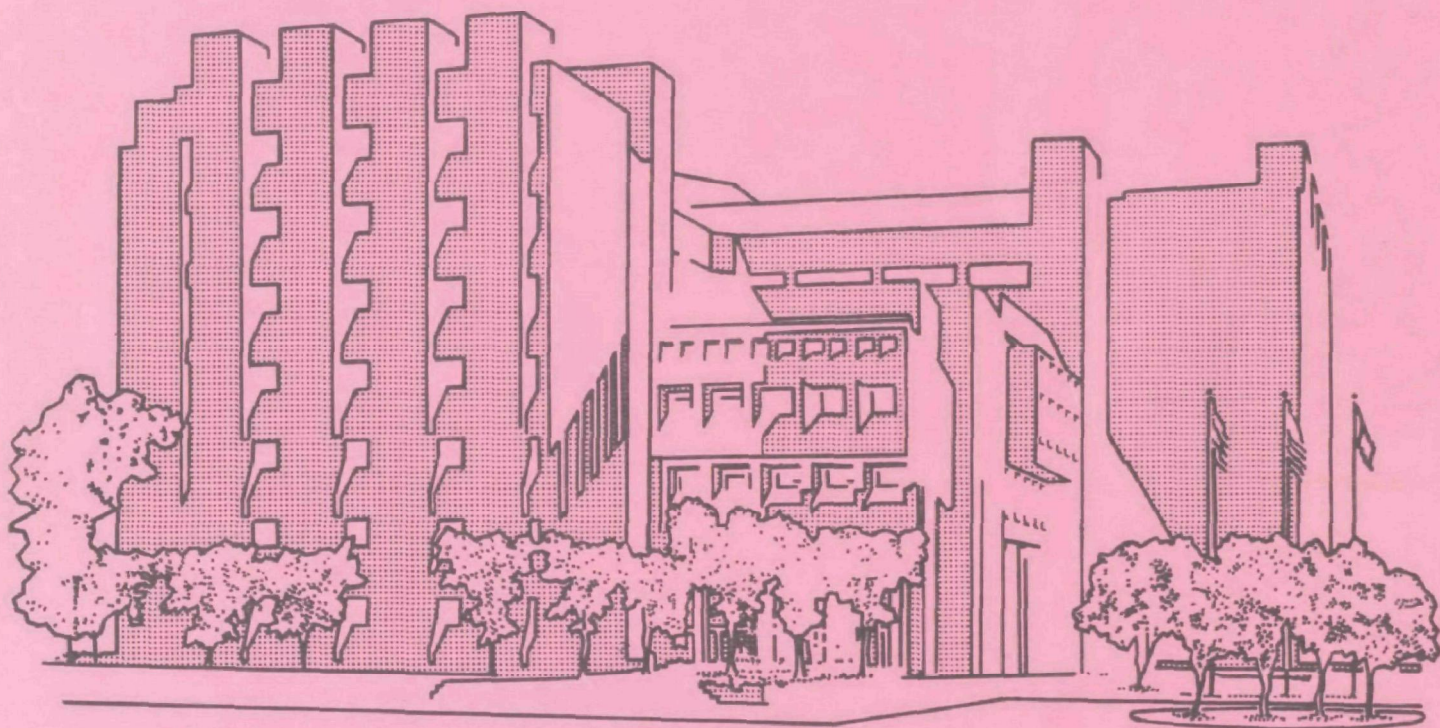


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FOREWORD

The purpose of this Publications List is to provide the potential user with a guide to technical papers and reports generated from the National Environmental Research Center (NERC) in Cincinnati and is not intended to reference all the technical publications of the U.S. Environmental Protection Agency.

This is one of several efforts undertaken by the Technical Information Staff to provide information and assistance on the availability of documents from the NERC. Although some of the listed publications are no longer available, they are included to assist the reader as background information to the research activities being investigated.

The NERC both conducts and contracts for research in the scientific and engineering interests of the technical and academic communities throughout the United States and the world. The research encompasses most areas of advanced waste treatment, industrial waste treatment, methods development and quality assurance, environmental toxicology, solid and hazardous waste, and water supply.

Environmental Research Publications is divided into sections listing reprints and journal proceedings; reports completed by contract, grant and in-house; and miscellaneous publications including newsletters issued by the Center.

Publications in this series will be distributed to requesters as supply permits. Requests should be directed to the Technical Information Staff, National Environmental Research Center, U.S. Environmental Protection Agency, Cincinnati, Ohio 45268. When not available from this Center, copies of reports may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151.

Gilbert M. Gigliotti, Director
Technical Information Staff
National Environmental Research Center,
Cincinnati

1971
PUBLICATIONS
REPRINTS

NERC-C

71-01

Van Donsel, D.J. and E.E. Geldreich.
Relationships of salmonellae to fecal coliforms in
bottom sediments. Water Research, 5:1079-1087,
1971.

71-02

Cummins, J.T. and R. Bull.
Spectrophotometric measurements of metabolic re-
sponses in isolated rat brain cortex.
Biochim. Biophys. Acta., 253:29-38, 1971.

71-03

Berg, G.
Integrated approach to problem of viruses in water.
J. San. Engrg. Div., ASCE. 97(SA6):867-882,
1971. Also printed in Proc. National
Specialty Conf. on Disinfection, Univ.
of Mass., Amherst, Mass., July 8-10, 1970,
1971.

★ 71-04

¹³¹ I Stigall, G.E., T.W. Fowler and H.L. Krieger.
Discharges from an operating boiling water reactor
nuclear power station. Health Phys., 20:593-599,
1971.

★ 71-05

Cohen, J.M. and S.A. Hannah.
Coagulation-Flocculation. Water Quality and
Treatment. Editors: AWWA. Chapter 3:66-122,
Third Edition, McGraw-Hill Book Co., 1971.

★ 71-06

Bunch, R.L.
Sewage effluents and sludge analyses. Treatise on
Analytical Chemistry. Editors: I.M. Kolthoff,
P.J. Elving and F. Stross. Chapter 47, Part III,
2:563-587, John Wiley and Sons, Inc., 1971.

★Designates that the reprint is not available from this office.

★ 71-07

Bunch, R.L.
Factors influencing phosphorus removal by biological treatment. Chemical Engrg. Progress Symposium Series, Water--1970, 67(107):90-94, 1971.

71-08

Blanchard, R.L. and J.B. Moore.
Body burden, distribution and internal dose of ^{210}Pb and ^{210}Po in a uranium miner population. Health Phys., 21:499-518, 1971.

★ 71-09

Krieger, H.L. and G.W. Frishkorn.
Evaluation of ion-exchange surveillance sampler for analyzing radioactive liquid effluents. Health Phys., 21:591-595, 1971.

★ 71-10

Dotson, G.K., R.B. Dean, B.A. Kenner, W.B. Cooke.
Land spreading, a conserving and non-polluting method of disposing of oily wastes. Proc. 5th International Water Pollution Research Conf., San Francisco, Calif., July-Aug. 1970, Sec. II, 36/1-15. Pergamon Press, 1971.

★ 71-11

Dean, R.B. and R. Bouthilet.
Hydrolysis of activated sludge. Proc. 5th International Water Pollution Research Conf. San Francisco, Calif., July-Aug. 1970, Sec. III, 31/1-13, Pergamon Press, 1971.

71-12

Smith, J.E., Jr.
Sludge handling and ultimate disposal. Third Annual Short Course on Water Quality Control, Univ. of Massachusetts, Amherst, Mass., 115-131, 1971.

71-13

Berg, G., D.R. Dahling and D. Berman.
Recovery of small quantities of viruses from clean waters on cellulose nitrate membrane filters. Applied Microbiology, 22(4):608-614, 1971.

71-14

Kugelman, I.J. and K.K. Chin.
Toxicity, synergism, and antagonism in anaerobic waste treatment processes. ACS Advances in Chemistry, No. 105, 55-90, 1971.

★71-15

Kahn, B., H.L. Krieger and H.E. Kolde.
Radionuclide release at a PWR nuclear power station.
Trans. Amer. Nucl. Soc., 14:326-327, 1971.

★71-16

English, J.N., A.N. Masse, C.W. Carry, et al.
Removal of organics from wastewater by activated carbon.
Chemical Engrg. Progress Symposium Series,
Water--1970, 67(107):147-153, 1971.

71-17

McFarren, E.F.
Assay and control of marine biotoxins. Food Technology,
25(3):38-46, 1971.

★71-18

Hill, R.D.
Reclamation and revegetation of strip-mined lands for
pollution and erosion control. Transactions of
the American Society of Agricultural Engrs.,
14(2):268-272, 1971.

★71-19

Karches, G.J., H.E. Kolde, W.L. Brinck, et al.
Field determination of dose from ^{133}Xe in the plume
from a pressurized water reactor. Proc. Inter-
national Symposium on Rapid Methods for Measur-
ing Radioactivity in the Environment. IAEA,
Vienna, 515-523, 1971.

★71-20

Blanchard, R.L., H.L. Krieger, H.E. Kolde, et al.
Radiological surveillance studies at a BWR nuclear
power station - estimated dose rates. Proc.
Symposium on Health Physics Aspects of Nuclear
Facility Siting. Editors: P.G. Voilleque and
B.R. Baldwin. Idaho Falls, Idaho, 372-384, 1971.

★71-21

Kahn, B., R.L. Blanchard, H.L. Krieger, et al.
Radiological surveillance studies at a boiling
water nuclear power reactor. Environmental
Aspects of Nuclear Power Stations, IAEA,
Vienna, 535-548, 1971.

71-22

Lishka, R. and E.F. McFarren.
Water physics no. 1. Anal. Ref. Service Report No. 39,
154 pp., 1971.

- 71-23
Lishka, R. and E.F. McFarren.
Water chlorine (Residual) no. 2. Anal. Ref. Service
Report No. 40, 97 pp., 1971.
- ★71-24
Lewis, R.F.
Identification of iron and sulfur bacteria.
Standard Methods for the Examination of Water
and Wastewater. 13th Edition. American Public
Health Association, New York, 715-721, 1971.
- 71-25
Eichelberger, J.W. and J.J. Lichtenberg.
Carbon adsorption for recovery of organic pesticides.
JAWWA, 63:25-27, Jan. 1971.
- 71-26
Breidenbach, A.W. and H.L. Hickman, Jr.
Solid waste management in the United States--Tech-
nological developments. ISWA Information Bulletin
No. 4, 113-130, Jan. 1971.
- 71-27
McFarren, E.F. and R.J. Lishka.
The use of collaborative studies to evaluate water
analysis instruments. JWPCF, 43:67-72, Jan. 1971.
- 71-28
Buelow, R.W. and G. Walton.
Bacteriological quality vs. residual chlorine.
JAWWA, 63:28-35, Jan. 1971.
- ★71-29
Cummins, J.M., A.C. Jones and A.A. Stevens.
Occurrence of toxic bivalve molluscs during a
Gymnodinium breve 'Red Tide'.
Trans. American Fisheries Society, 100:112-116,
Jan. 1971.
- 71-30
Winton, E.F., R.G. Tardiff and L.J. McCabe.
Nitrate in drinking water. JAWWA, 63:95-98,
Feb. 1971.
- 71-31
Berg, G.
Removal of viruses from water and wastewater.
Proc. 13th Water Quality Conf. - Virus and Water
Quality: Occurrence and Control, Univ. of Illinois
at Urbana-Champaign, Feb. 15-16, 1971. Univ. of
Illinois Bull. 69:126-136, Aug. 1971.

- 71-32
Chambers, C.W.
Chlorination for control of bacteria and viruses in
treatment plant effluents. JWPCF, 43:228-241,
Feb. 1971.
- 71-33
Ballinger, D.G. and G.D. McKee.
Chemical characterization of bottom sediments.
JWPCF, 43:216-227, Feb. 1971.
- ★71-34
Farrell, J.B.
Nitrogen in industry. Proc. Symposium on Nitrogen
in Soil and Water, Hespeler, Ontario, Canada,
Mar. 30-31, 1971. 92-108.
- ★71-35
Kreissl, J.F.
Phosphorus removal practice. Proc. Sanitary Engrg.
Institute, University of Wisconsin, Madison, Wisc.,
Mar. 9-10, 1971. 28pp.
- ★71-36
Kreissl, J.F.
Nitrogen removal today. Proc. Sanitary Engrg.
Institute, University of Wisconsin, Madison, Wisc.,
Mar. 9-10, 1971. 20 pp.
- 71-37
Mason, W.T., Jr. and J.E. Sublette.
Collecting Ohio River basin chironomidae (Diptera)
with a floating sticky trap. The Canadian Ento-
mologist, 103:397-404, Mar. 1971.
- 71-38
Kawahara, F.K.
Gas chromatographic analysis of mercaptans, phenols,
and organic acids in surface waters with use of
pentafluorobenzyl derivatives. Environmental
Science and Technology, 5:235-239, Mar. 1971.
- ★71-39
Kreissl, J.F., S.E. Clark, J.M. Cohen, et al.
Advanced waste treatment and Alaska's north slope.
Proc. Symposium on Cold Regions Engineering.
Editor: J.L. Burdick. Univ. of Alaska, College,
Alaska, Aug. 17-19, 1970. 2:647-689, Mar. 1971.

71-40

Geldreich, E.E. and R.H. Bordner.
Fecal contamination of fruits and vegetables during cultivation and processing for market. A review. J. Milk and Food Technology, 34:184-195, Apr. 1971.

71-41

Geldreich, E.E.
Application of bacteriological data in potable water surveillance. JAWWA, 63:225-229, Apr. 1971.

★ 71-42

Villiers, R.V., E.L. Berg, C.A. Brunner, et al.
Municipal wastewater treatment by physical and chemical methods. Water and Sewage Works, R62-R64, R77-R81, May 1971.

71-43

Cooke, W.B.
The effect of sludge additives on soil fungus populations. Mycopathologia & Mycologia Applicata, 44(3):205-219, May 1971.

71-44

Hill, W.F., Jr., E.W. Akin and W.H. Benton.
Detection of viruses in water: A review of methods and application. Water Research, 5:967-995, Pergamon Press, May 1971.

71-45

Kugelman, I.J.
Status of advanced waste treatment. Proc. Seminar on Advanced Wastewater Treatment and Disposal, Hauppauge, New York, June 10, 1971. 19-99.

★ 71-46

Smith, R.
Digital computer program for the cost engineer. American Association of Cost Engineers Bulletin, 13(3):21-27, June 1971.

71-47

Ballinger, D.G.
Decisions to be made in the use of automatic water quality monitors. Proc. International Symposium on Identification and Measurement of Environmental Pollutants, Ottawa, Canada, June 1971. 18 pp.

- 71-48
Roesler, J.F., R. Smith and R.G. Eilers.
Simulation of ammonia stripping from wastewater.
J. San. Engrg. Div., ASCE, Proc. Paper 8182,
97(SA3):269-286, June 1971.
- 71-49
Eichelberger, J.W. and J.J. Lichtenberg.
Persistence of pesticides in river water.
Environmental Science and Technology,
5:541-544, June 1971.
- ★71-50
Chambers, C.W.
Microbiology of waste treatment--1970 - Literature
review. JWPCF, 43:1217-1221, June 1971.
- ★71-51
Cohen, J.M.
Wastewater treatment by physical and chemical
methods - Literature review. JWPCF, 43:1092-
1104, June 1971.
- ★71-52
Bunch, R.L.
Biological filters - Literature review.
JWPCF, 43:1104-1107, June 1971.
- ★71-53
Hill, R.D. and R.C. Wilmoth.
Limestone treatment of acid mine drainage.
Transactions of the Society of Mining Engi-
neers, AIME, 250:162-166, June 1971.
- 71-54
Hill, R.D.
Restoration of a terrestrial environment--The
surface mine. The ASB Bulletin, 18(3):
107-116, July 1971.
- 71-55
Farrell, J.B.
Sludge dewatering by high-rate freezing at small
temperature differences - Discussion.
Environmental Science and Technology, 5:716,
Aug. 1971.
- ★71-56
Kahn, B., R.L. Blanchard, H.E. Kolde, et. al.
Radiological surveillance studies at a pressurized
water nuclear power reactor. NERC-Cincinnati,
EPA (RD-71-1), 99 pp., Aug. 1971.

71-57

Rohrman, F.A.
Analyzing the effect of fly ash on water pollution. Power, 2 pp., Aug. 1971.

71-58

Symons, J.M.
Artificial destratification in reservoirs.
JAWWA, 63:597-604, Sept. 1971.

71-59

Cooke, W.B.
The 1967 foray in Texas. Mycologia, LXIII(5):
1063-1067, Sept.-Oct. 1971.

★ 71-60

Mulbarger, M.C.
Nitrification and denitrification in activated
sludge systems. JWPCF, 43:2059-2070,
Oct. 1971.

71-61

Middleton, F.M. and J.J. Convery.
Municipal pollution control technology in the
United States of America. Proc. 1st.
U.S./Japanese Conf. on Sewage Treatment
Technology, Tokyo, Japan, Oct. 1971. 80 pp.

71-62

Chang, S.L.
Modern concept of disinfection. J. San. Engrg.
Div., ASCE, Proc. Paper 8441, 97(SA5):
689-707, Oct. 1971.

71-63

Hill, W.F., Jr., E.W. Akin, W.H. Benton, et. al.
Viral disinfection of estuarine water by UV.
J. San. Engrg. Div., ASCE, Proc. Paper 8423,
97(SA5):601-615, Oct. 1971.

71-64

Dean, R.B., R.T. Williams and R.H. Wise.
Disposal of mercury wastes from water laboratories.
Environmental Science and Technology, 5:1044-1045,
Oct. 1971.

★71-65

Farrell, J.B.
Mobile pilot plants for the removal of ammonia and phosphates from wastewater - Discussion. Proc. 31st International Water Conference, Engineers Society of Western Pennsylvania, Pittsburgh, Penn., 27-28, Oct. 1971.

71-66

Clark, R.M., B.L. Grunehoff, G.A. Garland, et al.
Cost of residential solid waste collection. J. San. Engrg. Div., ASCE, 97(SA5):563-568, Oct. 1971.

71-67

Barth, E.F.
Perspectives on wastewater treatment processes--Physical-chemical and biological. JWPCF, 43:2189-2194, Nov. 1971.

71-68

Logsdon, G.S. and E. Edgerley, Jr.
Sludge dewatering by freezing. JAWWA, 63:734-740, Nov. 1971.

★71-69

Huntley, B.E. and R.J. Hammerstrom.
An experimental depuration plant: Operation and evaluation. Chesapeake Science, 12(4):231-239, Dec. 1971.

71-70

Analytical Quality Control Lab., NERC, Cin., Ohio.
Methods for organic pesticides in water and wastewater. U.S. Environmental Protection Agency, National Environmental Research Center, Cincinnati, Ohio, 52 pp., 1971.

71-71

Analytical Quality Control Lab., NERC, Cin., Ohio.
Methods for chemical analysis of water and wastes. U.S. Environmental Protection Agency, National Environmental Research Center, Cincinnati, Ohio, 312 pp., 1971.

★71-72

Struzeski, E.J., Jr.
Environmental impact of highway deicing. Proc. Street Salting Urban Water Quality Workshop, State Univ. College of Forestry, Syracuse, New York, May 6, 1971. 14-19.

★71-73

Chang, S.L.
Small, free-living amoebas Cultivation, quantitation,
identification, classification, pathogenesis, and
resistance. Current Topics in Comparative
Pathobiology, 1:201-254, 1971, Academic Press, N.Y.

★71-74

Mason, W.T., Jr., P.A. Lewis and J.B. Anderson.
Macroinvertebrate collections and water quality mon-
itoring in the Ohio River 1963-1967. EPA, AQCL,
Cincinnati, 1971.

★71-75

Geldreich, E.E. and N.A. Clarke.
The coliform test: A criteria for the viral safety of
water. Proc. 13th Water Quality Conference -
Virus and Water Quality: Occurrence and Control,
University of Illinois Bulletin, 69(1):103-109,
Aug. 2, 1971.

★71-76

Geldreich, E.E.
Microbiology general - Literature review.
JWPCF, 43(6):1202-1217, June 1971.

★71-77

Alpert, S.M., B.B. Schwartz, S.D. Lee, et al.
Alveolar protein accumulation. Arch. Intern. Med.,
128:69-73, 1971.

★71-78

Alpert, S.M. and T.R. Lewis.
Ozone tolerance studies utilizing unilateral lung
exposure. J. Appl. Physiol., 31:243-246, 1971.

★71-79

Bloch, W.N., Jr. and T.R. Lewis.
A new glue holds rigid cup ECG skin electrodes for
24 hours and longer. J. Appl. Physiol.,
30:893-394, 1971.

★71-80

Campbell, K.I., W.M. Busey, N.K. Weaver, et al.
Biological effects in animals chronically exposed to
lead chlorobromide atmospheres. JAVMA,
159:1523-1529, 1971.

★71-81

Campbell, K.I., L.O. Emik, G.L. Clarke, et al.
Inhalation toxicity of peroxyacetyl nitrate.
Depression of voluntary activity in mice. Arch.
Environ. Health, 23:335-342, 1971.

★71-82

Emik, L.O., R.L. Plata, K.I. Campbell, et al.
Biological effects of urban air pollution. Arch.
Environ. Health, 23:335-342, 1971.

★71-83

Hemphill, F.E., M.L. Kaeberle and M.B. Buck.
Lead suppression of mouse resistance to Salmonella
typhimurium. Science, 172:1031-1032, 1971.

★71-84

Lee, S.D., J.R. Ramirez, B.B. Schwartz, et al.
Biochemical composition of human pulmonary washings.
Arch. Intern. Med., 127:395-400, 1971.

★71-85

Stara, J.F.
Effects of environmental pollution on domestic animals.
Proc. of 7th Annual Meeting U.S. Health Assoc.,
Oklahoma City, Oct. 1971. 325-328.

★71-86

Middleton, F.M.
Advanced treatment of municipal waste waters in
the United States of America. JWPCF,
70(2):201-212, 1971.

1972
PUBLICATIONS
REPRINTS

NERC-C

★72-01

Barth, E.F.
Design of treatment facilities for the control of
nitrogenous materials. Water Research, 6:481-483,
1972.

★72-02

Berg, G.
Viruses in water--Current status. Air and Water
Pollution. Editors: W.E. Brittin, R. West, and
R. Williams, 45-65, Colorado Assoc. Univ. Press,
Boulder, Colorado, 1972.

72-03

Bull, R.J. and A.J. Trevor.
Saxitoxin tetrodotoxin and the metabolism and cation
fluxes in isolated cerebral tissues.
J. Neurochemistry, 19:999-1009, 1972.

72-04

Bull, R.J. and A.J. Trevor.
Sodium and the flux of calcium ions in electrically-
stimulated cerebral tissue. J. Neurochemistry,
19:1011-1022, 1972.

★72-05

Blanchard, R.L. and B. Kahn.
Pathways for the transfer of radionuclides from
nuclear power reactors through the environment
to man. Proc. International Symposium on
Radioecology Applied to the Protection of Man
and His Environment, Rome, Italy, Sept. 7-10,
1971, 1:175-190, 1972.

72-06

Chambers, C.W. and G. Berg.
Disinfection and temperature influences. Proc.
International Symposium on Water Pollution
Control in Cold Climates, Fairbanks, Alaska,
July 22-24, 1970, 312-328, 1972.

★72-07

Cohen, J.M. and I.J. Kugelman.
Physical-chemical treatment for wastewater.
Water Research, 6:487-492, 1972.

72-08

Coleman, W.E.
Automatic amino acid analyses for determining the
amount and quality of protein in fungal protein
and in other protein sources. Symposium:
Seed Proteins. Editor: G.E. Inglett, Chapter
20:277-283. Avi Publishing Co., Inc. 1972.

72-09

Dobbs, R.A., R.H. Wise and R.B. Dean.
The use of ultraviolet absorbance for monitoring
the total organic carbon content of water and
wastewater. Water Research, 6:1173-1180, 1972.

72-10

Geldreich, E.E.
Buffalo Lake recreational water quality: A study
in bacteriological data interpretation.
Water Research, 6:913-924, 1972.

★72-11

Geldreich, F.E.
Water-borne pathogens. Water Pollution Micro-
biology. Editor: R. Mitchell, Chapter 9:207-
241, Wiley Interscience, 1972.

★72-12

Kahn, B., C. Weaver and B. Shleien.
Environmental experience with radioactive effluents
from operating nuclear power plants. Proc.
4th International Conference on the Peaceful
Uses of Atomic Energy, Geneva, Sept. 6-16,
1971, 11:559-573, 1972.

★72-13

Kolde, H.E. and W.E. Siri.
Radionuclides used in biological research. Biology
Data Book. Editors: P.L. Altman and D.S.
Dittmer, 1:477-484, 2nd Edition, Federation of
Societies for Experimental Biology, 1972.

★72-14

Librizzi, W.
Review and comment on waste treatment techniques for
commercial vessels. Pollution Control in the
Marine Industries. Editor: T.F.P. Sullivan,
163-180, International Association for Pol-
lution Control, 1972.

★72-15

Ridley, J.E. and J. Symons.
New approaches to water quality control in impound-
ments. Water Pollution Microbiology.
Editor: R. Mitchell, Chapter 17:389-412,
Wiley Interscience, 1972.

★72-16

Scarpino, P.V., G. Berg, S.L. Chang, et al.
A comparative study of the inactivation of viruses in
water by chlorine. Water Research, 6:959-965,
1972.

★72-17

Smith, R. and R.G. Eilers.
Cost to the consumer of collecting and treating waste
water in the U.S. Man and His Environment: The
Effects of Pollution on Man. Editor: T.R. Vickery,
Part 3:83-132, Syracuse University Press, 1972.

★72-18

Tabak, H.H., R.N. Bloomhuff and R.L. Bunch.
Coprostanol: A positive tracer of fecal pollution.
Developments in Industrial Microbiology,
13(Chapter 25):296-307, 1972.

72-19

Safferman, R.S., T.O. Diener, P.R. Desjardins, et al.
Isolation and characterization of AS-1, a phycovirus
infecting the blue-green algae, Anacystis
nidulans and Synechococcus cedrorum.
Virology, 47:105-113, Jan. 1972.

72-20

McFarren, E.F.
New, simplified methods for metal analysis.
Water Technology/Quality, JAWWA, 28-31, Jan. 1972.

72-21

Hammerstrom, R.J., D.E. Hissong, et al.
Mercury in drinking-water supplies. JAWWA, 64:60-61,
Jan. 1972.

72-22

Albrecht, O.W.
Economic basis for recycling solid waste.
The Environmental Capsule, 2 pp., Jan. and Feb.
1972.

72-23

Kopp, J.F., M.C. Longbottom and L.B. Lobring.
Cold Vapor' method for determining mercury. JAWWA,
64:20-25, Jan. 1972.

72-24

Longbottom, J.E.
Determination of nitrilotriacetic acid by high-speed
ion exchange chromatography. Analytical
Chemistry, 44:418-420, Feb. 1972.

★72-25

Ballinger, D.G.
Instruments for water quality monitoring.
Environmental Science and Technology, 6:130-133,
Feb. 1972.

72-26

Wilder, I. and J.E. Brugger.
Present and future technology requirements for
the containment of hazardous material spills.
Proc. 1972 Nat'l. Conf. on Control of
Hazardous Material Spills, Univ. of Houston,
Houston, Texas, Mar. 21-23, 1972, 77-83.

★72-27

Ziegler, R.C. and J.P. Laforanara.
In situ treatment methods for hazardous material
spills. Proc. Nat'l. Conf. on Control of Hazard-
ous Material Spills, Univ. of Houston,
Houston, Texas, Mar. 21-23, 1972, 157-171.

★72-28

Nadeau, R.J. and R.T. Dewling.
Hazardous material spills vs oil spills common
biological denominator. Proc. 1972 Nat'l.
Conf. on Control of Hazardous Material Spills,
Univ. of Houston, Houston, Texas, Mar. 21-23,
1972, 211-216.

72-29

Taylor, A., Jr., G.F. Craun, G.A. Faich, et al.
Outbreaks of waterborne diseases in the United States,
1961-1970. J. Infectious Diseases, 125:329-331,
Mar. 1972.

72-30

Smith, J.M., A.N. Masse, W.A. Feige, et al.
Nitrogen removal from municipal wastewater by colum-
nar denitrification. Environmental Science and
Technology, 6:260-267, Mar. 1972.

72-31

Schomaker, N.
Construction techniques for sanitary landfills.
Waste Age, 24-25 and 42-44, March-April 1972.

★72-32

Hill, R.D. and J.F. Martin.
Elkins mine drainage pollution control demonstration
project--An update. Proc. 4th Symposium on Coal
Mine Drainage Research, Mellon Institute, Pitts-
burgh, Pennsylvania, April 26-27, 1972, 96-104.

★72-33

Wilmoth, R.C., D.G. Mason and M. Gupta.
Treatment of ferrous iron acid mine drainage by
reverse osmosis. Proc. 4th Symposium on Coal
Mine Drainage Research, Mellon Institute, Pitts-
burgh, Pennsylvania, Apr. 26-27, 1972, 115-756.

★72-34

Wilmoth, R.C., R.B. Scott, and R.D. Hill.
Combination limestone-lime treatment of acid mine
drainage. Proc. 4th Symposium on Coal Mine
Drainage Research, Mellon Institute, Pittsburgh,
Pennsylvania, Apr. 26-27, 1972, pp. 244-265.

★72-35

Wallace, L.P.
An overview of hazardous waste disposal.
Proc. 2nd Annual Environmental Engrg. and
Science Conf., Louisville, Kentucky, April 20-
21, 1972, 779-787.

72-36

Hill, W.F., Jr., E.W. Akin, W.H. Benton, et al.
Virus in water, II. Evaluation of membrane cartridge
filters for recovering low multiplicities of
poliovirus from water. Applied Microbiology,
23:880-888, May 1972.

72-37

Longbottom, J.E.
Inexpensive mercury-specific gas chromatographic
detector. Analytical Chemistry, 44(6):1111-1112,
May 1972.

★72-38

Bunch, R.L.
Biological filters - Literature review. JWPCF,
44:923-924, June 1972.

★72-39

Geldreich, E.E.
Microbiology of water - Literature review.
JWPCF, 44:1159-1172, June 1972.

★72-40

Chambers, C.W.
Microbiology of waste treatment - Literature review.
JWPCF, 44:1172-1175, June 1972.

★ 72-41

Craun, G.F.
Microbiology-waterborne outbreaks - Literature review.
JWPCF, 44:1175-1182, June 1972.

72-42

Reasoner, D.J.
Microbiological pathogens in animals and their
detection - Literature review. JWPCF,
44:1182-1193, June 1972.

72-43

Berg, G.
Microbiology--detection and occurrence of viruses -
Literature review. JWPCF, 44:1193-1197,
June 1972.

★ 72-44

Cohen, J.M. and I.J. Kugelman.
Wastewater treatment by physical and chemical methods -
Literature review. JWOCF, 44:915-923, June 1972.

72-45

Berg, G.
Reassessment of the virus problem in sewage and in
surface and renovated waters. Proc. 6th Inter-
national Water Pollution Research Conf., Jerusalem,
June 18-23, 1972, B/14/28/1 - B/14/28/8.

★ 72-46

Scott, R.F., R.C. Wilmoth and R.D. Hill.
Cost of reclamation and mine drainage abatement,
Elkins demonstration project. Transactions of
the Society of Mining Engineers, AIME, 252:187-
193, June 1972.

72-47

Albrecht, O.W.
The federal government's role in recycling.
Univ. of Kentucky, College of Engrg., Tech-
nical Report UKY 44-72-CE 11, pp. 3, June 1972.

72-48

Middleton, F.M. and R.L. Stenburg.
Research needs for advanced waste treatment.
J. San. Engrg. Div., ASCE, 98(SA3):515-528,
June 1972.

★72-49

Evans, F.L. III, Editor.
Ozone in water and wastewater treatment.
Ann Arbor Science Publishers, Inc., Ann
Arbor, Michigan, 1972, pp. 195. (Available
from Ann Arbor Science Publishers, Inc.,
Ann Arbor, Michigan at \$14.50/copy)

★72-50

Venosa, A.D.
Ozone as a water and wastewater disinfectant:
A literature review. Ozone in Water and
Wastewater Treatment, Editor: F.L.
Evans, Chapter 5:83-100, Ann Arbor Science
Publishers, Inc., Ann Arbor, Michigan, 1972.

72-51

Dressman, R.C.
A new method for the gas chromatographic separation
and detection of dialkylmercury compounds--
Application to river water analysis. J. Chro-
matographic Science, 10:472-475, July 1972.

72-52

Dressman, R.C.
The conversion of phenylmercuric salts diphenyl-
mercury and phenylmercuric chloride upon gas
chromatographic injection. J. Chromatographic
Science, 10:468-472, July 1972.

72-53

Field, R. and E.J. Struzeski, Jr.
Management and control of combined sewer overflows.
JWPCF, 44:1393-1415, July 1972.

★72-54

O'Farrell, T.P., F.P. Frauson, A.F. Cassel, et al.
Nitrogen removal by ammonia stripping. JWPCF,
44:1527-1535, Aug. 1972.

72-55

Rogers, C.J., E. Coleman, D.F. Spino, et al.
Production of fungal protein from cellulose and
waste cellulosics. Environmental Science
and Technology, 6:715-719, Aug. 1972.

72-56

Kreissl, J.F. and J.J. Westrick.
Municipal waste treatment by physical-chemical
methods. Applications of New Concepts
of Physical-Chemical Wastewater Treatment.
Editor: W.W. Echenfelder, Jr., 1-11,
Pergamon Press, London, 1972.

72-57

Geldreich, E.E., H.D. Nash, D.J. Reasoner, et al.
The necessity of controlling bacterial populations
in potable waters: Community water supply.
JAWWA, 64:596-602, Sept. 1972.

72-58

Freeman, H.M., D.E. Ross and R.P. Stearns.
Bridging the gap - Analysis of federal programs
affecting solid waste generation and recycling:
a summation. Waste Age, pp. 5, Sept.-Oct. 1972.

72-59

Convery, J.J., J.F. Roesler and R.H. Wise.
Automation and control of physical-chemical treat-
ment for municipal wastewater. Proc. Inter-
national Conf. Applications of New Concepts of
Physical-Chemical Wastewater Treatment, Vander-
bilt Univ., Nashville, Tennessee, Sept. 18-22,
1972, Pergamon Press, Inc. 199-209.

72-60

Albrecht, O.W.
Impediments to recycling obsolete ferrous scrap.
Public Works, 103:92, 93, 126, 128, Oct. 1972.

72-61

Kawahara, F.K.
Characterization and identification of spilled
residual fuel oils by gas chromatography and
infrared spectrophotometry. J. Chromato-
graphic Science, 10:629-636, Oct. 1972.

★72-62

Klee, A.J.
The utilization of expert opinion in decision-
making. J. American Industrial Chemical
Engrg., 18(6):1107-1115, Nov. 1972.

★72-63

Lee, S.D., K.C. Butler, R.M. Danner, et al.
Radiorespirometry in the study of biological effects
of environmental pollutants. American Labora-
tory, 8-14, Dec. 1972.

- 72-64
Clark, R.M., J.R. Sweeten and D.G. Greathouse.
Basic data for solid waste management. J. San.
Engrg. Div., ASCE, 98(SA6):897-907, Dec. 1972.
- 72-65
Wilson, D.L.
Prediction of heat of combustion of solid wastes from
ultimate analysis. Environmental Science and
Technology, 6(13):1119-1121, Dec. 1972.
- ★72-66
Wagner, W.L., V.E. Archer and R.L. Blanchard.
A correction in the comparison of ²¹⁰Pb skeletal
levels with radon daughter exposures. Health
Physics, 23:871-872, Dec. 1972.
- 72-67
Kimmel, C.A., W. Moore, Jr. and J.S. Stara.
Hexachlorophane teratogenicity in rats. Lancet,
p. 765, Oct. 7, 1972.
- ★72-68
Bishop, D.F., T.P. O'Farrell, J.B. Stamberg, et al.
Advanced waste treatment systems at the Environmental
Protection Agency - District of Columbia Pilot
Plant. AIChE Symposium Series 124, Water 1971,
68:11-24, 1972.
- ★72-69
Stamberg, J.B., D.F. Bishop and G. Kumke.
Activated sludge treatment with oxygen. AIChE
Symposium Series 124, Water 1971, 68:25-34, 1972.
- ★72-70
Hais, A.B., J.B. Stamberg and D.F. Bishop.
Alum addition to activated sludge with tertiary
solids removal. AIChE Symposium Series 124,
Water 1971, 68:35-42, 1972.
- ★72-71
Cassel, A.F., TA. Pressley, W.W. Schuk, et al.
Physical-chemical nitrogen removal from municipi-
pal wastewater. AIChE Symposium Series
124, Water 1971, 68:56-64, 1972.

★72-72

Bishop, D.F., W.W. Schuk, R.B. Samworth, et al.
Computer control of physical-chemical wastewater
treatment. Pollution: Engineering and
Scientific Solutions. Editor: E.S. Bar-
rekette, 522-547, Plenum Publishing Corp.,
New York, 1972.

★72-73

Cohen, J.M.
Nutrient removal from wastewater by physical-
chemical processes. Nutrients in Natural
Waters. Editors: H.E. Allen and J.R. Kramer,
Chapter XII:353-389. John Wiley & Sons, Inc., 1972.

★72-74

Smith, J.M., A.N. Masse and W.A. Feige.
Upgrading existing wastewater treatment plants.
Proc. International Conf. Applications of
New Concepts of Physical-Chemical Wastewater
Treatment, Vanderbilt Univ., Nashville,
Tennessee, Sept. 18-22, 1972, Pergamon Press,
Inc., 103-117.

★72-75

NERC
Active research projects report--Fiscal year 1972.
U.S. Environmental Protection Agency, Nation-
al Environmental Research Center, Cincinnati,
Ohio, 742 pp., 1972.

★72-76

Levin, M.A. and V.J. Cabelli.
Membrane filter technique for enumeration of
Pseudomonas aeruginosa. Applied Micro-
biology, 24(6):864-870, Dec. 1972.

★72-77

Brinck, W.L., H.E. Kolde, H.L. Krieger, et al.
Radiological surveillance at pressurized water
reactors. Trans. Amer. Nuclear Society,
15:640-641, 1972.

72-78

NERC
Handbook for analytical quality control in water
and wastewater laboratories. U.S. Environmental
Protection Agency, National Environmental
Research Center, Analytical Quality Control
Laboratory, Cincinnati, Ohio, June 1972.

★72-79

Librizzi, W.J.
EPA's watercraft waste program. Proc. 1972 Conf.
on Sewage Control for Great Lakes Vessels,
Univ. of Michigan, Ann Arbor, Mich., Jan.
1972, 3-12.

72-80

Barkley, N.P., K.A. Busch, W.L. Crider, et al.
The concentration of lead in automobile
exhaust exposure chambers. Amer. Ind.
Hygiene Assoc. Journ., 678-683, Oct. 1972.

★72-81

Middleton, F.M.
Design of treatment facilities for the control of
phosphorus. Water Research, 6:475-476, Pergamon
Press, Great Britain, 1972.

★72-82

Wilder, I. and J.P. Laforanara.
Control of hazardous material spills in the water
environment. Water and Sewage Works, 119(1):82-86,
Jan. 1972.

72-83

Lee, S.D., D.R. Menzel, and J.N. Rohen.
Vitamin E: The biological and environmental
antioxidant. Agricultural and Food Chemistry,
20:481-486, 1972.

★72-84

Hufford, T.L. and G.B. Collins.
Morphological variation in the diatom Cymbella
cistula (Hempr.) Grun. J. Phycology,
8(2)192-195, 1972.

★72-85

Hufford, T.L. and G.B. Collins.
The freshwater diatom Cymbella cursiformis Nom.
J. Phycology, 8(2)184-187, 1972.

★72-86

Hufford, T.L. and G.B. Collins.
The stalk of the diatom Cymbella cistula:
S.E.M. observations. J. Phycology, 8(2)208-210,
1972.

★72-87

McClelland, N.I. and K.H. Mancy.
Water quality monitoring in distribution systems -
A progress report. JAWWA, 64(12):795-803, Dec. 1972.

★72-88

Bloch, W.N., Jr., T.R. Lewis, K.A. Busch, et al.
Cardiovascular status of female beagles chronically
exposed to air pollutants. Arch. Environ. Health,
24:342-353, 1972.

★72-89

Hall, L.L., F.A. Smith, and H.C. Hodge.
Plasma fluoride levels in rabbits acutely poisoned with
sodium fluoride. Proc. Soc. Exp. Biol. and Med.,
139:1007-1009, 1972.

★72-90

Skoryna, S.C., K.C. Hong, Y. Tanaka, et al.
Inhibition of radiostrontium absorption by
chemically and enzymatically degraded
products of alginates. Proc. 2nd. Intl.
Conf. on Strontium Metabolism, Glasgow,
Scotland, Aug. 1972, p. 39-51.

1973
PUBLICATIONS
REPRINTS

NERC-C
73-01

Bernstein, I.L. and R. Safferman.
Clinical sensitivity to green algae demonstrated by
nasal challenge and in vitro tests of immediate
hypersensitivity. J. Allergy and Clinical
Immunology, 51:22-28, Jan. 1973.

★73-02

Hornstein, B.
The visibility of oil-water discharges. Proc. Joint
Conf. on Prevention and Control of Oil Spills,
Washington, DC, Mar. 13-15, 1973, 91-99.

★73-03

Zafirliou, O.C., J. Myers, R. Bourbonniere, et al.
Oil spill-source correlation by gas chromatography:
An experimental evaluation of system performance.
Proc. Joint Conf. on Prevention and Control of
Oil Spills, Washington, DC, Mar. 13-15, 1973,
153-159.

★73-04

Gruenfeld, M.
Identification of oil pollutants: A review of some
recent methods. Proc. Joint Conf. on Prevention
and Control of Oil Spills, Washington, D.C.,
Mar. 13-15, 1973. 179-193.

★73-05

Dorrier, J.S.
Sorbent system development for oil spill cleanup.
Proc. Joint Conf. on Prevention and Control of
Oil Spills, Washington, D.C., Mar. 13-15, 1973.
309-314.

73-06

Nadeau, R.J. and T.H. Roush.
A salt marsh microcosm: An experimental unit for
marine pollution studies. Proc. Joint Conf.
on Prevention and Control of Oil Spills, Wash-
ington, D.C., Mar. 13-15, 1973. 671-683.

73-07

Kahn, B.
Determination of radioactive nuclides in water.
Water and Water Pollution Handbook,
Editor: L.L. Ciaccio, Marcel Dekker, Inc.,
New York, 1357-1388, 1973.

★73-08

Strong, A.B., C.R. Porter and B. Kahn.
Stable strontium: Calcium ratios in U.S. bone and
total diet samples. Proc. Second Inter-
national Conf. on Strontium Metabolism,
Glasgow and Strontian, Aug. 16-19, 1972.
USAEC Report CONF-720818, 513-520, 1973.

73-09

Craun, G.F. and L.J. McCabe.
Review of the causes of waterborne-disease out-
breaks. JAWWA, 65:75-84, Jan. 1973.

- 73-10
Buelow, R.W., J.K. Carswell and J.M. Symons.
An improved method for determining organics
by activated carbon adsorption and solvent
extraction--Part I. JAWWA, 65:57-73,
Jan. 1973.
- 73-11
Buelow, R.W., J.K. Carswell and J.M. Symons.
An improved method for determining organics by
activated carbon adsorption and solvent
extraction--Part II (Test Method). JAWWA,
65:195-199, Mar. 1973.
- 73-12
Longbottom, J.E.
The use of a programmable calculator with plot-
ting capabilities to assist in the chro-
matographic computations. J. Chromato-
graphic Sciences, 11:13-16, Jan. 1973.
- ★73-13
Carnes, R.A., J.U. Doerger and H.L. Sparks.
Polychlorinated biphenyls in solid waste and
solid waste related materials. Archives
of Environmental Contamination and Toxi-
cology, 1(1):27-35, 1973.
- ★73-14
NERC, Cincinnati, Ohio.
Cycling and Control of Metals. Proc. Environmental
Resources Conf., Columbus, Ohio, Oct. 31 -
Nov. 2, 1972. U.S. Environmental Protec-
tion Agency, National Environmental Research
Center, Cincinnati, Ohio, 187 pp., Feb. 1973.
- 73-15
Taylor, R.H., R.H. Bordner and P.V. Scarpino.
Delayed incubation membrane filter test for fecal
coliforms. Applied Microbiology, 25:363-368,
Mar. 1973.
- 73-16
Johnson, H.
Hazardous waste disposal studies. Waste Age,
4(2):38 and 40, Mar./Apr. 1973.
- 73-17
Goddard, H.C.
Environmental policy as economic policy.
Environmental Affairs, 2(3):630-637, 1973.

★73-18

Field, R.I.
Combined sewer overflows. Civil Engineering -
ASCE, 57-60, Feb. 1973.

73-19

Klee, A.J.
Environmental plastics legislation in the U.S.:
An overview. SPE Journal, 29:46-48, May 1973.

73-20

Weber, C.I.
Recent developments in the measurement of the
response of plankton and periphyton to
changes in their environment. Bioassay
Techniques and Environmental Chemistry,
Editor: G. Glass, Chapter 5:119-138, Ann
Arbor Science Publishers, Inc., 1973.

73-21

Kreissl, J.F. and J.M. Cohen.
Treatment capability of a physical-chemical
package plant. Water Research, 7:895-909,
1973.

★73-22

Bloch, W.N., Jr., S. Lassiter, J.F. Stara, et al.
Blood rheology of dogs chronically exposed to
air pollutants. Toxicology and Applied
Pharmacology, 25:576-581, 1973.

73-23

Field, R.I. and P.C. Weigel.
Urban runoff and combined sewer overflow.
JWPCF, 45:1108-1115, June 1973.

★73-24

Moore, W., Jr., J.F. Stara and W.C. Crocker.
Gastrointestinal absorption of different
compounds of ^{115m}cadmium and the effect
of different concentrations in the rat.
Environmental Research, 6:159-164, 1973.

73-25

Clark, R.M.
Measures of efficiency in solid waste collection.
J. of the Environmental Engineering Div., ASCE,
99(EE4):447-459, Aug. 1973.

73-26

Kopfler, F.C. and J. Mayer.
Concentrations of five trace metals in the waters
and oysters (Crassostrea virginica) of
Mobile Bay, Alabama. Proc. of the National
Shellfisheries Assoc., 63:27-34, June 1973.

73-27

Thomas, R.F. and R.L. Booth.
Selective electrode measurement of ammonia in
water and wastes. Environmental Science and
Technology, 7:523-526, June 1973.

73-28

Gilbert, T.W. and R.A. Dobbs.
New detector for ion-exchange chromatography.
Analytical Chemistry, 45(8):1390-1393,
July 1973.

73-29

Kopp, J.F.
l-ephedrine in chloroform as a solvent for silver
diethyldithiocarbamate in the determination
of arsenic. Analytical Chemistry, 45(9):
1786-1787, Aug. 1973.

73-30

Cohen, A.L.
Dependence of hi-vol measurements on airflow
rate. Environmental Science & Technology,
7:60-61, Jan. 1973.

73-31

Logsdon, G.S. and J.M. Symons.
Mercury removal by conventional water-treatment
techniques. JAWWA, 65:554-562, Aug. 1973.

73-32

Feige, W.A. and E.L. Berg.
Full-scale mineral addition at Lebanon, Ohio.
Water & Sewage Works (Reference Number),
120:R79-R80, R-82, R86, R88, R90, R92-R93, 1973.

73-33

Bull, R.J., and J.T. Cummins.
Influence of potassium on the steady-state redox
potential of the electron transport chain
in slices of rat cerebral cortex and the
effect of ouabain. J. of Neurochemistry,
21:923-937, 1973.

73-34

Bull, R.J. and S.D. Lutkenhoff.
Early changes in respiration, aerobic glycolysis and cellular NAD(P)H in slices of rat cerebral cortex exposed to elevated concentrations of potassium. J. Neurochemistry, 21:913-922, 1973.

73-35

Clark, R.M.
Solid waste: Management and models. Models for Environmental Pollution Control. Editor: R.A. Deininger, Ann Arbor Science Publishers, Inc., Ann Arbor, Michigan, Chap. 14, 269-305, 1973.

73-36

Venosa, A.D. and C.W. Chambers.
Bactericidal effect of various combinations of gamma radiation and chloramine on aqueous suspensions of Escherichia coli. Applied Microbiology, 25:735-744, May 1973.

★73-37

Moorman, W.J., J.J. Chmiel, J.F. Stara, et al.
Comparative decomposition of ozone in the nasopharynx of beagles - acute vs chronic exposure. Arch. Environ. Health, 26:153-155, Mar. 1973.

73-38

Dean, R.B.
Disposal and reuse of sludge and sewage: What are the options? Proc. Conf. on Land Disposal of Municipal Effluents and Sludges, EPA-902/9-73-001, 19-29, Mar. 12-13, 1973; also in Compost Science, 14(5):12-14, Sept.-Oct. 1973.

★73-39

Bunch, R.L.
The eutrophication control program of the organization for economic cooperation and development. Editor: G.F. Bennett, AIChE Symposium Series 129. Water--1972, 69:263-268, 1973.

73-40

Berg, G.
Microbiology--detection and occurrence of viruses - Literature review. JWPCF, 45(6):1289-1294, 1973.

73-41

Berg, G.
Methods for detecting viruses in environmental waters -
A status report. Proc. First Microbiology
Seminar on Standardization of Methods, San
Francisco, Calif., Jan. 1973, pp. 72-89, Mar. 1973.
(In Report EPA-R4-73-022)

73-42

Blanchard, R.L., E.L. Kaufman and H.M. Ide.
Lead-210 blood concentration as a measure
of uranium miner exposure. Health
Physics, 25:129-133, Aug. 1973.

73-43

Rogers, C.J. and D.F. Spino.
Microbial protein production from cellulosic
wastes. Symposium: Processing Agricultural
and Municipal Wastes. Editor: G.E. Inglett, Avi
Publishing Company, Inc., Westport, Conn.,
Chapter 14, 161-171, 1973.

73-44

Lobring, L.B. and R.L. Booth.
Evaluation of the AutoAnalyzer II: A progress
report. Advances in Automated Analysis (1972
Technicon International Congress), Mediad, Inc.,
8:7-10, 1973.

★73-45

Kahn, B.
Uses of gamma-ray spectrometric measurements
in radiological surveillance at nuclear
power facilities. Trans. Am. Nucl. Soc.
16:67-68, 1973.

★73-46

Kahn, B.
Environmental radiation monitoring.
Trans. Am. Nucl. Soc., 17:536, 1973.

★73-47

Caldwell, J.S., R.J. Lishka and E.F. McFarren.
Evaluation of a low cost arsenic and selenium
determination at microgram/liter levels.
JAWWA, 65:731-735, Nov. 1973.

73-48

Dean, R.B.
The case against mercury. AIChE Symposium Series
129, Water-1972, 69:279-283, 1973.

- 73-49
Weber, C.I.
Biological monitoring of the aquatic environment.
Biological Methods for the Assessment of Water
Quality, ASTM STP 528, American Society for
Testing and Materials, 46-60, 1973.
- 73-50
Mason, W.T., Jr., C.I. Weber, P.A. Lewis, et al.
Factors affecting the performance of basket and
multiplate macroinvertebrate samplers.
Freshwater Biology, 3:409-436, 1973.
- ★73-51
Bernstein, I.L. and R.S. Safferman.
The biomedical impact of algae. Carolina Tips,
36(12):45-47, Oct. 1, 1973.
- ★73-52
Ciancia, J.
New waste treatment technology in the metal finishing
industry. Plating, 60:1037-1042, Oct. 1973.
- ★73-53
Gruenfeld, M.
Extraction of dispersed oils from water for quantitative
analysis by infrared spectrophotometry. Environ-
mental Science and Technology, 7:636-639, 1973.
- 73-54
Cohen, J.M. and I.J. Kugelman.
Wastewater treatment - physical and chemical
methods. JWPCF, 45:1027-1038, June 1973.
- 73-55
Tardiff, R.G. and M. Deinzer.
Toxicity of organic compounds in drinking water.
Proc. Fifteenth Water Quality Conference
on Organic Matter in Water Supplies: Occurrence,
Significance, and Control. University of
Illinois, Urbana, Illinois, Feb. 7, 1973,
23-37, 1973.
- 73-56
Moore, W., Jr., J.F. Stara, W.C. Crocker, et al.
Comparison of ^{115m}cadmium retention in rats following
different routes of administration. Environ-
mental Research, 6:473-478, 1973.

73-57

Tardiff, R.G.
Health standards for metals in drinking waters.
Proc. Heavy Metals in the Environment, Seminar
Conducted by Water Resources Research Institute,
Oregon State University, Nov. 2, 1972. 113-139,
Jan. 1973.

★73-58

Smith, J.E. and J.B. Farrell.
Sludge disposal practices: How safe are they?
Water and Wastes Engineering. 10(12):39,40,
& 44, 1973.

★73-59

Atkins, P.F., Jr., D.A. Scherger, et al.
Ammonia removal by physical-chemical treatment.
JWPCF, 46(11):2372-2388, 1973.

73-60

Blanchard, R.L. and B. Kahn.
The fate of radionuclides discharged from a PWR
nuclear power station into a river. Proc.
of Environmental Behavior of Radionuclides
Released in the Nuclear Industry, Inter-
national Atomic Energy Agency, Vienna,
195-204, 1973.

★73-61

Chang, S.L.
Pathogenic free-living amoebae and recreational waters.
Advances in Water Pollution Research, Sixth Inter-
national Conference, Jerusalem, June 8-23, 1972,
85-96, Pergamon Press, 1973.

★73-62

Longbottom, J.E., R.C. Dressman, et al.
Gas chromatographic determination of methyl mercury
in fish, sediment, and water. JAOAC,
56:1293-1303, Nov. 1972.

★73-63

Lowe, R.L. and G.B. Collins.
An aerophilous diatom community from Hocking County,
Ohio. Trans. Amer. Micor. Soc. 92:492-496, 1973.

★73-64

Berg, G.
Comments to discussion paper and comments on
"Reassessment of the virus problem in sewage
and in surface and renovated waters."
Progress in Water Technology. Editor:
S.H. Kenkins, Vol. 3, Pergamon Press, New York,
1973.

73-65

Geldreich, E.E.
Microbiology of water - Literature review.
JWPCF, 45(6):1244-1259, June 1973.

★73-66

Bordner, R.H.
Quality control: A state-of-the-art. Proc. of the
First Microbiology Seminar on Standardization
of Methods, EPA-R4-73-022, 170-194, 1973.

73-67

Reasoner, D.J.
Microbiology - detection of bacterial pathogens and their
occurrence - Literature review.
JWPCF, 45(6):1278-1289, 1973.

73-68

Bull, R.J. and J.T. Cummins.
The potassium dependence of the cytochrome redox
potential of brain slices. Proc. Society for
Neuroscience, Third Annual Meeting Program and
Abstracts, San Diego, California, p. 383,
Nov. 7-11, 1973.

73-69

Freeman, G., R. Stephens, D. Coffin and J. Stara.
Changes in dogs' lungs after long-term exposure to ozone
light and electron microscopy. Arch. Environ.
Health, 26:209-216, Apr. 1973.

★73-70

Cabelli, V.J.
The occurrence of aeromonads in recreational waters.
Abstracts of the Annual Meeting of the American
Society for Microbiology, 73rd Annual Meeting,
Miami Beach, Florida, May 6-11, 1973, G-39.

★73-71

Carswell, J.K., R.W. Buelow and J.M. Symons.
An improved method of measuring organics in drinking water by activated carbon adsorption and solvent extraction. Proc. Fifteenth Water Quality Conf., Organic Matter in Water Supplies: Occurrence, Significance, and Control, Univ. of Ill. Bulletin, 70(122):73-80, Feb. 7-8, 1973, Urbana. Ill.

73-72

Van Gelder, G.A., T.L. Carson, R.M. Smith, et al.
Neurophysiologic and behavioral toxicologic testing to detect subclinical neurologic alterations induced by environmental toxicants.
JAVMA, 163(9):1033-1035, 1973.

★73-73

DuFour, A.P., V.J. Cabelli and M.A. Levin.
Occurrence of Klebsiella species in wastes from a textile finishing plant. Abstracts of the Annual Meeting of Microbiologists, Miami Beach, Florida, May 6-11, 1973, E-16.

★73-74

Huffman, G.L. and D.J. Keller.
The plastics issue. Polymer Science and Technology, Vol. 3: Polymers and Ecological Problems. Editor: James Guillet. Plenum Press, New York, 155-167, 1973.

73-75

Stephens, R., G. Freeman, J. Stara and D. Coffin.
Cytologic changes in dog lungs induced by chronic exposure to ozone. Amer. Journ. of Pathology, 73(3):711-726, Dec. 1973.

73-76

Symons, J.M. and G.G. Robeck.
Summary: Engineering management techniques for beneficial use. Man-Made Lakes: Their Problems and Environmental Effects. Editors: W.C. Ackermann, G.F. White, and E.B. Worthington. Geophysical Monograph Series, 17:836-37, 1973.

★73-77

Krieger, H.L., S. Gold and B. Kahn.
Tritium releases from nuclear power stations.
Tritium. Editors: A.A. Moghissi and M. W. Carter, Messenger Graphics, Phoenix, Arizona, 557-564, 1973.

★73-78

Levin, M.A., V.J. Cabelli and A.P. DuFour.
Quantitation of fecal streptococci in the
marine environment. Abstracts of the
Annual Meeting of the American Society
for Microbiology, 73rd Annual Meeting,
Miami Beach, Florida, May 6-11, 1973, G-69.

★73-79

Middleton, F.M.
Organics in water supply - the problem. Proc.
Fifteenth Water Quality Conference on Organic
Matter in Water Supplies: Occurrence, Sig-
nificance, and Control, University of Illinois,
Urbana, Illinois, Feb. 7, 1973, 1-14, 1973.

73-80

Skoryna, S., Y. Tanaka, W. Moore and J. Stara.
Prevention of gastrointestinal absorption of excessive
trace elements intake. Trace Substances in
Environmental Health, VI:3-11. 1973.

73-81

Cancelled.

★73-82

Lewis, P.A.
Description and ecology of three stenonema mayfly
nymphs. Proc. First International Conf. on
Ephemeroptera, Florida A & M University,
Tallahassee, Florida, Aug. 12-20, 1970, pp. 64-72.
Publ. E.J. Brill, Leiden, The Netherlands, 1973.

73-83

Stara, J., W. Moore, D. Hysell, S. Lee, et al.
Toxicology of methylcyclopentadienyl manganese tri-
carbonyl (MMT) and related manganese compounds
emitted from mobile and stationary sources.
Proc. 4th Annual Conf. on Environmental
Toxicology, sponsored by the Univ. of Calif.,
Irvine, held in Fairborn, Ohio, Oct. 16-18, 1973.
pp. 251-270.

★73-84

Dotson, G.K.
Some constraints of spreading sewage sludge on crop-
land. Proc. of Conf. on Land Disposal of Municipal
Effluents and Sludges. EPA-902/9-73-001, 67-77,
Mar. 12-13, 1973.

1974
PUBLICATIONS
REPRINTS

NERC-C
74-01

English, J.N., C.W. Carry, A.N. Masse, et al.
Denitrification in granular carbon and sand columns.
JWPCF, 46:28-42, Jan. 1974.

74-02

Eichelberger, J.W., L.E. Harris and W.L. Budde.
Analysis of the polychlorinated biphenyl problem:
Application of gas chromatography-mass
spectrometry with computer controlled repetitive
data acquisition from selected specific ions.
Analytical Chemistry, 46:227-232, Feb. 1974.

74-03

Kawahara, F.K., J.F. Santner and E.C. Julian.
Characterization of heavy residual fuel oils and
asphalts by infrared spectrophotometry using
statistical discriminant function analysis.
Analytical Chemistry, 46:266-273, Feb. 1974.

74-04

Clark, R.M. and J.I. Gillean.
Systems analysis and solid waste planning.
J. Envir. Engrg. Div., ASCE, (EEI),
Proc. Paper 10316, 100:7-24, Feb. 1974.

74-05

Scarpino, P.V., M. Lucas, D.R. Dahling, et al.
Effectiveness of hypochlorous acid and hypochlorite
ion in destruction of viruses and bacteria.
Chemistry of Water Supply, Treatment, and
Distribution. Editor: A.J. Rubin, Chap. 15,
359-368. Ann Arbor Science Publishers, Inc.,
Ann Arbor, Michigan, 1974.

74-06

Farrell, J.B., J.E. Smith, Jr., S.W. Hathaway, et al.
Lime stabilization of primary sludges. JWPCF,
46(1):113-122, 1974.

74-07

Breidenbach, A.W. and R.M. Clark.
Information and data systems for solid waste
management: Current status and future directions.
Design of Environmental Information Systems.
Editor: R.A. Deininger, Chapt. 11:253-271, Ann
Arbor Science Publishers, Inc., Ann Arbor,
Michigan, 1974.

74-08

Kimmel, C.A., W. Moore, Jr., D.K. Hysell, et al.
Teratogenicity of hexachlorophene in rats.
Archives of Environmental Health, 28:43-48,
Jan. 1974.

74-09

Hill, W.F., Jr., E.W. Akin, W.H. Benton, et al.
Recovery of poliovirus from turbid estuarine water on
microporous filters by the use of celite.
Applied Microbiology, 27:506-512, Mar. 1974.

74-10

Feige, W.A. and J.M. Smith.
Wastewater applications with a tubular reverse osmosis
Unit. AIChE Symposium Series, Water--1973,
70(136):523-533, Apr. 1974.

74-11

Kopfler, F.C.
The accumulation of organic and inorganic mer-
cury compounds by the eastern oyster (Cras-
sostrea virginica). Bulletin of Environ-
mental Contamination and Toxicology,
11(3):275-280, 1974.

★74-12

Klee, A.J.
Aspects of sampling attitudes towards solid waste
problems. Waste Age, 315-327, 1974.

★74-13

Dahling, D.R., G. Berg and D. Berman.
BGM, a continuous cell line more sensitive than primary
rhesus and african green kidney cells for the
recovery of viruses from water. Health Labora-
tory Science, 11(4):275-282, Oct. 1974.

74-14

Hill, W.F., Jr., W.E. Akin, W.H. Benton, et al.
Apparatus for conditioning unlimited quantities of
finished waters for enteric virus detection.
Applied Microbiology, 27(6):1177-1178, 1974.

74-15

Merson, M.H., W.H. Barker, Jr., G.F. Craun, et al.
Outbreaks of waterborne disease in the United States,
1971-1972. J. of Infectious Diseases, 129(5):
614-615, 1974.

★74-16

Logsdon, G.S. and J.M. Symons.
Removal of heavy metals by conventional treatment.
Proc. Symposium Traces of Heavy Metals in Water.
Removal Processes and Monitoring, EPA-902/9-74-001,
225-256, 1974.

74-17

Safferman, R.S. and M.E. Morris.
Bibliography - phycoviruses. 8 pp., 1974.

74-18

Akin, E.W., W.F. Hill, Jr. and N.A. Clarke.
Mortality of enteric viruses in marine and other
waters. Proc. International Symp. on Discharge
of Sewage from Sea Outfalls, London, Aug.
30, 1974, Paper No. 24, 9 pp.

74-19

Field, R.
Design of a combined sewer overflow regulator/con-
centrator. JWPCF, 46(7):1722-1741, 1974.

★74-20

Cabelli, J.J., M.A. Levin, A.P. Dufour, et al.
The development of criteria for recreational waters.
Proc. International Symposium on Discharge
of Sewage from Sea Outfalls, London, Paper No. 7,
10 pp., Aug. 28, 1974.

★74-21

Laforanara, J.P. and I. Wilder.
Solution of the hazardous material spill problem
in the Little Menomonee River. Proc. 1974
National Conf. on Control of Hazardous Material
Spills, San Francisco, Calif., Aug. 25-28, 1974,
202-207.

★74-22

Hiltz, R., F. Roehlich and J. Brugger.
Emergency collection system for spilled hazardous
chemicals. Proc. 1974 National Conf. on
Control of Hazardous Material Spills, San
Francisco, Calif., Aug. 25-28, 1974, 208-211.

★74-23

Mitchell, R.C., J.J. Vrolyk, R.W. Melvold, et al.
System for plugging leaks from ruptured containers.
Proc. 1974 National Conf. on Control of Hazardous
Material Spills, San Francisco, Calif.,
Aug. 25-28, 1974, 212-216.

★74-24

Roush, T.H., J.P. Laforanara and R.J. Nadeau.
A case history of a formalin spill: A preliminary
approach for impact assessment. Proc. 1974
National Conf. on Control of Hazardous Mater-
ial Spills, San Francisco, Calif., Aug. 25-28,
1974, 359-362.

74-25

Bull, R.J.
Toxicological research: Its application to the
setting of drinking water standards. Proc.
16th Water Quality Conf. - Trace Metals in
Water Supplies: Occurrence, Significance and
Control. University of Illinois Bulletin,
71(108):49-64, Apr. 29, 1974.

★74-26

Chambers, C.W.
An overview of the problems of disinfection.
International Symposium on Wastewater Treatment
in Cold Climates, Univ. of Saskatchewan, Canada,
Aug. 22-24, 1973. Editor: Eric Davis, 423-437,
March 1974.

74-27

Kenner, B.A. and H.P. Clark.
Detection and enumeration of Salmonella and
Pseudomonas aeruginosa. JWPCF, 46(9):2163-2171,
1974.

74-28

Logsdon, G.S., T.J. Sorg and J.M. Symons.
Removal of heavy metals by conventional treatment.
Proc. 16th Water Quality Conf. - Trace
Metals in Water Supplies: Occurrence, Signifi-
cance and Control. University of Illinois
Bulletin, 71(108):111-133, Apr. 29, 1974.

74-29

Stevens, A.A. and E.A. Robertson.
Determination of methylmercury in water. Arch.
of Environ. Contamination and Toxicology,
2(3):266-274, 1974.

74-30

Brinck, W.L., W.J. Averett, H.E. Kolde, et al.
Helicopter-borne measurement of radiation exposure
at a BWR nuclear power station. Physical
Behaviour of Radioactive Contaminants in the
Atmosphere. IAEA, Vienna, 231-243, 1974.

74-31

Geldreich, E.E.
Microbiology of water - Literature review.
JWPCF, 46(6):135-1372, 1974.

74-32

Chang, S.L.
Cytopathic and pathogenic differences among geographic
strains of pathogenic naegleria and their bearing
on epidemiology of primary amoebic meningo-
encephalitis (PAM). Proc. Third International
Congress of Parasitology, Munich, Aug. 25-31, 1974,
I:187-188.

74-33

Berg, G.
Microbiology - detection, occurrence, and removal of
viruses - Literature review. JWPCF, 46(6):
1408-1413, 1974.

74-34

Berg, G.
Removal of viruses from sewage effluents and waters -
Vol. I, A review. Bull. Org. Mond. Sante,
49:451-460, 1974.

74-35

Berg, G.
Removal of viruses from sewage effluents and waters -
Vol. II, Present and future trends. Bull. Org.
Mond. Sante, 49:461-469.

74-36

McFarren, E.F.
Determination of asbestos by optical microscopy.
Proc. AWWA Water Quality Technology Conf.,
Denver, Colorado, 1974, XIV-1 - XIV-5.

74-37

Love, O.T., Jr., G.G. Robeck, J.M. Symons, et al.
Experience with activated carbon in the USA.
Papers and Proc. Water Research Assoc. Conf.,
University of Reading, Medmenham, Marlow,
United Kingdom, Apr. 3-4, 1973, 279-312, and
373-374, Feb. 1974.

74-38

Stevens, A.A. and J.M. Symons.
Measurement of organics in drinking water. Proc.
AWWA Water Quality Technology Conf., Denver,
Colorado. XXIII-1 - XXIII-25, 1974.

74-39

Geldreich, E.E.
Is the total count necessary? Proc. AWWA
Water Quality Technology Conf., Denver, Colorado,
Denver, Colorado, 1974.

74-40

McFarren, E.F.
What's right/wrong with standard methods.
Proc. AWWA Water Quality Technology Conf.,
Denver, Colorado, XVI-1 - XVI-3, 1974.

74-41

Reasoner, D.J.
Microbiology - detection of bacterial pathogens and
their occurrence - Literature review.
JWPCF, 46:1395-1408, June 1974.

74-42

Hysell, D.K., W. Moore, J.F. Stara, et al.
Oral toxicity of methylcyclopentadienyl man-
ganese tricarbonyl (MMT) in rats. Environ-
mental Research, 7:158-168, 1974.

74-43

Lewis, T.R., W.J. Moorman, Y.Y. Yang, et al.
Long-term exposure to auto exhaust and other
pollutant mixtures. Effects on pulmonary
function in the beagle. Arch. Environ.
Health, 29:102-106, Aug. 1974.

74-44

Farrell, J.
Overview of sludge handling and disposal.
Proc. Nat'l. Conf. on Municipal Sludge
Management, Pittsburgh, Pennsylvania,
June 11-13, 1974, 5-10.

74-45

Kirkham, M.B. and G.K. Dotson.
Growth of barley irrigated with wastewater sludge
containing phosphate precipitants.
Proc. Nat'l. Conf. on Municipal Sludge
Management, Pittsburgh, Pennsylvania, June 11-13,
1974, 97-106.

74-46

Stern, G.
Pasteurization of liquid digested sludge.
Proc. of the Nat'l. Conf. on Municipal Sludge
Management, Pittsburgh, Pennsylvania, June 11-13,
1974, 163-169.

74-47

Jakubowski, W., J.C. Hoff, N.C. Anthony, et al.
Epoxy-fiberglass adsorbent for concentrating viruses
from large volumes of potable water. Applied
Microbiology, 28(3):501-502, Sept. 1974.

74-48

Field, R.I. and P.J. Szeley.
Urban runoff and combined sewer overflow - Literature
review. JWPCF, 46(6):1209-1226, 1974.

74-49

Craun, G.F.
Microbiology - waterborne outbreaks - Literature
review. JWPCF, 46(6):1384-1395, 1974.

74-50

Moore, W., Jr., L. Hall, W. Crocker, et al.
Metabolic aspects of methylcyclopentadienyl manganese
tricarbonyl in rats. Environmental Research,
8:171-177, 1974.

74-51

Moore, W. Jr., D. Hysell, W. Crocker, et al.
Biological fate of ^{103}Pd in rats following different
routes of exposure. Environmental Research,
8:234-240, 1974.

74-52

Harris, L.E., W.L. Budde, and J.W. Eichelberger.
Direct analysis of water samples for organic pollutants
with gas chromatography-mass spectrometry.
Analytical Chemistry, 46(13):1912-1917, Nov. 1974.

1972 (R Series)

PUBLICATIONS
REPORTS

EPA REPORT NO.

R2-72-002

Morth, A.H., E.E. Smith, and K.S. Shumate.
Project Office: Mine Drainage Pollution Control.
Pyritic systems: A mathematical model. 171 pp.,
Nov. 1972. (Order thru GPO, \$2.25)

R2-72-004

Brownrigg, J.T., D. Eastwood, and A.W. Hornig.
Project Officer: Ballinger, D.G.
Identification of polychlorinated biphenyls in the
presence of DDT-type compounds. 62 pp., Oct.
1972. (Order thru GPO, \$1.25)

R2-72-008

Sullivan, R.H., et al.
Project Officer: Field, R.
The SWIRL concentrator as a combined sewer
overflow regulator facility. 179 pp., Sept. 1972.
(Order thru GPO, \$2.25)

R2-72-011

Clark, R.M.
Project Officer: None.
Management information for solid waste collection.
18 pp., Aug. 1972.
(Order thru NTIS, PB-213 308, \$3.00)

R2-72-012

Clark, R.M.
Project Officer: None.
Urban solid waste management; economic case study.
21 pp., Aug. 1972.
(Order thru NTIS, PB-213 394, \$3.00)

R2-72-031

Morgan, W.E. and E.G. Fruh.
Project Officer: Bunch, R.L.
An investigation of phosphorus removal mechanism
in activated sludge systems. 146 pp., Nov.
1972. (Order thru GPO, \$2.00)

R2-72-032

Orcutt, J.C.
Project Officer: Kreissl, J.F.
Fluidized bed clarification as applied to
wastewater treatment. 98 pp., Dec. 1972.
(Order thru GPO, \$1.50)

R2-72-039

Hornstein, B.A.
Project Officer: None.
The appearance and visibility of thin oil films
on water. 95 pp., Aug. 1972. (Order thru
GPO, \$2.50)

R2-72-046

Potts, J.E., R.A. Clendinning, and W.B. Ackart.
Project Officer: Rogers, C.J.
An investigation of the biodegradability of
packaging plastics. 80 pp., Aug. 1972.
(Order thru NTIS, PB 213 488, \$4.85)

R2-72-049

Henager, C.H. and J.D. Smith.
Project Officer: Dewling, R.T.
Concept evaluation: Recovery of floating oil
using polyurethane foam sorbent. 97 pp.
Sept. 1972. (Order thru GPO \$1.50)

R2-72-053

Stenquist, R.J. and W.J. Kaufman
Project Officer: Hanna, S.A.
Initial mixing in coagulation processes.
161 pp., Nov. 1972. (Order thru GPO, \$2.25)

R2-72-054

Freestone, F.J.
Project Officer: None.
Runoff of oils from rural roads treated to suppress
dust. 29 pp., Oct. 1972. (Order thru GPO,
\$1.00)

R2-72-055

Nadeau, R.J. and T.H. Roush.
Project Officer: None.
Biological effects of oil pollution--selected bib-
liography II. 62 pp., Nov. 1972. (Order thru
NTIS, PB-213 483, \$4.50)

R2-72-056

Holmes, J. and E.D. Kreusch
Project Officer: Hill, R.D.
Acid mine drainage treatment by ion exchange.
215 pp., Nov. 1972.
(Order thru GPO, \$2.75)

R2-72-059

Bingham, T.H. and P.F. Mulligan
Project Officer: Ongerth, R.H.
The beverage container problem--analysis and
recommendations. 190 pp., Sept. 1972.
(Order thru GPO, \$2.25; or
NTIS, PB 213 341, \$6.75)

R2-72-064

Menar, A.B. and D. Jenkins.
Project Officer: Schwartz, W.A.
Calcium phosphate precipitation in wastewater
treatment. 96 pp., Dec. 1972. (Order thru
GPO, \$1.50)

R2-72-065

Toerber, E.D.
Project Officer: Eilers, R.G.
Full scale parallel activated sludge process
evaluation. 203 pp., Nov. 1972.
(Order thru GPO, \$2.75)

R2-72-069

Troy, J.C., J.A. Bores, and D.R. Brenneman.
Project Officer: Mine Drainage Pollution Control.
Oxidation of pyrites in chlorinated solvents.
Nov. 1972. (Order thru GPO, \$1.00)

R2-72-103

Bashaw, J.D., J.K. Lawson, and T.A. Orofino.
Project Officer: Smith, J.M.
Hollow fiber technology for advanced waste
treatment. 91 pp., Dec. 1972. (Order thru
NTIS, PB-214 605, \$3.25)

R2-72-104

Cha, C.Y. and J.M. Smith.
Project Officer: Wise, R.H.
Photochemical methods for purifying water.
29 pp., Nov. 1972. (Order thru GPO, \$.70)

R2-72-107

Snyder, W.C., Z.A. Patrick, and A.R. Weinhold.
Project Officer: Wiles, C.C.
Biological consequences of plant residue decomposition in soil. 136 pp., Nov. 1972.
(Order thru NTIS, PB-222 113/3, \$3.00)

R2-72-119

Zaval, F.J. and J.D. Robins.
Project Officer: Hill, R.D.
Revegetation augmentation by reuse of treated active surface mine drainage. 147 pp., Nov. 1972.
(Order thru GPO, \$2.00)

R2-72-123

Barnes, R.A., P.F. Atkins, Jr., and D.A. Scherger.
Project Officer: Evans, F.L., III
Ammonia removal in a physical-chemical wastewater treatment process. 66 pp., Nov. 1972 (Order thru GPO, \$1.25)

R2-72-125

Murray, D.M. and M.R. Eigerman.
Project Officer: Field, R. and H.E. Masters.
A search: New technology for pavement snow and ice control. 55 pp., Dec. 1972. (Order thru GPO, \$1.00)

R2-72-130

Miller, J.D.
Project Office: Mine Drainage Pollution Control.
Removal of dissolved contaminants from mine drainage. 53 pp., Dec. 1972. (Order thru GPO, \$1.25)

R2-72-131

Armstrong, D.H. and M.L. Peterson.
Project Officer: None.
Microbiological studies of compost plant dust. 13 pp., Nov. 1972. (Order thru NTIS, PB-222 160/4, \$3.00)

R4-72-002

Carnes, R.A.
Project Officer: None.
Tentative procedure analyzing pesticide residues in solid wastes. 15 pp., Aug. 1972.
(Order thru NTIS, PB-222 165, \$3.00)

R4-72-003

Winter, J.A. and H.A. Clements.
Project Officer: None.
Analyses for mercury in water--A preliminary
study of methods. 58 pp., Sept. 1972.
(Order thru NERC-Cincinnati)

R4-72-006

Lewis, P.A.
Project Officer: None.
References for the identification of freshwater
macroinvertebrates. 17 pp., Oct. 1972.
(Order thru NTIS, PB-213 379, \$3.00)

R5-72-003

National Analysts, Inc., Phila. Pa.
Project Officer: Ongerth, R.H.
Metropolitan housewives' attitudes toward solid
waste disposal. 80 pp., Sept. 1972.
(Order thru GPO, \$1.50; or
NTIS, PB-213 340, \$5.45)

R5-72-004

Clark, R.M.
Project Officer: None.
An investment decision model for control tech-
nology. 20 pp., Sept. 1972. (Order thru
NTIS, PB 213 482, \$3.00)

1973 (R Series)
PUBLICATIONS
REPORTS

EPA REPORT NO.

R2-73-044

Martin, J.J., Jr.
Project Officer: Ciancia, J.
Chemical treatment of plating waste for removal
of heavy metals. 40 pp., May 1973. (Order
thru GPO, \$.75)

R2-73-102

Lieberman, M.
Project Officer: Hornstein, B.
Oil pollution source identification.
175 pp., Feb. 1973. (Order thru GPO, \$2.35)

R2-73-109

Hopfenberg, H.B.
Project Officer: Schwartz, W.A.
Water treatment by membrane ultrafiltration.
1973. (Order thru NTIS, PB-220 685/2, \$3.00)

R2-73-112

Cunningham, J.
Project Officer: Freestone, F.J.
A rapidly deployable oil containment boom for
emergency harbor use. 31 pp., Feb. 1973.
(Order thru GPO, \$.65)

R2-73-113

Katz, B. and R. Cross.
Project Officer: Freestone, F.J.
Use of fire streams to control floating oil.
36 pp., Feb. 1973. (Order thru GPO, \$.75)

R2-73-114

Roberts, A.C.
Project Officer: Freestone, F.J.
Shore termination for oil spill booms. 21 pp.,
Feb. 1973. (Order thru GPO, \$.50)

R2-73-115

Cross, R.H., III
Project Officer: Freestone, F.J.
A small vacuum oil skimming system. 19 pp.,
Feb. 1973. (Order thru GPO, \$.50)

R2-73-116

Katz, B.
Project Officer: Freestone, F.J.
Removal of oil from under piers. 29 pp.
Feb. 1973. (Order thru GPO, \$.65)

R2-73-117

Cross, R., A. Roberts, J. Cunningham, and B. Katz.
Project Officer: Freestone, F.J.
Oil spills control manual for fire departments.
98 pp., Feb. 1973. (Order thru GPO, \$1.25)

R2-73-122

Linstedt, K.D. and E.R. Bennett.
Project Officer: Barth, E.F.
Evaluation of treatment for urban wastewater reuse.
139 pp., July 1973. (Order thru GPO, \$2.10)

R2-73-124

Glover, G.E. and G.R. Herbert.
Project Officer: Field, R.
Microstraining and disinfection of combined
sewer overflows - Phase II. 116 pp.,
Jan. 1973. (Order thru GPO, \$2.10)

R2-73-135

Chung, N.K.
Project Officer: Hill, R.D.
Investigation of use of gel material for
mine sealing. 67 pp., Jan. 1973.
(Order thru GPO, \$1.25)

R2-73-138

Click, C.N.
Project Officer: Bostian, H.E.
The feasibility of flow smoothing stations in
municipal sewage systems. 93 pp., Feb. 1973.
(Order thru GPO, \$1.25; or NTIS, PB-221 246, \$3.25)

R2-73-140

Foreman, J.W. and D.C. McLean.
Project Officer: Hill, R.D.
Evaluation of pollution abatement procedures,
Moraine State Park. 71 pp., Jan. 1973.
(Order thru GPO, \$1.00)

R2-73-142

Zaval, F.J. and J.D. Robins.
Project Officer: Scott, R.B.
Water infiltration control to achieve mine
water pollution control. 185 pp., Jan.
1973. (Order thru GPO, \$2.35)

R2-73-144

Barsom, G.
Project Officer: Middleton, F.M.
Lagoon performance and the state of lagoon tech-
nology. 214 pp., June 1973. (Order thru
GPO, \$2.60)

R2-73-145

Eshleman, P.W. and R.A. Blase.
Project Office: EWQRL Staff.
A thermal wave flowmeter for measuring combined
sewer flows. 100 pp., Mar. 1973. (Order
thru GPO, \$1.25)

R2-73-146

Wynn, C.S., B.S. Kirk, and R. McNabney.
Project Officer: Evans, F.L. III.
Pilot plant for tertiary treatment of wastewater
with ozone. 231 pp., Jan. 1973. (Order
thru GPO, \$2.60)

R2-73-147

Maier, W.J.
Project Officer: Bunch, R.L.
Biological removal of colloidal matter from
wastewater. 166 pp., June 1973. (Order
thru GPO, \$2.35)

R2-73-149

Shuckrow, A.J., G.W. Dawson, and W.F. Bonner.
Project Office: EWQRL Staff.
Physical-chemical treatment of combined and
municipal sewage. 178 pp., Feb. 1973.
(Order thru GPO, \$2.35)

R2-73-150

Ford, C.T. and J.F. Boyer, Jr.
Project Officer: Harris, E.F.
Treatment of ferrous acid mine drainage with
activated carbon. 123 pp., Jan. 1973.
(Order thru GPO, \$2.10)

R2-73-151

Ohio State Dept. of Natural Resources.
Project Officer: Harris, E.F.
Feasibility study Lake Hope mine drainage dem-
onstration project. 97 pp., Mar. 1973.
(Order thru GPO, \$1.25)

R2-73-152

Mytelka, A.I., L.P. Cagliostro, et al.
Project Office: EWQRL Staff.
Combined sewer overflow study for the Hudson River
conference. 287 pp., Jan. 1973.
(Order thru GPO, \$2.85)

R2-73-156

Miller, E., L. Stephens, and J. Ricklis.
Project Office: EWQRL Staff.
Development and preliminary design of a sorbent-
oil recovery system. 191 pp., Jan. 1973.
(Order thru GPO, \$2.60)

R2-73-158

McHarness, D.D. and P.L. McCarty.
Project Officer: Barth, E.F.
Field study of nitrification with the submerged
filter. 101 pp., Feb. 1973. (Order thru
GPO, \$1.25)

R2-73-159

Schmid, L.
Project Officer: Barth, E.F.
Pilot plant demonstration of a lime-biological
treatment phosphorus removal method.
48 pp., June 1973. (Order thru GPO, \$.85)

R2-73-166

Sartor, J.D., C.R. Foget, and R.W. Castle.
Project Officer: Dorrlar, J.S.
Oil/sorbent harvesting system for use on
vessels of opportunity. 99 pp., Apr. 1973.
(Order thru GPO, \$1.25)

R2-73-169

Akers, D.J., Jr. and E.A. Moss.
Project Officer: Wilmoth, R.C.
Dewatering of mine drainage sludge. 152 pp.,
Feb. 1973. (Order thru GPO, \$2.10)

R2-73-176

Mallory, C.W. and R. Waller.
Project Officer: McMichael, W.F.
Application of selected industrial engineering
techniques to wastewater treatment plants.
226 pp., Feb. 1973. (Order thru GPO, \$2.60)

R2-73-181

Roberts, A.C.
Project Officer: Freestone, F.J.
Using fire streams with a self-propelled oil
spill skimmer. 27 pp., May 1973. (Order
thru GPO, \$.55)

R2-73-183

Beebe, R.L.
Project Officer: Berg, E.L.
Activated carbon treatment of raw sewage in solids-
Contact clarifiers. 98 pp., Mar. 1973.
(Order thru GPO, \$1.25)

R2-73-185

Friel, J.V., R.H. Hiltz, and M.D. Marshall.
Project Officer: Wilder, I.
Control of hazardous chemical spills by physical
barriers. 91 pp., Mar. 1973. (Order
thru GPO, \$1.25)

R2-73-199

Duddles, G.A. and S.E. Richardson.
Project Officer: Barth, E.F.
Application of plastic media trickling filters for
biological nitrification systems. 111 pp.,
June 1973. (Order thru GPO, \$1.25)

R2-73-201

McCarthy, L.T., Jr., I. Wilder, and J.S. Dorrier.
Project Officer: None.
Standard dispersant effectiveness and toxicity
tests. 57 pp., May 1973. (Order thru GPO, \$.90)

R2-73-205

Bianchi, R.A. and G. Henry.
Project Office: EWQRL Staff.
The development and demonstration of an underwater
oil harvesting technique. 86 pp., Apr. 1973.
(Order thru GPO, \$1.25; or NTIS, PB-221 431, \$3.25)

R2-73-206

Almgren, H.
Project Officer: Stern, G.
Tertiary treatment by lime addition at Santee,
California. 194 pp., Mar. 1973. (Order thru
NTIS, PB-217 888, \$3.00)

R2-73-209

Thackston, E.L.
Project Officers: Westrick, J.J. and J.F. Kreissl.
Secondary waste treatment for a small diversified
tannery. 75 pp., Apr. 1973.
(Order thru GPO, \$1.25)

R2-73-213

Wehking, M.W., et al.
Project Office: AWTRL Staff.
Stabilization of sewage solids by the channel
aeration process. 95 pp., June 1973. (Order thru
NTIS, PB-223 134, \$6.75)

R2-73-215

Mohr, D., K. McCormack, G. Brewster, et al.
Project Office: EWQRL Staff.
Oil spill surveillance system study. 215 pp.,
May 1973. (Order thru GPO, \$2.60)

R2-73-221

Miller, J.W.
Project Officer: Hornstein, B.
A multiparameter oil pollution source identification
system. 173 pp., July 1973. (Order thru GPO,
\$1.85)

R2-73-222

Nebolsine, R., I. Pouschine, Jr., C.Y. Fan, et al.
Project Officer: Kreissl, J.F.
Ultra high rate filtration of activated sludge
plant effluent. 114 pp., Apr. 1973.
(Order thru GPO, \$2.10)

R2-73-223

Renn, C.E.
Project Officer: Skovronek, H.
Management of recycled waste-process water ponds.
49 pp., May 1973. (Order thru GPO, \$.85)

R2-73-224

Bargman, R.D. and J. Borgerding.
Project Officer: Smith, R.
Characterization of the activated sludge process.
63 pp., Apr. 1973. (Order thru GPO, \$.95)

R2-73-226

Kaminsky, E.L., W.F. Roberts, and J.C. Volk, Jr.
Project Officer: Librizzi, W.J., Jr.
Marine sanitation system demonstration. 105 pp.,
May 1973. (Order thru GPO, \$1.25)

R2-73-228

Thomas, D.G., R.B. Gallaher, and J.S. Johnson, Jr.
Project Officer: Smith, J.M.
Hydrodynamic flux control for waste water appli-
cation of hyperfiltration systems.
80 pp., May 1973. (Order thru GPO, \$1.25)

R2-73-230

Kosowski, Z.V.
Project Office: Mine Drainage Pollution Control.
Control of mine drainage from coal mine mineral wastes.
83 pp., May 1973. (Order thru GPO, \$1.25)

R2-73-233

Dolan, F.X. and J.P. Bowersox.
Project Office: EWQRL Staff.
Development of a mobile system for cleaning oil-contaminated beaches. 92 pp., May 1973.
(Order thru GPO, \$1.25)

R2-73-237

Bechtel Corporation.
Project Officer: McMichael, W.F.
Cost estimating guidelines for wastewater treatment systems. 102 pp., 1973. (Order thru NTIS, PB-215 516, \$7.25)

R2-73-238

Derick, C. and K. Logie.
Project Office: EWQRL Staff.
Flow augmenting effects of additives on open channel flows. 74 pp., June 1973. (Order thru GPO, \$1.00)

R2-73-239

Filar, H., Jr.
Project Officer: Stern, G.
Desalination exchange for demineralization at Santee, California. 215 pp., May 1973. (Order thru NTIS, PB-220 123, \$3.00)

R2-73-240

Filar, H., Jr.
Project Officer: Stern, G.
Carbon adsorption and electrodialysis for demineralization at Santee, California. 443 pp., May 1973. (Order thru NTIS, PB-220 360/2, \$6.00)

R2-73-242

Hudak, R.A. and T.J. McMahon
Project Office: EWQRL Staff.
Temporary detention of storm and combined sewage in natural underground formations. 70 pp., May 1973.
(Order thru GPO, \$.95)

R2-73-247a

Hallowell, J.B., J.F. Shea, G.R. Smithson, Jr., et al.
Project Officer: Ciancia, J.
Water pollution control in the primary nonferrous metals industry - Vol. I, Copper, zinc, and lead industries. 168 pp., Sept. 1973.
(Order thru GPO, \$1.90)

R2-73-247b

Hallowell, J.B., J.F. Shea, G.R. Smithson, Jr., et al.
Project Officer: Ciancia, J.

Water pollution control in the primary nonferrous
metals industry - Vol. II, Aluminum, mercury,
gold, silver, molybdenum, and tungsten.
113 pp., Sept. 1973. (Order thru GPO, \$1.45)

R2-73-250

Parker, D.S., F.J. Zadick, and K.E. Train.
Project Officer: Dean, R.B.

Sludge processing for combined physical-chemical-
biological sludges. 141 pp., July 1973.
(Order thru GPO, \$2.10)

R2-73-251

Mitchell, R.C., C.L. Hammermesh, and J.V. Lecce.
Project Officer: Wilder, I.

Feasibility of plastic foam plugs for sealing
leaking chemical containers. 60 pp., May
1973. (Order thru GPO, \$.85)

R2-73-257

Field, R., E.J. Struzeski, Jr., H.E. Masters, et al.
Project Officer: None

Water pollution and associated effects from street
salting. 48 pp., May 1973. (Order thru GPO, \$.85)

R2-73-261

Shelley, P.E. and G.A. Kirkpatrick.
Project Officer: Field, R.I.

An assessment of automatic sewer flow samplers.
233 pp., June 1973. (Order thru GPO, \$2.60)

R2-73-263

Seiler, E.L. and J.W. Altman.
Project Officer: McMichael, W.

Guide to the preparation of operational plans for
sewage treatment facilities. 212 pp.,
July 1973. (Order thru GPO, \$2.60)

R2-73-264

Burns, D.E. and G.L. Shell.
Project Officer: Westrick, J.J.

Physical-chemical treatment of a municipal wastewater
using powdered carbon. 230 pp., Aug. 1973.
(Order thru GPO, \$2.25)

R2-73-270

Mekosh, G. and D. Ramos.
Project Officer: Kreissl, J.F.
Pressure sewer demonstration at the borough of
Phoenixville, Pennsylvania. 70 pp., July 1973.
(Order thru GPO, \$1.00)

R2-73-278

Schultz, J.S.
Project Officer: Chambers, C.W.
Electrical stimulation of microbial waste
treatment. 53 pp., June 1973. (Order thru NTIS,
PB-222 384/0, \$3.50)

R2-73-279

Zanoni, A.E.
Project Officer: Barth, E.F.
Phosphorus removal by trickling filter slimes.
122 pp., July 1973. (Order thru GPO, \$2.10)

R2-73-281

Smith, R.
Project Officer: None.
Electrical power consumption for municipal waste-
water treatment. 89 pp., July 1973. (Order
thru GPO, \$1.25)

R2-73-282

Opferkuch, R.E., T. Ctvrtnicek, et al.
Project Officer: Farrell, J.B.
Study of utilization and disposal of lime sludges
containing phosphates. 119 pp., June 1973. (Order
thru NTIS, PB-222 354/3, \$8.00)

R2-73-283

Pitt, R.E. and G. Amy.
Project Office: EWQRL Staff.
Toxic materials analysis of street surface con-
taminants. 133 pp., Aug. 1973.
(Order thru GPO, \$1.55)

R2-73-287

Tuwiner, S.B.
Project Office: EWQRL Staff.
Investigation of treating electroplaters cyanide waste
by electrodialysis. 48 pp., Dec. 1973.
(Order thru GPO, \$.90)

R2-73-289

Rudder, C.L., A.G. Wallace, and C.J. Reinheimer.
Project Office: EWQRL Staff.
Aerial detection of spill sources. 23 pp., Sept. 1973.
(Order thru GPO, \$.55)

R2-73-293

Chansky, S., B. McCoy, and N. Surprenant.
Project Office: EWQRL Staff.
Waste automotive lubricating oil as a municipal
incinerator fuel. 74 pp., Sept. 1973.
(Order thru GPO, \$1.05)

R3-73-029

Regan, R, J.S. Deris, R. Gasser, et al.
Project Officer: Wiles, C.C.
Cellulose degradation in composting. 153 pp., Mar. 1973.
(Order thru NTIS, PB-215 722, \$6.00)

R3-73-031

Golueke, C.G., W.J. Oswald, G.L. Dugan, et al.
Project Officer: Clemons, C.A.
Photosynthetic reclamation of agricultural solid
and liquid wastes. 94 pp., Aug. 1973.
(Order thru NTIS, PB-222 454, \$3.75)

R4-73-011

Darby, R.L. and R.L. Little.
Project Officer: Weber, C.I.
Operation of the analytical methodology information center. 162 pp., Apr. 1973.
(Order thru GPO \$2.35)

R4-73-014

Krieger, H.L. and S. Gold.
Project Officer: None.
Procedures for radiochemical analysis of nuclear
reactor aqueous solutions. 174 pp., May 1973.
(Order thru NTIS, PB-222 154/7, \$6.00)

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PUBLICATIONS
IN-HOUSE, CONTRACT, AND GRANT REPORTS

EPA REPORT NO.

670/1-73-036

ETRL, NERC-Cincinnati, Ohio
Project Officer: Stara, J.F.
Annual report for calendar year 1972. Environmental
Toxicology Research Laboratory.

670/2-73-005

Currier, R.A. and M.L. Laver.
Project Officer: Carnes, R.A.
Utilization of bark waste. 165 pp., July 1973.
(Order thru NTIS, PB-221 876, \$6.00)

670/2-73-006

Fleischer, L.R.
Project Officer: Clemons, C.A.
Investigation of corrosion deposition phenomena on
gas turbine blades. 44 pp., June 1973.
(Order thru NTIS, PB-221 095, \$3.75)

670/2-73-009

Miller, B.F.
Project Officer: Rogers, C.J.
Biological conversion of animal wastes to
nutrients. 82 pp., June 1973. (Order thru
NTIS, PB-221 171, \$4.85)

670/2-73-010

Stevenson, M.K., J.O. Leckie, and R. Eliassen.
Project Officer: Clemons, C.A.
Preparation and evaluation of activated carbon
produced from municipal refuse. 150 pp.,
June 1973. (Order thru NTIS, PB-221 172, \$5.45)

670/2-73-011

Converse, A.O., H.E. Grethlein, et al.
Project Officer: Rogers, C.J.
Acid hydrolysis of cellulose in refuse to sugar
and its fermentation to alcohol. 113 pp., 1973.
(Order thru NTIS, PB-221 239, \$5.45)

670/2-73-013

Booz Allen Applied Research, Inc.
Project Officer: Clemons, C.A.
An analysis of the abandoned automobile problem.
196 pp., July 1973. (Order thru NTIS,
PB-221-879, \$6.00)

670/2-73-014

Booz Allen Applied Research, Inc.
Project Officer: Clemons, C.A.
A study of hazardous waste materials, hazardous
effects and disposal methods, Volume I.
408 pp., July 1973. (Order thru NTIS, PB-221 465,
\$10.60) (3 Volume set, PB-221 464, \$21.00)

670/2-73-015

Booz Allen Applied Research, Inc.
Project Officer: Clemons, C.A.
A study of hazardous waste materials, hazardous
effects and disposal methods, Volume II.
544 pp., July 1973. (Order thru NTIS,
PB-221 466, \$12.50)

670/2-73-016

Booz Allen Applied Research, Inc.
Project Officer: Clemons, C.A.
A study of hazardous waste materials, hazardous
effects and disposal methods, Volume III.
460 pp., July 1973. (Order thru NTIS, PB-221 467,
\$10.60)

670/2-73-017

First, M.W., C.A. Oviatt, et al.
Project Officer: Clemons, C.A.
Municipal waste disposal by shipborne incineration
and sea disposal of residues. 603 pp., July 1973.
(Order thru NTIS, PB-221 684, \$32.25)

670/2-73-021

Wren, E.J.
Project Officer: Clemons, C.A.
Preventing landfill leachate contamination of water.
119 pp., July 1973. (Order thru NTIS, PB-222 468,
\$4.25)

670/2-73-022

Sack, W.A. and S.A. Phillips.
Project Officer: Bunch, R.L.
Evaluation of the bio-disc treatment process for
summer camp application. 76 pp., Aug. 1973.
(Order thru GPO, \$1.05)

670/2-73-023

Kaiser, E.R., D. Kasner, and C. Zimmer.
Project Officer: Thurnau, R.C.
Incineration of bulky refuse without prior shredding. 92 pp., July 1973. (Order thru NTIS, PB-221 731, \$3.00)

670/2-73-024

Condon, R.L., Jr., R.A. Cooper, Jr., et al.
Project Officer: English, J.N.
Instream aeration to control dissolved sulfides in sanitary sewers. 92 pp., July 1973. (Order thru NTIS, PB-223 342, \$7.25)

670/2-73-025

Miner, J.R.
Project Officer: Clemons, C.A.
A recirculating waste system for swine units. 247 pp., July 1973. (Order thru NTIS, PB-221 621, \$14.50)

670/2-73-027

Torpey, W.N., H. Heukelekian, and A.J. Kaplovsky.
Project Office: AWTSL Staff.
Rotating biological disk wastewater treatment process - Pilot plant evaluation. 250 pp., 1973. (Order thru NTIS, PB-232 133, \$6.00)

670/2-73-029

Sallo, F.W., Jr., H.F. Mueller, and T.E. Larson.
Project Officer: Chambers, C.W.
Disinfection of sewage effluents. (Order thru NTIS, PB-222 355, \$6.00)

670/2-73-030

Kelly, J.A.
Project Officer: Rogers, C.J.
Radiolytic hydrolysis of cellulose. 26 pp., July 1973. (Order thru NTIS, PB-221 877, \$3.00)

670/2-73-031

Mitchell, R.C.
Project Officer: English, J.N.
U-tube aeration. 186 pp., Sept. 1973. (Order thru GPO, \$2.00)

670/2-73-032

Vaughan, D.A. and P.D. Miller.
Project Officer: Clemons, C.A.
First annual progress report on a study of corrosion in municipal incinerators. 44 pp., July 1973. (Order thru NTIS, PB-221 851, \$3.75)

670/2-73-033

Cole, C.A., J.B. Stamberg, and D.F. Bishop.
Project Officer: Bishop, D.F.

Hydrogen peroxide cures filamentous growth
in activated sludge. 20 pp., Oct. 1973. (Order
thru GPO, \$.65)

670/2-73-034

Allan, G.G., C.S. Chopra, R.I. Gara, et al.
Project Officer: Clemons, C.A.

Wood waste reuse in controlled release pesticides.
96 pp., July 1973. (Order thru NTIS, PB-222 051,
\$4.85)

670/2-73-037

Hais, A.B., J.B. Stamberg, and D.F. Bishop.
Project Officer: Bishop, D.F.

Alum addition to activated sludge with tertiary
solids removal. 25 pp., Aug. 1973.
(Order thru GPO, \$.65)

670/2-73-038

Malisch, W.R., D.E. Day, and B.G. Wixson.
Project Officer: Clemons, C.A.

Use of domestic waste glass for urban paving.
106 pp., July 1973. (Order thru NTIS,
PB-222 052, \$6.45)

670/2-73-039

Hoffman, D.A.
Project Officer: Carnes, R.A.

Pyrolysis of solid municipal wastes. 79 pp., 1973.
(Order thru NTIS, PB-222 015, \$4.85)

670/2-73-040

O'Farrell, T.P., D.F. Bishop, and A.F. Cassel.
Project Officer: Bishop, D.F.

Nitrogen removal by ammonia stripping. 23 pp.,
Sept. 1973. (Order thru GPO, \$.65)

670/2-73-041

Howes, J.R., C.F. Hall, and W.F. Krueger.
Project Officer: Clemons, C.A.

The effect of processing poultry manure on disease
agents. 36 pp., July 1973. (Order thru NTIS,
PB-222 148, \$4.00)

670/2-73-042

Wilcox, E.A. and S. Akinbami.
Project Officer: Bishop, D.F.

Activated sludge process using pure oxygen.
48 pp., Feb. 1974. (Order thru GPO, \$.95)

670/2-73-043

Parkhurst, J.D., R.F. Rodrigue, R.P. Miele, et al.
Project Officer: Dean, R.B.
Summary report: pilot plant studies on dewatering
primary digested sludge. 202 pp., Aug. 1973.
(Order thru GPO, \$2.10)

670/2-73-044

Smith, R, R.G. Eilers, and E.D. Hall.
Project Officer: None.
Mathematical model for post aeration. 44 pp.,
July 1973. (Order thru NTIS, PB-222 031, \$3.75)

670/2-73-045

Smith, R, R.G. Eilers, and E.D. Hall.
Project Officer: None.
A mathematical model for aerobic digestion.
50 pp., July 1973. (Order thru NTIS,
PB-222 029, \$3.75)

670/2-73-046

Smith, R., R.G. Eilers, and E.D. Hall.
Project Officer: None.
Design and simulation of equalization basins.
58 pp., July 1973. (Order thru NTIS, PB-222 000,
\$4.50)

670/2-73-047A

Brown, J.C., L.W. Little, D.E. Francisco, et al.
Project Officer: Bunch, R.L.
Methods for improvement of trickling filter
plant performance - Part I. Mechanical and
biological optima. 235 pp., Aug. 1973.
(Order thru GPO, \$2.30)

670/2-73-047B

Brown, J.C., L.W. Little, D.E. Francisco, et al.
Project Officer: Brenner, R.C.
Methods for improvement of trickling filter plant
performance. Part II. Aug., 1973.
(Pending)

670/2-73-048

Iglar, A.F. and R.G. Bond.
Project Officer: Clemons, C.A.
Hospital solid waste disposal in community facilities.
350 pp., July 1973. (Order thru NTIS, PB-222 018
\$9.00)

670/2-73-049.

Boettner, E.A., G. Ball, and B. Weiss.

Project Officer: Clemons, C.A.

Combustion projects from the incineration of plastics.
140 pp., July 1973. (Order thru NTIS, PB-222 001,
\$8.00)

670/2-73-050

Leary, R.D., L.A. Ernest, R.S. Powell, et al.

Project Officer: Bunch, R.L.

Two hundred MGD activated sludge plant removes
phosphorus by pickle liquor. 127 pp.,
Sept. 1973. (Order thru GPO, \$1.50)

670/2-73-051

Diesch, S.L., B.S. Pomeroy, and E.R. Albred.

Project Officer: Clemons, C.A.

Survival of pathogens in animal manure disposal.
135 pp., Aug. 1973. (Order thru NTIS, PB-222 337,
\$4.50)

670/2-73-052

Fookson, A. and G. Frohnsdorff.

Project Officer: Rogers, C.J.

The nitrite-accelerated photochemical degradation of
cellulose as a pretreatment for microbiological
conversion to protein. 102 pp., July 1973.
(Order thru NTIS, PB-222 115, \$5.45)

670/2-73-053A

Ottinger, R.S., I.L. Blumenthal, et al.

Project Officer: Schomaker, N.B.

Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. I. Summary report. 212 pp., Aug. 1973. (Order
thru NTIS, PB-224 580/AS, \$5.50) (053A thru
053P is \$72.00 set, PB-224 579)

670/2-73-053B

Ottinger, R.S., I.L. Blumenthal, et al.

Project Officer: Schomaker, N.B.

Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. II. Toxicologic summary. 246 pp., Aug. 1973.
(Order thru NTIS, PB-224 581/AS, \$5.75)

670/2-73-053C

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. III. Disposal process description:
Ultimate disposal, incineration, and pyrolysis
processes. 255 pp., Aug. 1973. (Order thru NTIS,
PB-224 582/AS, \$6.25)

670/2-73-053D

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. IV. Disposal process descriptions:
Biological and miscellaneous waste treat-
ment processes. 151 pp., Aug. 1973. (Order thru
NTIS, PB-224 583/AS, \$4.50)

670/2-73-053E

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. V. National disposal site candidate
waste stream constituent profile reports:
Pesticides and cyanide compounds. 150 pp., Aug. 1973.
(Order thru NTIS, PB-224 584/AS, \$4.50)

670/2-73-053F

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. VI. National disposal site candidate
waste stream constituent profile reports:
Mercury, arsenic, chromium, and cadmium
compounds. 212 pp., Aug. 1973. (Order thru NTIS,
PB-224 585/AS, \$5.50)

670/2-73-053G

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. VII. National disposal site candidate
waste stream constituent profile reports:
Propellants, explosives, and chemical war-
fare materiel. 283 pp., Aug. 1973. (Order thru
NTIS, PB-224 586/AS, \$6.25)

670/2-73-053H

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. VIII. National disposal site candidate
waste stream constituent profile reports:
Miscellaneous inorganic and organic com-
pounds. 82 pp., Aug. 1973. (Order thru NTIS,
PB-224 587/AS, \$3.75)

670/2-73-053I

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. IX. National disposal site candidate
waste stream constituent profile reports:
Radioactive materials. 173 pp., Aug. 1973.
(Order thru NTIS, PB-224 588/AS, \$4.75)

670/2-73-053J

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. X. Industrial and municipal disposal
candidate waste stream constituent pro-
file reports: Organic compounds. 321 pp., Aug. 1973.
(Order thru NTIS, PB-224 589/AS, \$7.00)

670/2-73-053K

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. XI. Industrial and municipal dis-
posal candidate waste stream constituent
profile reports: Organic compounds (cont'd).
264 pp., Aug. 1973. (Order thru NTIS,
PB-224 590/AS, \$5.75)

670/2-73-053L

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. XII. Industrial and municipal disposal
candidate waste stream constituent profile
reports: Inorganic compounds. 340 pp., Aug. 1973.
(Order thru NTIS, PB-224 591/AS, \$7.25)

670/2-73-053M

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. XIII. Industrial and municipal disposal
candidate waste stream constituent profile
reports: Inorganic compounds (cont'd). 303 pp.,
Aug. 1973. (Order thru NTIS, PB-224 592/AS, \$6.50)

670/2-73-053N

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. XIV. Summary of waste origins, forms,
and quantities. 170 pp., Aug. 1973. (Order
thru NTIS, PB-224 593/AS, \$4.75)

670/2-73-053O

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. XV. Research and development plans. 115 pp.,
Aug. 1973. (Order thru NTIS, PB-224 594/AS, \$4.25)

670/2-73-053P

Ottinger, R.S., I.L. Blumenthal, et al.
Project Officer: Schomaker, N.B.
Recommended methods of reduction, neutralization,
recovery or disposal of hazardous waste.
Vol. XVI. References. 423 pp., Aug. 1973.
(Order thru NTIS, PB-224 595/AS, \$8.25)

670/2-73-054

Robins, J.D.
Project Officer: Hill, R.D.
Gas requirements to pressurize abandoned deep
mines. 192 pp., Aug. 1973. (Order thru
GPO, \$2.00)

670/2-73-056

International Research & Technology Corporation.
Project Officer: Albrecht, O.W.
Problems and opportunities in management of com-
bustible solid wastes. 517 pp., Aug. 1973.
(Order thru NTIS, PB-222 467, \$9.75)

670/2-73-057

Schoenberger, R.J. and P.W. Purdom.

Project Officer: Bender, D.F.

A study of incinerator residue analysis of water soluble components. 316 pp., Aug. 1973.
(Order thru NTIS, PB-222 458, \$7.00)

670/2-73-058

Pressley, T.A., D.F. Bishop, A.P. Pinto, et al.

Project Officer: Bishop, D.F.

Ammonia-nitrogen removal by breakpoint chlorination. 45 pp., Sept. 1973. (Order thru GPO, \$.95)

670/2-73-059

Field, R.

Project Officer: None

The dual functioning swirl combined sewer overflow regulator/concentrator. 49 pp., Sept. 1973.
(Order thru GPO, \$2.20)

670/2-73-060

Derrington, R.E., D.H. Stevens, and J.E. Laughlin.

Project Officer: Brenner, R.C.

Enhancing trickling filter plant performance by chemical precipitation. 117 pp., Aug. 1973.
(Order thru GPO, \$1.45)

670/2-73-061

Andrews, J.F. and K. Kambhu.

Project Officer: Brunner, D.R.

Thermophilic aerobic digestion of organic solid wastes. 83 pp., Aug. 1973. (Order thru NTIS, PB-222 396, \$6.25)

670/2-73-062

Weinberg, M.S., H.K. Weiss, A.L. Palander, et al.

Project Officer: Dean, R.B.

Sludge conditioning using SO_2 and low pressure for production of organic feed concentrate.
Aug. 1973. (Order thru NTIS, PB-223 343, \$10.50)

670/2-73-063

Hortenstine, C.C. and D.F. Rothwell.

Project Officer: Wiles, C.C.

Composted municipal refuse as a soil amendment.
67 pp., Aug. 1973. (Order thru NTIS, PB-222 422, \$3.50)

670/2-73-064

Horstkotte, G.A., Jr.
Project Officer: Brunner, C.A.
Pilot-demonstration project for industrial reuse.
of renovated municipal wastewater. 133 pp.,
Aug. 1973. (Order thru GPO, \$1.55)

670/2-73-065

Grove, C.S. and C.M. Antoni.
Project Officer: Clemons, C.A.
Studies on modifications of solid industrial wastes.
179 pp., Aug. 1973. (Order thru NTIS, PB-222 419,
\$5.25)

670/2-73-066

Wolk, R.H. and C.A. Battista.
Project Officer: Wiles, C.C.
Study of the technical and economic feasibility of a
hydrogenation process for utilization of
waste rubber. 150 pp., Aug. 1973. (Order thru
NTIS, PB-222 694, \$4.40)

670/2-73-067

Pontius, U.R., E.H. Pavia, and D.G. Crowder.
Project Office: EWQRL Staff.
Hypochlorination of polluted stormwater pumpage
at New Orleans. 188 pp., Sept. 1973. (Order thru
GPO, \$1.95)

670/2-73-068

Gumtz, G.D. and T.P. Meloy.
Project Office: EWQRL Staff.
Oil recovery system using sorbent material. 159 pp.,
Sept. 1973. (Order thru GPO, \$4.00)

670/2-73-069

Bonz, P.E.
Project Officer: Farlow, J.S.
Fabric boom concept for containment and collection
of floating oil. 63 pp., Sept. 1973.
(Order thru GPO, \$1.00)

670/2-73-070

Bishop, D.F., T.P. O'Farrell, A.F. Cassell, et al.
Project Officer: Bishop, D.F.
Physical-chemical treatment of raw municipal
wastewater. 59 pp., Sept. 1973. (Order thru GPO,
\$1.05)

670/2-73-071

Homack, P., K.L. Zippler, E.C. Herkert.
Project Officer: Bromberg, A.W.
Utilization of trickling filters for dual treatment of dry and wet weather flows. 118 pp., Sept. 1973. (Order thru GPO, \$1.50)

670/2-73-072

Zandi, I.
Project Officer: Oberacker, D.A.
Pneumo-slurry pipeline collection and removal of municipal solid waste. 128 pp., Sept. 1973. (Order thru NTIS, PB-223 162, \$8.25)

670/2-73-073

Stamberg, J.B., D.F. Bishop, and A.B. Hais.
Project Officer: Bishop, D.F.
Activated sludge treatment systems with oxygen. 35 pp., Sept. 1973. (Order thru GPO, \$.90)

670/2-73-074

Morrison, J.E.
Project Officers: Swanson, C.L., S.A. Hannah, et al.
Study of upflow filter for tertiary treatment. 62 pp., Sept. 1973. (Order thru NTIS, PB-223 354, \$5.25)

670/2-73-075

Roan, S.G., D.F. Bishop, and T.A. Pressley.
Project Officer: Bishop, D.F.
Laboratory ozonation of municipal wastewaters. 38 pp., Sept. 1973. (Order thru GPO, \$.85)

670/2-73-076

Eisenmann, J.L. and J.D. Smith.
Project Officer: Brunner, C.A.
Selective nutrient removal from secondary effluent. 155 pp., Sept. 1973. (Order thru GPO, \$1.75)

670/2-73-077

Field, R., A.N. Tafuri, R.H. Sullivan, et al.
Project Officer: EWQRL
Combined sewer overflow seminar papers. 216 pp., Nov. 1973. (Order thru GPO, \$2.20)

670/2-73-078

Mercer, B.W., A.J. Shuckrow, and G.W. Dawson.
Project Officer: Wilder, I.
Treatment of hazardous material spills with floating mass transfer media. 93 pp., Sept. 1973. (Order thru GPO, \$1.25)

670/2-73-079

Huber, C.O.
Project Officer: Booth, R.L.
Atomic absorption analysis of phosphates in water.
45 pp., Oct. 1973. (Order thru NTIS,
PB-223 338, \$4.50)

670/2-73-080

Ross, L.W.
Project Office: MDPC Staff.
Removal of heavy metals from mine drainage by
precipitation. 64 pp., Sept. 1973. (Order thru
GPO, \$1.00)

670/2-73-081

Penrose, R.G., Jr. and I. Holubec.
Project Office: MDPC Staff.
Laboratory study of self-sealing limestone plugs
for mine openings. 217 pp., Sept. 1973. (Order
thru GPO, \$2.25)

670/2-73-082

Engelbrecht, R.S., D.H. Foster, et al.
Project Officer: Chambers, C.W.
New microbial indicators of wastewater chlorination
efficiency. 67 pp., Feb. 1974. (Order thru
GPO, \$1.15)

670/2-73-083

Burchinal, J.C.
Project Officer: Clemons, C.A.
A study of institutional solid wastes. 247 pp.,
Sept. 1973. (Order thru NTIS, PB-223 345, \$5.75)

670/2-73-084

Cochran, R.A., J.P. Fraser, D.P. Hemphill, et al.
Project Officer: Dorrlor, J.S.
An oil recovery system utilizing polyurethane
foam -- A feasibility study. 199 pp., Oct. 1973.
(Order thru GPO, \$2.35)

670/2-73-085

Rutgers University, Coll. of Agr. & Envir. Sc.
Project Officer: Clemons, C.A.
Poultry manure disposal by plow-furrow-cover.
203 pp., Sept. 1973. (Order thru NTIS,
PB-223 430, \$5.50)

670/2-73-086

Lackey, L.L., T.O. Jacobs, et al.
Project Officer: Schomaker, N.B.
Public attitudes toward hazardous waste disposal
facilities. 181 pp., Sept. 1973.
(Order thru NTIS, PB-223 638/AS, \$5.25)

670/2-73-087

Heimburg, R.W., A.R. Colella, D. Jones, et al.
Project Officer: Clemons, C.A.
Incineration of plastics found in municipal wastes.
246 pp., Sept. 1973. (Order thru NTIS,
PB-223 651/AS, \$5.75)

670/2-73-088

Matthew, F.L. and E.E. Nesheim.
Project Officer: Librizzi, W.
Demonstration of a non-aqueous sewage disposal
system. 69 pp., Dec. 1973. (Order thru GPO, \$1.60)

670/2-73-089A

Sarofim, A.F., G.C. Williams, J.B. Howard, et al.
Project Officer: Oberacker, D.A.
Design and control of incinerators, Volume I.
300 pp., Sept. 1973. (Order thru NTIS,
PB-223 626/AS, \$6.50)

670/2-73-089B

Sarofim, A.F., G.C. Williams, J.B. Howard, et al.
Project Officer: Oberacker, D.A.
Design and control of incinerators, Volume II.
appendices. 154 pp., Sept. 1973. (Order thru NTIS,
PB-223 626/AS, \$6.50)

670/2-73-090

Leatherwood, J.M.
Project Officer: Rogers, C.J.
Utilization of fibrous wastes as sources of nutrient.
17 pp., Sept. 1973. (Order thru NTIS,
PB-223 625/AS, \$3.00)

670/2-73-091

Carlson, O.N. and F.A. Schmidt.
Project Officers: Wilson, D.L. and R. Carnes.
The metallurgical upgrading of automotive scrap steel.
90 pp., Oct. 1973. (Order thru NTIS, PB-223 740,
\$4.35)

670/2-73-092

Stoddard, C.K.
Project Office: MDPC Staff.
Abatement of mine drainage pollution by underground precipitation. 125 pp., Oct. 1973.
(Order thru GPO, \$1.55)

670/2-73-093

Lovell, H.L.
Project Officer: Hill, R.D.
An appraisal of neutralization processes to treat coal mine drainage. 347 pp., Nov. 1973.
(Order thru GPO, \$3.50)

670/2-73-095

Callihan, C.D. and C.E. Dunlap.
Project Officer: Rogers, C.J.
Single-cell protein from waste cellulose. 105 pp., June 1973. (Order thru NTIS, PB-223 873/AS, \$3.75)

670/2-73-096

Becker, E.R.
Project Officer: Brunner, C.A.
BOD, solids and nutrient removal by foam flotation. 71 pp., Nov. 1973. (Order thru NTIS, PB-232 184/AS, \$7.00)

670/2-73-098

Rains, B.A., M.J. DePrimo, and I.L. Groseclose.
Project Office: AWTRL Staff.
Odors emitted from raw and digested sewage sludge. 68 pp., Dec. 1973. (Order thru GPO, \$1.15)

670/2-73-099

MacIntyre, W.G., C.L. Smith, J.C. Munday, et al.
Project Office: EWQRL Staff.
Investigation of surface films - Chesapeake Bay entrance. 168 pp., Feb. 1974. (Order thru GPO \$2.05)

670/2-73-100

Wilmoth, R.C.
Project Officer: None.
Applications of reverse osmosis to acid mine drainage treatment. 157 pp., Dec. 1973.
(Order thru GPO, \$2.00)

670/2-73-101

Barth, E.F. and B.W. Ryan.

Project Officer: Barth, E.F.

Design, construction and initial evaluation of the
El Lago AWT facility.

(Pending)

670/2-73-102

Tripfler, A.B., Jr., R.H. Cherry, Jr., et al.

Project Officer: Harris, E.F.

Reclamation of metal values from metal-finishing
waste treatment sludges.

(Pending)

670/2-73-103

Green, O., D. VanDam, B. LaBeau, et al.

Project Officer: Barth, E.F.

Ferric chloride and organic polyelectrolytes for
the removal of phosphorus. 109 pp., Feb. 1974.

(Order thru GPO, \$1.55)

670/2-73-104

Molvar, A.E. and J.F. Roesler.

Project Officer: Roesler, J.F.

Selected abstracts for instrumentation and automation
of wastewater facilities. 315 pp., Dec. 1973.

(Order thru NTIS, PB-225 520/6AS, \$7.00)

670/4-73-001

Weber, C.I., Editor.

Project Officer: None.

Biological field and laboratory methods for measur-
ing the quality of surface waters and effluents.

July, 1973. (Order thru NTIS, PB-227 183, \$12.50)

670/4-73-002

Schmer, F.A., D.W. Ryland and F.A. Waltz

Project Officer: Ritter, R.

Investigation of remote sensing techniques for
agricultural feedlot pollution detection.
Dec. 1973.

(Pending)

670/4-73-018

O'Herron, R.J.

Project Officer: None.

Performance of the Union Carbide dissolved oxygen
analyzer. 17 pp., July 1973.

(Pending)

670/4-73-026

Cancelled.

670/5-73-012

Clark, R.M. and J.I. Gillean.

Project Officer: None.

Systems simulation and solid waste planning: A case study. 36 pp., July 1973. (Order thru NTIS, PB-222 995, \$3.00)

670/5-73-020

Bond, R.G., et. al.

Project Officer: Albrecht, O.W.

Study of the economics of hospital solid waste systems. 329 pp. July 1973. (Order thru NTIS, PB-221 681, \$9.00)

670/5-73-021

Albrecht, O.W. and R.G. McDermott.

Project Officer: Albrecht, O.W.

Economic and technological impediments to recycling obsolete ferrous solid waste. 62 pp., Oct. 1973. (Order thru NITS, PB-223 034, \$3.50)

670/9-73-035

Foster, J.F.

Project Officer: Albrecht, O.W.

Socio-economic factors affecting demand for municipal collection of household refuse. (Condensed from Decision Making and Solid Waste Disposal, University of Chicago, Center for Urban Studies.) 47 pp., Aug. 1973. (Order thru NTIS, PB-225 020/7AS, \$3.50)

670/9-73-055

NERC-Cincinnati

Project Office: Technical Information Staff.

Annual report, 1972, NERC-Cincinnati. 94 pp., Aug. 1973. (Order thru NTIS, PB-222 910, \$3.75)

670/9-73-056

Shultz, G.R. and D.J. Harmon, Editors.

Project Officer: None.

Active research tasks report, Fiscal year 1973. 367 pp., 1973. (Order thru NTIS, PB-223 567/AS, \$6.50)

1974
PUBLICATIONS
IN-HOUSE, CONTRACT, AND GRANT REPORTS

EPA REPORT NO.

670/1-74-001

Clark, R.M. and H.C. Goddard.

Project Officer: None.

Pricing for water supply; Its impact on systems management. 22 pp., Apr. 1974. (Order thru NTIS, PB-231 073/AS, \$3.25)

670/2-74-001

LaRosa, P.J., K.A. Ricciardella, and R.J. McGarvey.

Project Officer: Hill, R.D.

Carbonate bonding of taconite tailings. 53 pp., Jan. 1974. (Order thru GPO, \$1.00)

670/2-74-002

Moomau, H.F., F.R. Zachar, J.W. Leonard.

Project Officer: Mulhern, J.J.

Feasibility study of a new surface mining method 'longwall stripping.' 67 pp., Feb. 1974. (Order thru GPO, \$1.15)

670/2-74-003

Zaval, F.J. and R. Burns.

Project Officer: Harris, E.F.

Mine drainage pollution control demonstration grant procedures and requirements. 110 pp., Jan. 1974. (Order thru NTIS, PB-230 709/AS, \$28.25)

670/2-74-004

Rosenblatt, T.M.

Project Officer: Smith, J.E., Jr.

Optimization and design of an oil activated sludge concentration process. 112 pp., Feb. 1974. (Order thru GPO, \$1.40)

670/2-74-005

Page, A.L.

Project Officer: Dotson, G.K.

Fate and effects of trace elements in sewage sludge when applied to agricultural lands. 97 pp., Jan. 1974. (Order thru NTIS, PB-231 171/AS, \$4.50)

670/2-74-006

McMichael, W.F.

Project Officer: None.

Costs of filter pressing domestic sewage sludges.
14 pp., Dec. 1973. (Order thru NTIS,
PB-226 130/AS, \$3.75)

670/2-74-007

Ulmer, N.S.

Project Officer: Ulmer, N.S.

Physical, chemical, and microbiological methods of
solid waste testing. Four additional procedures.
11 pp., Mar. 1974. (Order thru NTIS,
PB-231 203/AS, \$3.75)

670/2-74-008

Chase, O.P.

Project Officer: Tabakin, R.

Metallic recovery from waste waters utilizing cemen-
tation. 36 pp., Jan. 1974. (Order thru GPO, \$.85)

670/2-74-009

Doyle, F.J., H.G. Ghatt, and J.R. Rapp.

Project Officer: Maneval, D.R.

Analysis of pollution control costs. 437 pp., Feb. 1974.
(Order thru GPO, \$3.20)

670/2-74-010

McMichael, W.F.

Project Officer: None.

Costs of hauling and land spreading of domestic
sewage treatment plant sludge. 19 pp., Feb. 1974.
(Order thru NTIS, PB-227 005/AS, \$4.25)

670/2-74-011

McMichael, W.F.

Project Officer: None.

Cost of dissolved air flotation thickening of
waste activated sludge at municipal sewage
treatment plants. 11 pp., Feb. 1974.
(Order thru NTIS, PB-226 582/AS, \$2.75)

670/2-74-012

Weber, W.J., Jr., and P.J. Usinowicz.

Project Officer: Brunner, C.A.

Adsorption from aqueous solution. 187 pp., Feb. 1974.
(Order thru NTIS, PB-232 453/AS, \$15.00)

670/2-74-013

Martin, E.J. and G.D. Guntz.
Project Officer: Lederman, P.B.
State of Maryland waste oil recovery and reuse
program. 248 pp., Jan. 1974. (Order
thru GPO, \$2.70, or NTIS, PB-221 879, \$6.00)

670/2-74-014

Brand, B.G.
Project Officer: Carnes, R.A.
Scrap rubber tire utilization in road dressings.
49 pp., Mar. 1974. (Order thru NTIS,
PB-232 559/AS, \$3.75)

670/2-74-015

Shafizadeh, F., C. McIntyre, H. Lundstrom, et al.
Project Officer: Carnes, R.A.
Chemical conversion of wood and cellulosic wastes.
53 pp., Mar. 1974. (Order thru NTIS,
PB-229 246/AS, \$6.00)

670/2-74-016

Pfeffer, J.T.
Project Officer: Clemons, C.A.
Reclamation of energy from organic waste. 129 pp.
Mar. 1974. (Order thru NTIS, PB-231 176/AS, \$4.75)

670/2-74-017

Lippert, T.E. and M.C. Skriba.
Project Officer: Smith, J.E., Jr.
Evaluation and demonstration of the capillary
suction sludge dewatering device. 71 pp.
Mar. 1974. (Order thru NTIS, PB-232 358/AS, \$4.00)

670/2-74-018

Unz, R.F. and S.R. Farrah
Project Officer: Chambers, C.W.
Bacterial zoogloea formation. 87 pp., Apr. 1974.
(Order thru NTIS, PB-235 023/AS, \$4.00)

670/2-74-019

Guzdar, A.R. and S.S. Rhee.
Project Officer: Oberacker, D.A.
Feasibility of hydraulic transport and treatment
of ground household refuse through sewers.
201 pp., Apr. 1974. (Order thru NTIS,
PB-229 256/AS, \$14.25)

670/2-74-020

Fisk, A.T. and A.D. Guzdar.
Project Officer: Oberacker, D.A.
Preliminary design of a household refuse grinder.
Apr. 1974.
(Pending)

670/2-74-021

Monaghan, D.A. and A.R. Guzdar.
Project Officer: Oberacker, D.A.
Feasibility of hydraulic transport of ground household
refuse through sewer appurtenances. Apr. 1974.
(Pending)

670/2-74-022

Leiser, C.P.
Project Officer: Willman, J.C.
Computer management of a combined sewer system.
475 pp., July 1974. (Order thru NTIS,
PB-235 779/AS, \$8.30, or GPO, \$5.30)

670/2-74-023

Franco, N.B. and R.A. Balouskus.
Project Officer: Hill, R.D.
Electrochemical removal of heavy metals from
acid mine drainage. 87 pp., May 1974.
(Order thru NTIS, PB-232 764/AS, \$4.00)

670/2-74-024a

Foran, J.F., A.T. Heenan, and R.G. Schweikhardt.
Project Officer: Albrecht, O.
Raw materials transportation costs and their
influence on the use of wastepaper and
scrap iron and steel. Vol. I, Technical
discussion. 207 pp., Apr. 1974. (Order
thru NTIS, PB-229 816/AS, \$5.75)

670/2-74-024b

Foran, J.F., A.T. Heenan, and R.G. Schweikhardt.
Project Officer: Albrecht, O.
Raw materials transportation costs and their
influence on the use of wastepaper and scrap
iron and steel. Vol II, Appendices. 94 pp.
Apr. 1974. (Order thru NTIS, PB-229 817/AS, \$4.00)

670/2-74-025

Geinapolos, A.
Project Officer: Barth, E.F.
Effect of carbon to nitrogen ratio on activated sludge
subsidence and dewatering characteristics.
Mar. 1974. (Pending)

- 670/2-74-026
 Sullivan, R.H., M.M. Cohen, J.E. Ure, et al.
 Project Officer: Field, R.
 The swirl concentrator as a grit separator device.
 93 pp., June 1974. (Order thru NTIS,
 PB-233 964/AS, \$4.50)
- 670/2-74-027
 Barbour, J.F., R.R. Groner, and V.H. Freed.
 Project Officer: Rogers, C.J.
 The chemical conversion of solid wastes to useful
 products. 168 pp., Apr. 1974. (Order thru NTIS,
 PB-233 178/AS, \$4.50)
- 670/2-74-028
 Cancelled.
- 670/2-74-029
 Cancelled.
- 670/2-74-030
 Barrett, W.J., G.A. Morneau, J.J. Roden, III.
 Project Officer: Skovronek, H.S.
 Waterborne wastes of the paint and inorganic pig-
 ments industries. 86 pp., Mar. 1974.
 (Order thru NTIS, PB-232 019/AS, \$4.00)
- 670/2-74-031
 Winkler, P.F.
 Project Officer: Oberacker, D.A.
 An infrared spectral sensor for refuse sorting.
 84 pp., Apr. 1974. (Order thru NTIS,
 PB-229 901/AS, \$7.25)
- 670/2-74-032
 O'Melia, C.R.
 Project Officer: Hannah, S.A.
 The role of polyelectrolytes in filtration processes.
 82 pp., Apr. 1974. (Order thru NTIS, PB-233 271/AS,
 \$4.00)
- 670/2-74-033
 Richardson, D.L., C.P. Campbell, et al.
 Project Officer: Masters, H.E.
 Manual for deicing chemicals: Storage and handling.
 89 pp., July 1974. (Order thru NTIS,
 PB-236 152/AS, \$3.70)

670/2-74-034

Wise, R.H..

Project Officer: Wise, R.H.

"Off-the shelf" analyzers for measuring adenosine triphosphate(ATP)in activated sludge. 18 pp.,
Apr. 1974. (Order thru NTIS, PB-231 345/AS, \$3.00)

670/2-74-035a

Wathne. M.

Project Officer: Oberacker, D.A.

First annual report: Routing of solid waste collection vehicles and Appendix A: A linear programming approach for the travelling salesman problem.
May 1974. (Pending)

670/2-74-035b

Hong, S.

Project Officer: Oberacker, D.A.

First annual report: Routing of solid waste collection vehicles and Appendix B: Optimal routing of solid waste collection vehicles. May 1974.
(Pending)

670/2-74-036a

Liebman, J.C.

Project Officer: Oberacker, D.A.

Routing of solid waste collection vehicles, final report: Appendix A - Manual for use of the computer codes.
(Pending)

670/2-74-036b

Mole, J.W.

Project Officer: Oberacker, D.A.

Routing of solid waste collection vehicles: Appendix B - A heuristic solution to the M-postmen's problem.
(Pending)

670/2-74-037

Kos, P., P.M. Meier, and J.M. Joyce.

Project Officer: Oberacker, D. and H. Bostian.

Economic analysis of the processing and disposal of refuse sludges. 75 pp., July 1974.
(Order thru NTIS, PB 234 498/AS, \$4.00)

670/2-74-038

Meier, P.M., J. Kuhner, and R.E. Bolton.

Project Officer: Oberacker, D. and H. Bostian.

Wet systems for residential refuse collection:
A case study for Springfield, Massachusetts.
208 pp., July 1974. (Order thru NTIS,
PB-234 499/AS, \$5.75)

670/2-74-039

Sullivan, R.H., M.M. Cohen, J.E. Ure, et al.
Project Officer: Field, R.
Relationship between diameter and height for the
design of a swirl concentrator as a combined
sewer overflow regulator. 44 pp., July 1974.
(Order thru GPO, \$1.00)

670/2-74-040

Lager, J.A. and W.G. Smith.
Project Officer: Field, R.
Urban stormwater management and technology: An assess-
ment. 447 pp., Dec. 1974.
(Pending)

670/2-74-042

S.K. Williams Co.
Project Officer: Risley, C. Jr. and R.B. Tabakin.
Waste water treatment and reuse in a metal finishing
job shop. 59 pp., July 1974. (Order thru NTIS,
PB-234 476/AS, \$3.75)

670/2-74-043

Heeney, J.M., R.B. Neveril, E.K. Krug, et al.
Project Officer: Cesareo, D.J.
Development and evaluation report: Physical chemical
marine sanitation system. 69 pp., May 1974.
(Order thru NTIS, PB-231 846/AS, \$7.00)

670/2-74-044

Robinson, D.J., H.E. Weisberg, G.I. Chase, et al.
Project Officer: Tabakin, R.B. and J. Ciancia.
An ion-exchange process for recovery of chromate
from pigment manufacturing. 92 pp., June 1974.
(Order thru NTIS, PB-233 641/AS, \$4.50)

670/2-74-045

Richardson, D.L., R.C. Terry, J.B. Metzger, et al.
Project Officer: Masters, H.E.
Manual for deicing chemical application practices.
152 pp., Dec. 1974.
(Pending)

670/2-74-046

Wise, R.H.
Project Officer: None.
On-line colorimetric analyzers for monitoring
nitrate-nitrite, ammonia, orthophosphorus
and total hydrolyzable phosphorus in wastewater
treatment process streams. 24 pp., June 1974.
(Order thru NTIS, PB-231 990/AS, \$4.50)

670/2-74-047

Weber, W.J., Jr. and L.A. Ketchum.
Project Officer: Sanders, W.
Activated silica in wastewater coagulation. 140 pp.,
June 1974. (Order thru NTIS, PB-232 454/AS,
\$11.50)

670/2-74-048

Bass, T.D., W. Garner, and A.E. Vandegrift.
Project Officer: Wise, R.H.
Oxygenation of aqueous bodies using liquid oxygen-
loxination. 53 pp., June 1974. (Order thru
NTIS, PB-232 455/AS, \$6.00)

670/2-74-049

Maheer, M.B..
Project Officer: Field, R.
Microstraining and disinfection of combined sewer
overflows - Phase III. 82 pp., Aug. 1974.
(Order thru GPO)

670/2-74-050

Autotrol Corp., Milwaukee, WI.
Project Officer: Wright, D.
Combined sewer overflow treatment by the rotating
biological contractor process. June 1974.
(Order thru NTIS, PB-231 891/AS, \$11.00)

670/2-74-051

Wilmoth, R.C.
Project Officer: None.
Limestone and limestone-lime neutralization of
acid mine drainage. 92 pp., June 1974.
(Order thru GPO)

670/2-74-052

Weinstein, N.J.
Project Officer: McCarthy, L.T., Jr.
Waste oil recycling and disposal. 328 pp., Aug. 1974.
(Order thru NTIS, PB-235 857/AS, \$6.50, or
GPO, \$4.00)

670/2-74-053

McMahon, T.S.
Project Officer: Cesare, D.J.
Combustion toilet for use on small boats. 111 pp.,
July 1974. (Order thru NTIS, PB-233 175/AS, \$9.00)

670/2-74-054

Woodward, J.B.
Project Officer: Librizzi, W.
Sources of oil and water in bilges of great
lake ships. 34 pp., July 1974. (Order thru
GPO, \$.85, or NTIS, PB-233 846/AS, \$3.25)

670/2-74-055

Cancelled.

670/2-74-056

Robins, J.H. and A.C. Green.
Project Officer: Cesareo, D.J.
Development of on-shore treatment system for sewage
from watercraft waste retention system. 114 pp.
July 1974. (Order thru GPO)

670/2-74-057

Mayes, J.H.
Project Officer: Skovronek, H.S.
Characterization of waste waters from the ethical
pharmaceutical industry. 66 pp., July 1974.
(Order thru NTIS, PB-233 116/AS, \$4.00)

670/2-74-058

Cancelled.

670/2-74-059

Byerley, J.J. and K. Enns.
Project Officer: Risley, C., Jr.
Laboratory study of continuous electrooxidation
of dilute cyanide wastes. 40 pp., Oct. 1974.
(Order thru NTIS; PB-235 588/AS, \$3.25;

670/2-74-060

Cancelled.

670/2-74-061

Finger, R.E., G.J. Mason, D.A. Carlson, et al.
Project Officer: Osborn, J.E.
Phosphate removal in an activated sludge facility.
93 pp., Aug. 1974. (Order thru NTIS, PB-235 749/AS,
\$4.50)

670/2-74-062

Met. St. Louis S.D., and Havens & Emerson, Ltd.
Project Officer: Barth, E.F.
Cost-effective design of wastewater treatment
facilities based on field derived parameters.
93 pp., July 1974. (Order thru NTIS,
PB-234 356/AS, \$4.50)

670/2-74-063

Shuster, W.W., L. Clesceri, S. Kobayashi, et al.
Project Officer: Nadeau, R.J.
Effects of exhaust from two-cycle outboard engines.
305 pp., July 1974. (Order thru NTIS,
PB-233 567/AS, \$7.25)

670/2-74-064

Cancelled.

670/2-74-065

Meier, P.M., J. Kuhner, and C.J. Martel.
Project Officer: Oberacker, D.
A preliminary assessment of wet systems for
residential refuse collection. 167 pp., July 1974.
(Order thru NTIS, PB-234 496/AS, \$5.50)

670/2-74-066

Meier, P.M. and G.R. Fisette.
Project Officer: Oberacker, D. and H. Bostian.
Modifications to the executive computer program
for steady-state simulation of wastewater
treatment facilities. 62 pp., July 1974.
(Order thru NTIS, PB-234 497/AS, \$3.75)

670/2-74-067

Clark, R.M., B.L. Grupenhoff, and G.C. Kent.
Project Officer: None
A mathematical analysis of the kinetics of viral
inactivation. 35 pp., Aug. 1974. (Order thru NTIS,
PB-235 124/AS, \$3.25)

670/2-74-068

Meier, P.M., J. Kuhner, and R.E. Bolton.
Project Officer: Oberacker, D. and H. Bostian.
An assessment of wet systems for residential refuse
collection: Summary report. 93 pp., Aug. 1974.
(Order thru NTIS, PB-236 085/AS, \$4.50)

670/2-74-069

Smith, R. and R.G. Eilers.
Project Officer: None.
Control schemes for the activated-sludge process.
56 pp., Aug. 1974. (Order thru NTIS,
PB-236 086/AS, \$3.75)

670/2-74-070

Smith, R.M., W.E. Grube, Jr., T. Arkle, Jr., et al.
Project Officer: Wilmoth, B.M.
Mine spoil potentials for soil and water quality.
303 pp., Sept. 1974. (Order thru NTIS,
PB-237 525/AS, \$6.25)

670/2-74-071

Cohen, S. and H. Wallman.
Project Officer: Bostian, H.E.
Demonstration of waste flow reduction from households.
103 pp., Sept. 1974. (Order thru NTIS,
PB-236 904/AS, \$5.25)

670/2-74-072

Yousef, Y.A.
Project Officer: Roush, T.H.
Assessing effects on water quality by boating activity.
60 pp., Oct. 1974. (Order thru GPO)

670/2-74-073

Thomas, C.R., G.M.L. Robinson, and E.J. Martin.
Project Officer: Lederman, P.B.
Evaluation of MTF for testing hazardous material spill
control equipment. Sept. 1974.
(Pending)

670/2-74-074

Miller, R.H.
Project Officer: Dotson, G.K.
Microbiology of sewage sludge disposal in soil.
119 pp., Nov. 1974.
(Pending)

670/2-74-075

Welborn, H.L.
Project Officer: Bishop, W.D. and R. Field.
Surge facility for wet and dry weather flow control.
86 pp., Nov. 1974.
(Pending)

670/2-74-076a

Andersland, O.B., R.P. Vallee, and T.A. Armstrong.
Project Officer: Schomaker, N.B.
An experimental high ash papermill sludge landfill -
First annual report. Sept. 1974.
(Pending)

670/2-74-076b

Andersland, O.B., W.A. Charlie, R.P. Vallee, et al.
Project Officer: Schomaker, N.B.
An experimental high ash papermill sludge landfill -
Second annual report. Sept. 1974.
(Pending)

670/2-74-077

Boen, D.F. and G.L. Johannsen.
Project Officer: Stern, G.
Reverse osmosis of treated and untreated secondary
sewage effluent. 218 pp., Sept. 1974.
(Pending)

670/2-74-078

Saxton, J.C. and M. Kramer.
Project Officer: Carnes, R.A.
Industrial chemicals solid waste generation - The
significance of process change, resource recovery,
and improved disposal. 144 pp., Nov. 1974.
(Pending)

670/2-74-079

Parks, J.W.
Project Officer: Phillips, J.H. and D. Cesareo.
An evaluation of three combined sewage overflow
treatment alternatives. Oct. 1974.
(Pending)

670/2-74-080

New York State Atomic & Space Dev. Auth.
Project Officer: Trax, J.R. and J.J. Convery.
Study of an integrated power, water and wastewater
utility complex. 228 pp., Oct. 1974.
(Pending)

670/2-74-081

Cancelled.

670/2-74-082

Messer Associates, Inc., Silver Spring, Maryland.
Project Officer: Klee, A.J.
Measures of effectiveness for refuse storage, collection,
and transportation practices. 183 pp., Nov. 1974.
(Pending)

670/2-74-083

Vaughan, D.A., M.Y. Anastas and H.H. Krause.
Project Officer: Oberacker, D.A.
An analysis of the current impact of plastic refuse
disposal upon the environment. Nov. 1974.
(Pending)

670/2-74-084

Vaughan, D.A., H.H. Krause, and W.W. Boyd.
Project Officer: Oberacker, D.A.
A study of corrosion in municipal incinerators
versus refuse composition. Nov. 1974.
(Pending)

670/2-74-085

Cancelled.

670/2-74-086

O'Brien, P.J., P.L. Levins, and C.H. Summers.

Project Officer: Masters, H.E.

Chemical impact of snow dumping practices. Nov. 1974.

(Pending)

670/2-74-087

Molvar, A. and A. Tulumello.

Project Officer: Masters, H.E.

Assessment and development plan for monitoring of organics in storm flows. Nov. 1974.

(Pending)

670/2-74-088

Rogers, C.J. and R.E. Landreth.

Project Officer: Rogers, C.J.

Promising technologies for treatment of hazardous waste. 38 pp., Nov. 1974.

(Pending)

670/2-74-089

Cancelled.

670/2-74-090

Field, R. and J.A. Lager.

Project Officer: Field, R.

Countermeasures for pollution from overflow - The state of the art. Nov. 1974.

(Pending)

670/2-74-091

O'Grady, T.J. and T.D. Lakowski.

Project Officer: McCarthy, L.T., Jr.

Devices for on-board treatment of waste from vessels. Nov. 1974.

(Pending)

670/2-74-092

Hare, C.P. and C.J. Springer.

Project Officer: Padden, T.J. and L.T. McCarthy, Jr.

Crankcase drainage from in-service out-board motors.

Nov. 1974.

(Pending)

670/2-74-093

Grim, E.C. and R.D. Hill.
Project Officer: Grim, E.C.
Environmental protection in surface mining of coal.
277 pp., Oct. 1974.
(Pending)

670/2-74-094

Gerber, N.N.
Project Officer: Stevens, A.A.
Microbiological production of Geosmin. 9 pp., Nov. 1974.
(Pending)

670/2-74-095a

Stone, R.
Project Officer: Talley, R.J.
Effects of water pollution controls on solid waste
generation, 1971 to 1985. Dec. 1974.
(Pending)

670/2-74-095b

Stone, R. and D. Brows.
Project Officer: Talley, R.M.
Forecast of the effects of air and water controls of
solid waste generation. Dec. 1974.
(Pending)

670/2-74-096

Colston, N.V.
Project Officer: Tafuri, A.N.
Characterization and treatment of urban land runoff.
Dec. 1974.
(Pending)

670/2-74-097

Gumtz, G.D., D.M. Jordan and R. Waller.
Project Officer: Librizzi, W. and L.J. McCarthy, Jr.
Characterization of vessel waste in Duluth-Superior
harbor. Dec. 1974.
(Pending)

670/4-74-001

O'Herron, R.J.
Project Officer: None.
Literature survey of instrumental measurements
of biochemical oxygen demand for control
application 1960-1973. 26 pp., Feb. 1974.
(Order thru NTIS, PB 232 765/AS, \$3.25)

670/4-74-002

Gales, M.E., Jr. and R.L. Booth.

Project Officer: None.

Simultaneous and automated determination of total phosphorus and total kjeldahl nitrogen. 19 pp., May 1974. (Order thru NTIS, PB-232 710/AS, \$3.00)

670/4-74-003a

Battelle Memorial Institute, Columbus, Ohio

Project Officer: Garret, L.

Reviews of current literature on analytical methodology and quality control, 1973 through 1974. No. 24. 48 pp., Feb. 1974. (Pending)

670/4-74-003b

Battelle Memorial Institute, Columbus, Ohio

Project Officer: Garrett, L.

Reviews of current literature on analytical methodology and quality control, 1973 through 1974. No. 25. 47 pp., Feb. 1974. (Pending)

670/4-74-004

Brownrigg, J.T. and A.W. Hornig.

Project Officer: Ballinger, D.G.

Estimation of polychlorinated biphenyls in the presence of DDT--type compounds. 90 pp., June 1974. (Order thru NTIS, PB-233 599/AS, \$4.00)

670/4-74-005

Lowe, R.L.

Project Officer: Collins, G.B.

Environmental requirements and pollution tolerance of freshwater diatoms. 334 pp., Nov. 1974. (Pending)

670/4-74-006

Lewis, P.A.

Project Officer: Lewis, P.A.

Taxonomy and ecology of *Aspenonema* mayflies of the Ohio River Basin. Oct. 1974. (Pending)

670/4-74-007

Lauch, R.P.

Project Officer: Lauch, R.P.

Evaluation of the Ryan waterproof thermograph (Model F-30). 13 pp., Oct. 1974. (Pending)

670/4-74-008

Bellar, T.A., J.J. Lichtenberg, and R.C. Kroner.
Project Officer: Bellar, T.A.

The occurrence of organohalides in chlorinated
drinking waters. 14 pp., Nov. 1974.
(Order thru GPO)

670/4-74-009

Bellar, T.A. and J.J. Lichtenberg.
Project Officer: Bellar, T.A.

The determination of volatile organic compounds
at the $\mu\text{g/l}$ level in water by gas chroma-
tography. 28 pp., Nov. 1974. (Order thru GPO)

670/5-74-001

Singer, R.D., A.G. DuChene, and N.J. Vick.
Project Officer: Albrecht, O.W.

Hospital solid waste. An annotated bibliography.
197 pp., Oct. 1973. (Order thru NTIS,
PB-227 708/AS, \$5.75)

670/5-74-002

Resource Planning Inst., Cambridge, Mass.
Project Officer: Talley, R.J.

A case study and business analysis of the scrap
industry. 120 pp., Mar. 1974. (Order thru
NTIS, PB-229 200/AS, \$4.75)

670/5-74-003

Milgrom, J.
Project Officer: Albrecht, O.W.

Can federal procurement practices be used to reduce
solid waste? 217 pp., Mar. 1974. (Order
thru NTIS, PB-229 727/AS, \$6.00;

670/5-74-004

Cardin, F.A.
Project Officer: Albrecht, O.W.

Secondary fiber recovery incentive analysis.
375 pp., Oct. 1974.
(Pending)

670/5-74-005

Talley, R.J. and R.H. Ongerth.
Project Officer: Talley, R.J.

Aluminum as a component of solid waste and a recover-
able resource. 31 pp., Sept. 1974.
(Order thru NTIS, PB-235 770/AS, \$3.25)

670/5-74-006

Stevens, B.H., G. Steiker, R.E. Coughlin, et al.
Project Officer: Talley, R.J.
Criteria for regional solid waste management planning.
332 pp., Nov. 1974.
(Pending)

670/5-74-007

Pathak, A.A.
Project Officer: Talley, R.J.
Optimal configuration of a regional solid waste management system. 135 pp., Nov. 1974.
(Order thru NTIS, PB-233 360/AS, \$5.75)

670/5-74-008

Vasan, K.S.
Project Officer: Talley, R.J.
Optimization models for regional public systems.
128 pp., Nov. 1974.
(Order thru NTIS, PB-231 309/AS, \$4.75)

670/5-74-009

Yaffe, H.J.
Project Officer: Talley, R.J.
A model for optimal design and operation of solid waste transfer stations. 111 pp., Nov. 1974.
(Order thru NTIS, PB-227 075/AS, \$4.50)

670/9-74-001

NERC, Cincinnati, Ohio
Project Officer: None.
Environmental research in 1973, annual report.
100 pp., Feb. 1974. (Order thru NTIS,
PB-229 510/AS, \$4.50)

670/9-74-002

NERC, Cincinnati, Ohio.
Project Officer: Technical Information Staff.
News of environmental research in Cincinnati,
May-Dec. 1973. 63 pp., Apr 1974. (Order thru
NTIS, PB-230 935/AS, \$6.25)

670/9-74-003

Office of International Affairs, OR&D
Project Officer: Gigliotti, G.M.
Second U.S.-Japan conference on sewage treatment technology, December 1-6, 1972. Held in Cincinnati, Ohio and Washington, D.C. 494 pp., July 1973.
(Order thru NTIS, PB-230 709, \$28.25)

670/9-74-004

TIS, NERC-Cincinnati, Ohio.

Project Officer: Gigliotti, G.M.

Excerpts from control of infiltration and inflow into sewer systems and prevention and correction of excessive infiltration and inflow into sewer systems. Revised. 14 pp., Sept. 1974.
(Pending)

670/9-74-005

Berg, G.,

Project Officer: Berg, G.

Viruses in waste, renovated, and other waters - 1973 literature abstracts. 28 pp., Oct. 1974.
(Pending)

670/9-74-006

U.S. EPA, Cincinnati, OH and Battelle-Columbus.

Project Officer: Gigliotti, G.M.

Pollution control technology assessment - proceedings of an environmental resources conference, May 1-3, 1974. 190 pp., Oct. 1974.

MISCELLANEOUS PUBLICATIONS

1973
NEWSLETTERS

Anderson, J.B., Editor.

Analytical quality control newsletter. National Environmental Research Center, Cincinnati, Analytical Quality Control Laboratory (Issued Quarterly).

Bishop, D.F. and J.M. Smith.

The EPA-DC pilot plant for water pollution control. News of Environmental Research in Cincinnati, Sept. 28, 1973.

Bostian, H.E.

Conserving water at home. News of Environmental Research in Cincinnati, Nov. 9, 1973.

Brugger, J.E.

CAM-1: using enzymes to detect insecticides. News of Environmental Research in Cincinnati, July 1, 1973.

Burkart, J.K., W. Moore, R.G. Hinners, et al.

Catalytic converters used in health effects studies. News of Environmental Research in Cincinnati, Dec. 28, 1973.

Carnes, R.A.

Using reclaimed rubber tires in road dressings. News of Environmental Research in Cincinnati, Oct. 31, 1973.

Carswell, J.K., R.W. Buelow, and J.M. Symons.

Removing organic matter from drinking water - monitoring treatment processes. News of Environmental Research in Cincinnati, Dec. 7, 1973.

Clark, R.M. and H.C. Goddard.

Relating socio-economic variables to technology for environmental management. News of Environmental Research in Cincinnati, Aug. 31, 1973.

Dotson, G.K.

Constraints to spreading sewage sludge on cropland. News of Environmental Research in Cincinnati, May 31, 1973.

Kawahara, F.K. and E.C. Julian.
Oil identification: state-of-the-art. News of Environmental Research in Cincinnati, Sept. 14, 1973.

Krieger, H.L. and B. Kahn.
Monitoring radionuclides in reactor effluents. News of Environmental Research in Cincinnati, Oct. 12, 1973.

Masters, H.
Using porous pavement to control runoff. News of Environmental Research in Cincinnati, Aug. 10, 1973.

Ongerth, R.H. and H. Johnson.
Consumerism and solid waste. News of Environmental Research in Cincinnati, May 1, 1973.

Thurnau, R.C. and N.S. Ulmer.
Plastics and incineration. News of Environmental Research in Cincinnati, July 16, 1973.

1974 NEWSLETTERS

Anderson, J.B., Editor.
Analytical quality control newsletter. National Environmental Research Center, Cincinnati, Analytical Quality Control Laboratory (Issued Quarterly).

Bendixen, T.W. and G.L. Huffman.
Impact of environmental control technologies on the energy crisis. News of Environmental Research in Cincinnati, Jan. 11, 1974.

Blannon, J.C. and M.L. Peterson.
Survival of fecal coliforms and fecal streptococci in a sanitary landfill. News of Environmental Research in Cincinnati, Apr. 12, 1974.

Cabelli, V.J. and L.J. McCabe.
Recreational water quality criteria. News of Environmental Research in Cincinnati, Nov. 11, 1974.

Cole, R.E. and A.H. Tate, Compilers.
Publications-1973. News of Environmental Research in Cincinnati, Feb. 1, 1974.

- Dahling, D.R., G. Berg, D. Berman, et al.
BGM: A new cell line for recovering viruses from water.
News of Environmental Research in Cincinnati,
Sept. 27, 1974.
- Dean, R.B.
Toxicity of wastewater disinfectants. News of Environmental Research in Cincinnati, July 5, 1974.
- Eichelberger, J.W., L.E. Harris, and W.L. Budde.
Identifying organic pollutants in water. News of Environmental Research in Cincinnati, Mar. 22, 1974.
- Field, R.
A swirl device for regulating and concentrating combined sewer overflows. News of Environmental Research in Cincinnati, Oct. 25, 1974.
- Kreissl, J.F.
Granular media filtration of secondary effluent. News of Environmental Research in Cincinnati, Dec. 13, 1974.
- Lee, S.D., R.M. Danner, L. McMillan, et al.
Radiorespirometry: Rapid toxicological screening of environmental pollutants. News of Environmental Research in Cincinnati, Oct. 11, 1974.
- Martin, J.F.
Coal refuse disposal in the eastern United States. News of Environmental Research in Cincinnati, Dec. 27, 1974.
- O'Farrell, T.P.
Advanced wastewater treatment plant at Piscataway, Maryland. News of Environmental Research in Cincinnati, Feb. 22, 1974.
- Olexsey, R.A. and J.B. Farrell.
Sludge incineration and fuel conservation. News of Environmental Research in Cincinnati, May 3, 1974.
- Rogers, C.J.
Producing protein while reducing waste. News of Environmental Research in Cincinnati, June 7, 1974.

1973
TECHNOLOGY TRANSFER

Brenner, R.C.
EPA experiences in oxygen-activated sludge. Technology Transfer Design Seminar Publication, Oct. 1973.

Brenner, R.C.
Upgrading trickling filters. Technology Transfer Design Seminar Publication, Nov. 1973.

Cohen, J.M.
Physical-chemical processes. Technology Transfer Design Seminar Publication, Aug. 1973.

Cohen, J.M., J.J. Westrick, and I.J. Kugelman.
Process design manual for carbon adsorption. Technology Transfer Design Seminar Publication, Oct. 1973.

Kreissl, J.F.
Suspended solids removal. Technology Transfer Design Seminar Publication, Oct. 1973.

Lewis, R.F. and J.M. Smith.
Upgrading existing lagoons. Technology Transfer Design Seminar Publication, Oct. 1973.

Berg, G., Compiler.
Viruses in waste, renovated, and other waters - 1971 literature abstracts. 26 pp.

SW-72-4-4

SCS Engineers.
Project Officer: Freeman, H.
Analysis of federal programs affecting solid waste generation and recycling. 153 pp., 1972. (Order thru NTIS, PB-213 311, \$3.00)

SW-72-3-3

Miller, P.D. and Staff of Battelle's Columbus Lab.
Project Officer: Thurnau, R.
Corrosion studies in municipal incinerators. 120 pp., 1972.
(Order thru NTIS, PB-213 378, \$3.00)

SW-72-1-1

Geyer, J.A.

Project Officer: None

Landfill decomposition gases--An annotated bibliography. 28 pp., June 1972.

(Order thru NTIS, PB-213 487, \$3.75)

6700-73-01

EPA, NERC-Cincinnati, Ohio.

Project Officer: Solid Waste Research Lab.

Physical, chemical and microbiological methods of solid waste testing. May 1973.

(Order thru NTIS, PB-220 479, \$6.75)

6700-73-03

Berg, G., Compiler.

Viruses in waste, renovated, and other waters - 1972 literature abstracts. 26 pp., 1973.

NERC-Cincinnati.

National environmental information symposium, summary report, Volume 1, Sept. 24-27, 1972.

U.S. Environmental Protection Agency,
National Environmental Research Center -
Cincinnati, 47 pp., 1973. (Order thru
NTIS, PB-220 050)

NERC-Cincinnati.

Interact symposium proceedings, University of Cincinnati - National Environmental Research Center, Dec. 11-12, 1972. U.S. Environmental Protection Agency, National Environmental Research Center - Cincinnati, 89 pp., July 1973.