Periodic publication presenting innovative approaches to
waste reduction.

- 416 RED OWL STORES. Environmental Protection Agency. 1975.
Reuse of grocery containers.
- 447 INTERNATIONAL PAPER AND WELLS DAIRY. Environmental Protection
Agency. 1975.
Redesigned milk carton to conserve paper fiber and
energy in production.
- 353 RESOURCE RECOVERY AND SOURCE REDUCTION: SECOND REPORT TO CONGRESS.
Environmental Protection Agency. March 1974. 112 p.
(See Overview for description)
- 448 RESOURCE RECOVERY AND WASTE REDUCTION: THIRD REPORT TO CONGRESS.
Environmental Protection Agency. 1975. 96 p.
(See Overview for description)
- 600 RESOURCE RECOVERY AND WASTE REDUCTION: FOURTH REPORT TO CONGRESS.
Environmental Protection Agency. January 1977.
(See Overview for description)
- 456 REDUCE. League of Women Voters Educational Fund Publication.
1975. 47 p.
Highlights targets for waste reduction, possible approaches,
expected impacts and activity by industry, legislatures,
EPA, and the public.
- 460 WIN THE WAR ON WASTE. Train, Russell. Presented at the Third
National Congress on Waste Management Technology and Resource
Recovery, November 14, 1974. 15 p.
Presents EPA policy on solid waste management and waste
reduction. Advocates industry initiatives in reducing
waste generation.
- 461 PROCEEDINGS: 1975 CONFERENCE ON WASTE REDUCTION.
Environmental Protection Agency. 1975. 152 p.
Transcripts of speeches, questions and answers on government,
industry, labor and public perspectives on waste reduction,
technical options for reducing product waste and beverage
container legislation.

- 500 REDUCE THE INCENTIVE TO WASTE. Skinner, J.H. Presented at the 80th National Meeting, American Institute of Chemical Engineers, Boston, Sept. 8, 1975. 9 p.
Discusses the need for waste reduction and the Federal role in waste reduction.

Packaging

- 364 ENVIRONMENTAL PROTECTION, RESIDUAL MANAGEMENT, AND RESOURCES. Darnay, A.J. March 1974.
Information on packaging waste reduction.
- 442 PACKAGING SOURCE REDUCTION: CAN INDUSTRY AND GOVERNMENT COOPERATE? Claussen, E.L. Presented at the Packaging Institute Annual Forum, Oct. 1974. 17 p.
Discusses pros and cons of reducing packaging waste.
- 437 AN EVALUATION OF THE EFFECTIVENESS AND COSTS OF REGULATORY AND FISCAL POLICY INSTRUMENTS ON PRODUCT PACKAGING. Bingham, J.H., et al. 1974. 301 p.
Evaluates regulations which would require use of recycled materials in packaging and several types of taxes on packaging.
- AN EVALUATION OF THE IMPACT OF DISCRIMINATORY TAXATION ON THE USE OF PRIMARY AND SECONDARY RAW MATERIALS. Booz-Allen and Hamilton, Inc. Distributed by the National Technical Information Service, U.S. Dept. of Commerce, Springfield, Va. 22151. Publication No. PB-240 988.
Describes and quantifies the value of current Federal tax policy as it relates to competition between virgin and secondary materials.

Beverage Containers

- 459 STATEMENT BEFORE SUBCOMMITTEE ON THE ENVIRONMENT, SENATE COMMITTEE ON COMMERCE. Quarles, J., Jr. May 7, 1974. 14 p.
Presents EPA position on beverage container legislation.
- STATEMENT BEFORE THE WISCONSIN SENATE COMMERCE COMMITTEE. HEARINGS OF BEVERAGE CONTAINER DEPOSIT LEGISLATION. Skinner, J.H. March 3, 1976. Distributed by the Resource Recovery Division (AW-463), Office of Solid Waste Mgmt., U.S. Environmental Protection Agency, Washington, D.C 20460.
Statement of EPA policy on beverage container legislation.
- 405 RESOURCE AND ENVIRONMENTAL PROFILE ANALYSIS OF NINE BEVERAGE CONTAINER ALTERNATIVES. U.S. Environmental Protection Agency, 1974. 178 p.
Analyzes seven different impact categories for each manufacturing and transportation step in the life of a beverage container.

- 487 BEVERAGE CONTAINERS: THE VERMONT EXPERIENCE. Loube, M.
1975. 16 p.
Analyzes the impact of the Vermont beverage container legislation.
- 462 QUESTIONS AND ANSWERS ON RETURNABLE BEVERAGE CONTAINERS FOR
BEER AND SOFT DRINKS. Environmental Protection Agency.
June 1975. 9 p.
Gives answers to frequently asked questions on deposit
legislation and its impacts.
- 463 SOLID WASTE MANAGEMENT-GUIDELINES FOR BEVERAGE CONTAINERS.
Federal Register, September 20, 1976. (40 CFR Part 244).
Guidelines for implementing a deposit system on beverage
containers sold on Federal facilities.
- 532a YOSEMITE TEST OF BEVERAGE CONTAINER NEWS RELEASE.
July 1976.
One-page news release stating progress on test implementation
of beverage guidelines on a Federal facility.
- 572 UNTRASHING YOSEMITE PARK. Pierce, C. Reprinted from EPA Journal,
October 1976.
Review of the Yosemite National Park's experience with returnable
beverage containers.
- 531 PRICE SURVEY OF BEVERAGES IN REFILLABLE AND NONREFILLABLE CONTAINERS.
Peterson, C. October 1976. 2 pg. press release.
Summary of price comparison survey of beverages in refillable
and nonrefillable containers.

III. TECHNOLOGY AND MARKETS

General Information

- 570 A REVIEW OF ENERGY RECOVERY TECHNOLOGIES. Levy, S.J. and S.A. Lingle.
Reprinted from Waste Age, November 1976.
(See Overview-General Information for description.)
- 438 RECYCLED MATERIALS MARKETS: FEBRUARY 1975 - A SUMMARY.
Lingle, S.A. April 1975. 8 p.
Provides a brief review of the market demand for materials
recovered from municipal solid waste. Reviews market
conditions during 1973-1974 period and describes factors
underlying longer term trends in recycled materials markets.
- 490 GUIDELINES FOR PROCUREMENT OF PRODUCTS THAT CONTAIN RECYCLED MATERIAL
Federal Register, January 15, 1976. (40 CFR Part 247)
Recommends procedures to be followed to encourage the
purchase of products that contain recycled materials.

- 490 SOLID WASTE MANAGEMENT GUIDELINES-GUIDELINES FOR RESOURCE RECOVERY FACILITIES. Federal Register, September 21, 1976 (40 CFR Part 245).
A regulation that requires Federal agencies that are involved with solid waste disposal activities to establish or utilize resource recovery facilities to dispose of the waste and recover the material and energy contained in the waste.
- 458 ANAEROBIC DIGESTION OF SOLID WASTE AND SEWAGE SLUDGE TO METHANE. Hitte, S.J. 1975. 13 p.
A discussion of the biological conversion of solid waste to methane. Discusses markets, current research, benefits, economics, and environmental impacts.
- 550 RESOURCE RECOVERY PLANT IMPLEMENTATION: GUIDE FOR MUNICIPAL OFFICIALS-TECHNOLOGIES. Levy, S.J., and H.G. Rigo. 1976. 81 p.
(See Waste Reduction for description)
- 499 RESOURCE RECOVERY PLANT IMPLEMENTATION: GUIDE FOR MUNICIPAL OFFICIALS-MARKETS. Garbe, Y., and S.J. Levy. 1976. 74 p.
(See Waste Reduction for description)
- 518 MARKET LOCATIONS FOR RECOVERED MATERIALS. Howard, S. 1976. 88 p.
Contains lists of actual or potential users of recycled paper, steel, glass, and aluminum. Certain key data is presented when available for each facility, including whether they use recycled materials and their yearly capacity.
- 528 DEMONSTRATING RESOURCE RECOVERY. EPA (Staff). Reprinted from Waste Age, June 1976.
A summary of EPA's resource recovery demonstration projects. Discusses problems encountered and gives current status.
- 378 ENERGY CONSERVATION THROUGH IMPROVED SOLID WASTE MANAGEMENT. Lowe, R.A. Appendices by M. Loube and F.A. Smith. April 1974. 39 p. ERRATA SHEET. 1976. 4 p.
(See Overview for description)
- 448 RESOURCE RECOVERY AND WASTE REDUCTION. THIRD REPORT TO CONGRESS. Environmental Protection Agency. 1975. 96 p.
(See Overview-General Information for description.)

Source Separation and Paper Recycling

- 381 SEPARATING PAPER AT THE WASTE SOURCE. Lingle, S.A. April 1974. 16. p.
Discussion of techniques for separate collection of newspaper, corrugated, and office wastepaper, as well as associated market, environmental and conservation issues.

- 400 A NEW LOOK AT THE ECONOMICS OF SEPARATE REFUSE COLLECTION.
SCS Engineers and EPA staff. Reprinted from Waste Age,
May/June 1974.
Discusses the economic implications of separate refuse
collection.
- ANALYSIS OF SOURCE SEPARATE COLLECTION OF RECYCLABLE SOLID WASTE
(2 vols.) SCS Engineers. 1974. Distributed by the National
Technical Information Service, U.S. Dept. of Commerce,
Springfield, Va. 22151. Publication Nos. PB-239 775 and
PB-239 776
Final report of detailed case studies of separate collection
and recycling centers. Discusses economics, equipment,
public response and other influencing factors.
- 397 TRENDS IN WASTEPAPER EXPORTS AND THEIR EFFECTS ON DOMESTIC MARKETS.
Smith, F.L., Jr. 1974. 17 p.
An economic evaluation of the impact of wastepaper exports on
domestic paper markets.
- 343 THE NATIONAL BUYER'S GUIDE TO RECYCLED PAPER. Environmental
Educators, Inc. October 1973. 208 p.
Directory of paper companies and their distributors who
manufacture products containing recycled paper. Products
and recycled contents are listed.
- 420 PAPER RECYCLING IN THE UNITED STATES. Lingle, S.A. Reprinted
from Waste Age, Nov. 1974 4 p.
An overview of the wastepaper market in the United States,
covering supply, demand and price.
- 446 WHAT YOU CAN DO TO RECYCLE MORE PAPER. Environmental Protection
Agency. 1975. 12 p.
Guide for citizens interested in ways to recycle paper.
- 473 MATERIALS RECOVERY: SOLID WASTE MANAGEMENT GUIDELINES FOR
SOURCE SEPARATION. Federal Register, April 23, 1976.
(40 CFR Part 246)
Guidelines for source separation in Federal facilities.
- 486 RESIDENTIAL PAPER RECOVERY: A MUNICIPAL IMPLEMENTATION GUIDE.
Hansen, P. 1975. 26 p.
Discusses municipal separate collection in terms of methods
of collection, public vs. private collection, success factors,
pilot vs. full-scale programs, and mandatory vs. voluntary
separation.

- 553 RESIDENTIAL PAPER RECOVERY: A COMMUNITY ACTION PLAN.
National Center for Resource Recovery, Inc. 1976.
Describes how to conduct a public education campaign
implementing a community source separation program.
This is a companion document to #486 above.
- A NEW LOOK AT RECYCLING WASTE PAPER. Citizens' Advisory Committee
on Environmental Quality. 1976. 88 p. Distributed by the
Superintendent of Documents, U.S. Government Printing Office,
Washington, D.C. 20402. No. 040-000-00369-0. \$1.55/copy,
25% discount on orders of 100 or more.
Report on a conference held May 11, 1976, sponsored by NCRR,
involving key people knowledgeable on the subject of the
recycled-paper problem.
- WASTEPAPER RECYCLING. 12 p.
WASTEPAPER RECYCLING FOR COMMERCE AND INDUSTRY 12 p.
WASTEPAPER RECYCLING FOR CIVIC AND CHARITABLE GROUPS 12 p.
OFFICE WASTEPAPER RECYCLING. 12 p.
Distributed by the American Paper Institute, Paper Stock
Conservation Committee, 260 Madison Avenue, New York, N.Y. 10016
Four brief brochures outlining considerations for starting
municipal, civic, office or industrial paper collection programs
- 510 DEMONSTRATING MULTIMATERIAL SOURCE SEPARATION IN SOMERVILLE
AND MARBLEHEAD, MASSACHUSETTS. Hansen, P. and Resource
Planning Associates. Reprinted from Waste Age, Feb. 1976.
Describes two demonstration projects, funded in part by
EPA, where source separated materials are collected for
recycling.
- ANALYSIS OF DEMAND AND SUPPLY FOR SECONDARY FIBER IN THE U.S.
PAPER AND PAPERBOARD INDUSTRY. (3 vols.) A.D. Little, Inc.
Distributed by the National Technical Information Service,
U.S. Dept. of Commerce, Springfield, Va. 22151. Publication
Nos. PB-250 758; PB-250 905; PB-250 802.
Compiles a comprehensive technical and economic data bank
of information on the U.S. pulp and paper industry with
specific attention to the role of secondary fiber in the
industry.
- 511 WASTEPAPER RECYCLING: REVIEW OF RECENT MARKET DEMAND AND SUPPLY.
Smith, Fred. Reprinted from Pulp & Paper, Sept. 1975.
Discusses the causes and patterns of unstable U.S. wastepaper
market during 1973 to 1975; foresees little to prevent
future fluctuations.
- EVALUATION OF A COMPARTMENTALIZED REFUSE COLLECTION VEHICLE FOR
SEPARATE NEWSPAPER COLLECTION. SCS Engineers. 1976. 94 p.
Distributed by the National Technical Information Service,
U.S. Dept of Commerce, Springfield, Va. 22151.
Publication No. PB 257-969.
Presents information on the economic viability of a compart-
mentalized refuse collection vehicle for separate newspaper
collection.

575 RESOURCE RECOVERY THROUGH MULTI-MATERIAL SOURCE SEPARATION. Hansen, P. Reprinted from Waste Age, October 1976. Review of Somerville and Marblehead, Mass., source separation demonstrations.

551 SOURCE SEPARATION: THE COMMUNITY AWARENESS PROGRAM. Resource Planning Associates. 1976. 88 p. Describes the public education campaign conducted to kick-off the source separation programs in Somerville and Marblehead, Mass.

Materials Recovery

408 THE FRANKLIN, OHIO DEMONSTRATION PROJECT: WET PROCESSING SOLID WASTES FOR RESOURCE RECOVERY. Arella, D.G. 1974. 26 p. A summary description of the Franklin, Ohio demonstration project--equipment, process flow, and economics.

558 COLOR SORTING WASTE GLASS AT FRANKLIN, OHIO. Garbe, Y.M. Reprinted from Waste Age, September 1976. An evaluation of the waste glass color sorting subsystem at the Franklin, Ohio, resource recovery demonstration project.

491 MINERAL RECOVERY FROM WASTES. Garbe, Y. 1975. 14 p. Summary report of technology which was to be demonstrated at Lowell, Massachusetts, including equipment description, process flow and economics. Explanation of Lowell withdrawal from grant.

A TECHNICAL, ENVIRONMENTAL AND ECONOMIC EVALUATION OF THE "WET PROCESSING SYSTEM FOR THE RECOVERY AND DISPOSAL OF MUNICIPAL SOLID WASTE." Systems Technology Corporation. 1975. Distributed by the National Technical Information Service, U.S. Dept. of Commerce, Springfield, Va. 22151. Publication No. PB-245 674. An evaluation of the hydrasposal and fiber recovery systems developed by Black Clawson Co. for an EPA demonstration facility in Franklin, Ohio.

A TECHNICAL AND ECONOMIC STUDY OF WASTE OIL RECOVERY. Teknekron, Inc. Distributed by the National Technical Information Service, U.S. Dept. of Commerce, Springfield, Va. 22151. Publication No. PB-251 716. A summary of Federal programs affecting waste oil and a technical and economic analysis of the rerefining industry.

TIRE RECYCLING AND REUSE INCENTIVES. International Research and Technology Corporation. Distributed by the National Technical Information Service, U.S. Dept. of Commerce, Springfield, Va. 22151. Publication No. PB-252 602. Identifies alternatives for recycling tires plus possible incentive schemes.

MATERIALS RECOVERY FROM POST-CONSUMER SOLID WASTE. Levy, S.J.
Presented at the Third Annual U.S. -Japan Conference on Solid
Waste Management, May 12-14, 1976. 33 p. Distributed by the
Resource Recovery Division (AW-463), Office of Solid Waste,
U.S. Environmental Protection Agency, Washington, D.C. 20460.
Discusses materials recovery equipment and promising approaches
to glass, metals and paper by source separation and separate
collection.

ENVIRONMENTAL IMPACTS OF VIRGIN AND RECYCLED STEEL AND ALUMINUM.
Calspan Corporation. Distributed by the National Technical
Information Service, U.S. Dept. of Commerce, Springfield, Va.
22151. Publication No. PB-253 487.
A technical and economic assessment comparing the impacts
of using virgin and recycled steel and aluminum.

- 448 RESOURCE RECOVERY AND WASTE REDUCTION: THIRD REPORT TO CONGRESS.
Environmental Protection Agency, 1975. 96 p.
(See Overview for description.)

Solid Waste as a Supplementary Fuel for Power Plants

- 264 ENERGY RECOVERY FROM WASTE. Lowe, R.A. November 1973. 24 p.
Describes the St. Louis energy recovery demonstration,
funded in part by EPA, where solid waste is processed and
used as a supplementary fuel in power plant boilers.
- 538 EPA RESOURCE RECOVERY DEMONSTRATION: SUMMARY OF AIR EMISSIONS
ANALYSES. Holloway, J.R. Reprinted from Waste Age, August 1976.
Summary of St. Louis RDF project particulate, and bacteria and
virus emissions testing at processing plant, and particulate
and gaseous emissions at power plant.
- ST. LOUIS/UNION ELECTRIC REFUSE FIRING DEMONSTRATION AIR POLLUTION
TEST REPORT. Midwest Research Institute. August 1974.
Distributed by the National Technical Information Service,
U.S. Dept. of Commerce, Springfield, Va. 22151. Publication
No. PB-237 630.
The result of EPA's air emission test conducted in December 1973
as part of the St. Louis energy recovery demonstration.
- SOLID WASTE AS FUEL FOR POWER PLANTS. Horner & Shifrin. 1973.
146 p. Distributed by the National Technical Information
Service, U.S. Dept. of Commerce, Springfield, Va. 22151.
Publication No. PB-220 316.
Summarizes a 1969 study for the City of St. Louis that
determined the technical and economic feasibility of
burning municipal solid waste as supplementary fuel in
large suspension-fired utility boilers.

- 387 INTERIM PROGRESS REPORT: REFUSE AS A SUPPLEMENTARY FUEL FOR POWER PLANTS. NOVEMBER 1973 THRU MARCH 1974. Sutterfield, G.W. City of St. Louis, Missouri, July 1974. 25 p.
This third interim report summarizes the operating experience from November 1973 thru March 1974, providing a technical description of added equipment and summarizing operating problems and costs incurred during this period.
- ST. LOUIS REFUSE PROCESSING PLANT: EQUIPMENT, FACILITY, AND ENVIRONMENTAL EVALUATIONS. Midwest Research Institute. 1975. Distributed by the National Technical Information Service, U.S. Department of Commerce, Springfield, Va. 22151. Publication No. PB-243 634.
Describes partial results of test and evaluations at the St. Louis facility from September 1974 to January 1975. Includes energy balance, performance evaluation, operating costs, particulate emission tests, evaluation of plant washdown water and a plant sound survey.
- SYSTEMS EVALUATION FOR REFUSE AS A LOW SULFUR FUEL. Envirogenics and EPA Staff. 1971. (2 vols.) Distributed by the National Technical Information Service, U.S. Dept. of Commerce, Springfield, Va. 22151. Publication Nos. PB-209 271 and PB-209 272.
These volumes assess the fuel properties of refuse and the mechanics and technology involved with the utilization of refuse as a fuel.
- WHERE THE BOILERS ARE. Gordian Associates. May 1974. 329 p. Distributed by the National Technical Information Service, U.S. Dept. of Commerce, Springfield, Va. 22151. Publication No. PB-239 392.
Identifies the location and important design characteristics of electric utility boilers that have potential capacity for using waste as a supplemental fuel. Indicates how much waste could be burned each day in each boiler.
- STUDY OF THE FEASIBILITY OF FEDERAL PROCUREMENT OF FUELS PRODUCED BY SOLID WASTE. A.D. Little, Inc. Distributed by the National Technical Information Service. U.S. Dept. of Commerce, Springfield, Va. 22151. Publication No. PB-255 695.
A list with discussion of Federally-owned steam generators and their capability of using solid waste as a supplemental fuel.
- 467 USE OF SOLID WASTE AS A FUEL BY INVESTOR OWNED ELECTRIC UTILITIES: PROCEEDINGS. EPA/EDISON ELECTRIC INSTITUTE MEETING. Edited by R.A. Lowe. July 1975. 27 p.
Discusses technical aspects, air pollution, economics and financing, and contract negotiations and terms for using solid waste as a supplementary fuel in electric utilities.

Pyrolysis

- 417 PYROLYSIS OF MUNICIPAL SOLID WASTE. Levy, S.J. Reprinted from Waste Age, Oct. 1974. 6 p.
Describes pyrolysis in general and the pyrolysis systems being developed and built by several private companies.
- 431 BALTIMORE DEMONSTRATES GAS PYROLYSIS. Sussman, D.B. 1975. 24 p.
Describes the Baltimore energy and materials recovery demonstration, funded in part by EPA, where steam is generated by burning gases produced by pyrolysis of solid waste.
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A technical review of four pyrolysis systems currently being marketed in the United States.

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- 537 AIR EMISSIONS FROM SOLID WASTE-FIRED STEAM GENERATORS IN THE U.S. Sussman, D. Reprinted from Waste Age, July 1976.
A list with discussion compiled from various sources of particulate emission data from 100 percent solid waste-fired steam generators.

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