Docket 50-3

GL-77-7

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

December 15, 1977

All Power Reactor Licensees

The demonstrated reliability of standby diesel generator (DG) units in operating nuclear power plants has been less than anticipated. The NRC has concluded that a systematic review and analysis of operating problems associated with diesel generator units is necessary to establish what practical measures may be taken to enhance the reliability of these units. The NRC, with the assistance of the University of Dayton, has initiated such a study. It is our intent that this study will provide practical results that will prove useful to each nuclear utility, therefore, each operating reactor licensee is requested to respond to the enclosed questionnaire.

An analysis will be performed on the information received and the results of this analysis, along with recommendations that may lead to improved reliability, will be transmitted to licensees and applicants for their use. We believe that this information will assist in identifying as well as avoiding or minimizing operating experiences encountered by others. We view this effort as one of mutual interest.

We ask that a single completed copy of the enclosed questionnaire be returned to the Director of Nuclear Reactor Regulation, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, by January 20, 1978. Please include on a separate sheet the name, address and phone number of the person(s) at the reactor site responsible for completing the questionnaire and responsible for responding to any follow-up communications concerning the questionnaire or for arranging a reactor site visit.

The responses to the majority of the questions can be answered with just a few words or by checking the appropriate space. In responding to those questions which do not apply to a particular installation and/or situation, please indicate "N/A" for "not applicable". If the question does apply to a particular installation or situation but the answer is not known, please indicate "UN" for "unknown". For those entries on the questionnaire where the requested information is not known by January 20, 1978, please provide it in follow-up correspondence when it becomes available.

1 MAY

Further, the detailed information obtained in this study will be subject to disclosure pursuant to the Freedom on Information Act Regulations as implemented by 10 CFR Part 9 - Public Records.

In the event that any information requested as a part of this study, is considered by you (or your contractor) to be proprietary, it is necessary that you make a written application to withhold such information from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement of reasons which address with specificity the items which will be considered by the Commission as listed in subparagraph (b)(4) of Section 2.790 of NRC's "Rules and Practice", Part 2, Title 10, Code of Federal Regulations. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit.

In the event any portion of the questionnaire needs clarification, please contact F. Clemenson at (301) 492-8077.

This request for generic information was approved by GAO under a blanket clearance number B-180225 (R0072); this clearance expires July 31, 1980.

Sincerely,

Karl R. Goller

Karl R. Goller, Assistant Director
for Operating Reactors
Division of Operating Reactors

Enclosure:
Questionnaire

cc w/enclosure:
See next page

Docket No. 50-313

Arkansas Power & Light Company
ATTN: Mr. William Cavanaugh, III
Executive Director
Generation and Construction
Department
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Little Rock, Arkansas 72203

cc: Phillip K. Lyon, Esquire
House, Holms & Jewell
1550 Tower Building
Little Rock, Arkansas 72201

Mr. Daniel H. Williams
Manager, Licensing
Arkansas Power & Light Company
Post Office Box 551
Little Rock, Arkansas 72203

Mr. John W. Anderson, Jr.
Plant Superintendent
Arkansas Nuclear One
Post Office Box 608
Russellville, Arkansas 72801

Arkansas Polytechnic College
Russellville, Arkansas 72801

Docket Nos. 50-317
and 50-318

Baltimore Gas and Electric Company
ATTN: Mr. A. E. Lundvall, Jr.
Vice President - Supply
P. O. Box 1475
Baltimore, Maryland 21203

cc: James A. Biddison, Jr.
General Counsel
G and E Building
Charles Center
Baltimore, Maryland 21203

Mr. R. C. L. Olson
Baltimore Gas and Electric Company
Room 922 - G and E Building
Post Office Box 1475
Baltimore, Maryland 21203

Mr. R. M. Douglass, Chief Engineer
Calvert Cliffs Nuclear Power Plant
Baltimore Gas and Electric Company
Lusby, Maryland 20657

Bechtel Power Corporation
ATTN: Mr. R. L. Ashley
Chief Nuclear Engineer
P. O. Box 607
Gaithersburg, Maryland 20760

Combustion Engineering, Inc.
ATTN: Mr. J. A. Honey
Project Manager
P. O. Box 500
Windsor, Connecticut 06095

Calvert County Library
Prince Frederick, Maryland 20678

Docket No. 50-293

Boston Edison Company
M/C NUCLEAR
ATTN: Mr. G. Carl Andognini
800 Boylston Street
Boston, Massachusetts 02199

cc: Mr. Paul J. McGuire
Pilgrim Station Acting Manager
Boston Edison Company
RFD #1, Rocky Hill Road
Plymouth, Massachusetts 02360

Anthony Z. Roisman, Esquire
Sheldon, Harmon & Roisman
1025 15th Street, N. W., 5th Floor
Washington, D. C. 20005

Henry Herrmann, Esquire
Massachusetts Wildlife Federation
151 Tremont Street
Boston, Massachusetts 02111

Plymouth Public Library
North Street
Plymouth, Massachusetts 02360

Docket No. 50-261

Carolina Power & Light Company
ATTN: Mr. J. A. Jones
Senior Vice President
336 Fayetteville Street
Raleigh, North Carolina 27602

cc: Hartsville Memorial Library
Home and Fifth Avenue
Hartsville, South Carolina 29550

Docket Nos. 50-325
and 50-324

Carolina Power & Light Company
ATTN: Mr. J. A. Jones
Executive Vice President
336 Fayetteville Street
Raleigh, North Carolina 27602

cc: Richard E. Jones, Esquire
Carolina Power & Light Company
336 Fayetteville Street
Raleigh, North Carolina 27602

George F. Trowbridge, Esquire
Shaw, Pittman, Potts & Trowbridge
1800 M Street, N. W.
Washington, D. C. 20036

John J. Burney, Jr., Esquire
Burney, Burney, Sperry & Barefoot
110 North Fifth Avenue
Wilmington, North Carolina 28401

Southport-Brunswick County Library
109 West Moore Street
Southport, North Carolina 28461

Docket No. 50-10

Commonwealth Edison Company
ATTN: Mr. R. L. Bolger
Assistant Vice President
P. O. Box 767
Chicago, Illinois 60690

cc: Mr. John W. Rowe
Isham, Lincoln & Beale
Counselors at Law
One First National Plaza, 42nd Floor
Chicago, Illinois 60603

Mr. B. B. Stephenson
Plant Superintendent
Dresden Nuclear Power Station
Rural Route #1
Morris, Illinois 60450

Docket Nos. 50-237
and 50-249

Commonwealth Edison Company
ATTN: Mr. R. L. Bolger
Assistant Vice President
P. O. Box 767
Chicago, Illinois 60690

cc: Morris Public Library
604 Liberty Street
Morris, Illinois 60451

Docket Nos. 50-254
and 50-265

Commonwealth Edison Company
ATTN: Mr. R. L. Bolger
Assistant Vice President
P. O. Box 767
Chicago, Illinois 60690

cc: Mr. D. R. Stichnoth
President
Iowa-Illinois Gas and
Electric Company
206 East Second Avenue
Davenport, Iowa 52801

Mr. Nick Kalivianakas
Plant Superintendent
Quad-Cities Nuclear Power Station
22710 - 206th Avenue - North
Cordova, Illinois 61242

Moline Public Library
504 - 17th Street
Moline, Illinois 61265

Docket Nos. 50-295
and 50-304

Commonwealth Edison Company
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Assistant Vice President
Post Office Box 767
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cc: Mr. John W. Rowe
Isham, Lincoln & Beale
Counselors at Law
One First National Plaza, 42nd Floor
Chicago, Illinois 60603

Robert J. Vollen, Esquire
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Chicago, Illinois 60602

Dr. Cecil Lue-Hing
Director of Research & Development
Metropolitan Sanitary District
of Greater Chicago
100 East Erie Street
Chicago, Illinois 60611

Waukegan Public Library
128 North County Street
Waukegan, Illinois 60085

Docket No. 50-213

Connecticut Yankee Atomic Power Company
ATTN: Mr. Donald C. Switzer
President
Post Office Box 270
Hartford, Connecticut 06101

cc: Day, Berry, & Howard
Counselors at Law
One Constitution Plaza
Hartford, Connecticut 06103

Russell Library
119 Broad Street
Middletown, Connecticut 16457

Docket Nos. 50-3
and 50-241

Consolidated Edison Company
of New York, Inc.
ATTN: Mr. William J. Cahill, Jr.
Vice President
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New York, New York 10003

cc: Leonard M. Trosten, Esquire
LeBoeuf, Lamb, Leiby & MacRae
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Assistant Attorney General
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Natural Resources Defense
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Director, Technical Development
Programs
State of New York Energy Office
Agency Building 2
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Albany, New York 12223

White Plains Public Library
100 Martine Avenue
White Plains, New York 10601

Docket No. 50-286

Consolidated Edison Company
of New York, Inc.
ATTN: Mr. William J. Cahill, Jr.
Vice President
4 Irving Place
New York, New York 10003

cc: Admiral Paul Early (IP-3)
Power Authority of the State
of New York
10 Columbus Circle
New York, New York 10019

White Plains Public Library
100 Martine Avenue
White Plains, New York 10601

Consumers Power Company
ATTN: Mr. David A. Bixel
Nuclear Licensing Adminstrator
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Jackson, Michigan 49201

cc: Charles F. Bayless
Of Counsel
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

George C. Freeman, Jr., Esquire
Hunton, Williams, Gay and Gibson
700 East Main Street
Richmond, Virginia 23212

Peter W. Steketee, Esquire
505 Peoples Building
Grand Rapids, Michigan 49503

Charlevoix Public Library
107 Clinton Street
Charlevoix, Michigan 49720

Docket No. 50-255

Consumers Power Company
ATTN: Mr. Dave Bixel
Nuclear Licensing Adminstrator
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cc: M. I. Miller, Esquire
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Chicago, Illinois 60670

J. L. Bacon, Esquire
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Paul A. Perry, Secretary
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Kalamazoo Public Library
315 South Rose Street
Kalamazoo, Michigan 49006

Myron M. Cherry, Esquire
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One IBM Plaza
Chicago, Illinois 60611

Docket No. 50-409

Dairyland Power Cooperative
ATTN: Mr. John P. Madgett
General Manager
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La Crosse, Wisconsin 54601

cc: Fritz Schubert, Esquire
Staff Attorney
Dairyland Power Cooperative
2615 East Avenue, South
La Crosse, Wisconsin 54601

O. S. Heistand, Jr., Esquire
Morgan, Lewis & Bockius
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Washington, D. C. 20036

Mr. R. E. Shimshak
LaCrosse Boiling Water Reactor
Dairyland Power Cooperative
P. O. Box 135
Genoa, Wisconsin 54632

La Crosse Public Library
800 Main Street
La Crosse, Wisconsin 54601

Docket Nos. 50-269
50-270
and 50-287

Duke Power Company
ATTN: Mr. William O. Parker, Jr.
Vice President
Steam Production
Post Office Box 2178
422 South Church Street
Charlotte, North Carolina 28242

cc: Mr. William L. Porter
Duke Power Company
Post Office Box 2178
422 South Church Street
Charlotte, North Carolina 28242

J. Michael McGarry, III, Esquire
DeBevoise & Liberman
700 Shoreham Building
806 - 15th Street, N. W.
Washington, D. C. 20005

Oconee County Library
201 South Spring Street
Walhalla, South Carolina 29691

Docket No. 50-334

Duquesne Light Company
ATTN: Mr. C. N. Dunn, Vice President
Operations Division
435 Sixth Avenue
Pittsburge, Pennsylvania 15219

cc: Karin Carter, Esq.
Special Assistant Attorney General
Bureau of Administrative Enforcement
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Harrisburg, Pennsylvania 17120

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Utility Counsel
City of Pittsburgh
313 City-County Building
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Mr. J. M. Cumiskey
Stone & Webster Engineering
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Mr. J. D. Woodward
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Westinghouse Electric Corporation
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Mr. Jack Carey
Technical Assistant
Duquesne Light Company
P. O. Box 4
Shippingport, Pennsylvania 1507,

Mr. R. E. Martin
Duquesne Light Company
435 6th Avenue
Pittsburgh, Pennsylvania 15219

Beaver Area Memorial Library
100 College Avenue
Beaver, Pennsylvania 15009

Docket Nos. 50-250
and 50-251

Florida Power & Light Company
ATTN: Dr. Robert E. Uhrig
Vice President
P. O. Box 013100
Miami, Florida 33101

cc: Mr. Jack R. Newman, Esquire
Lowenstein, Newman, Reis & Axelrad
1025 Connecticut Avenue, N. W.
Suite 1214
Washington, D. C. 20036

Environmental & Urban Affairs Library
Florida International University
Miami, Florida 33199

Docket No. 50-335

Florida Power & Light Company
ATTN: Dr. Robert E. Uhrig
Vice President
Nuclear and General Engineering
Post Office Box 013100
Miami, Florida 33101

cc: Robert Lowenstein, Esquire
Lowenstein, Newman, Reis & Axelrad
1025 Connecticut Avenue, N. W.
Washington, D. C. 20036

Norman A. Coll, Esquire
McCarthy, Steel, Hector & Davis
14th Floor, First National Bank Building
Miami, Florida 33131

Indian River Junior College Library
3209 Virginia Avenue
Ft. Pierce, Florida 33450

Docket No. 50-302

Mr. W. P. Stewart
Director, Power Production
Florida Power Corporation
P. O. Box 14042, Mail Stop C-4
St. Petesburg, Florida 33733

cc: Mr. S. A. Brandimore
Vice President and General Counsel
P. O. Box 14042
St. Petersburg, Florida 33733

Crystal River Public Library
Crystal River, Florida 32629

Docket No. 50-321

Georgia Power Company
Oglethorpe Electric Membership Corporation
Municipal Electric Association of Georgia
City of Dalton, Georgia
ATTN: Mr. Charles F. Whetmer
Vice President - Engineering
Georgia Power Company
Atlanta, Georgia 30302

cc: Ruble A. Thomas
Vice President
P. O. Box 2625
Southern Services, Inc.
Birmingham, Alabama 35202

Mr. Harry Majors
Southern Services, Inc.
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Birmingham, Alabama 35202

Mr. L. T. Gucwa
Georgia Power Company
Engineering Department
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Mr. C. P. Moore
Georgia Power Company
Production Department
P. O. Box 4545
Atlanta, Georgia 30302

Appling County Public Library
Parker Street
Baxley, Georgia 31513

Docket No. 50-315

Indiana & Michigan Electric Company
Indiana & Michigan Power Company
ATTN: Mr. John Tillinghast
Vice President
P. O. Box 18
Bowling Green Station
New York, New York 10004

cc: Mr. Robert Hunter
Vice President
American Electric Power Service
Corporation
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New York, New York 10004

Gerald Charnoff, Esquire
Shaw, Pittman, Potts & Trowbridge
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Donald Cook Nuclear Plant
ATTN: Mr. D. Shaller
Plant Manager
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Bridgman, Michigan 49106

Mr. David Dinsmore Comey
Executive Director
Citizens for a Better Environment
59 East Van Buren Street
Chicago, Illinois 60605

Maude Reston Palenske Memorial Library
500 Market Street
St. Joseph, Michigan 49085

Docket No. 50-331

Iowa Electric Light & Power Company
ATTN: Mr. Duane Arnold
President
P. O. Box 351
Cedar Rapids, Iowa 52406

cc: Cedar Rapids Public Library
426 Third Avenue, S. E.
Cedar Rapids, Iowa 52401

Docket No. 50-219

Jersey Central Power & Light Company
ATTN: Mr. I. R. Finfrock, Jr.
Vice President - Generation
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960

cc: Steven P. Russo, Esquire
248 Washington Street
P. O. Box 1060
Toms River, New Jersey 08753

Jersey Central Power & Light Company
ATTN: Mr. T. Gary Broughton
Safety and Licensing Manager
GPU Service Corporation
260 Cherry Hill Road
Parsippany, New Jersey 07054

Honorable Joseph W. Ferraro, Jr.
Deputy Attorney General
State of New Jersey
Department of Law & Public Safety
Consumer Affairs Section
1100 Raymond Boulevard
Newark, New Jersey 07102

Ocean County Library
Brick Township Branch
401 Chambers Bridge Road
Brick Town, New Jersey 08723

Docket No. 50-289

Metropolitan Edison Company
ATTN: Mr. J. G. Herbein
Vice President
P. O. Box 542
Reading, Pennsylvania 19603

cc: GPU Service Corporation
Richard W. Heward, Project Manager
Mr. T. Gary Broughton, Safety and
Licensing Manager
260 Cherry Hill Road
Parsippany, New Jersey 07054

Pennsylvania Electric Company
Mr. R. W. Conrad
Vice President, Generation
1001 Broad Street
Johnstown, Pennsylvania 15907

Miss Mary V. Southard, Chairman
Citizens for a Safe Environment
P. O. Box 405
Harrisburg, Pennsylvania 17108

Government Publications Section
State Library of Pennsylvania
Box 1601 (Education Building)
Harrisburg, Pennsylvania 17126

Docket No. 50-298

Nebraska Public Power District
ATTN: Mr. J. M. Pilant, Director
Licensing and Quality Assurance
P. O. Box 499
Columbus, Nebraska 68601

cc: Mr. G. D. Watson, General Counsel
Nebraska Public Power District
P. O. Box 499
Columbus, Nebraska 68601

Mr. Arthur C. Gehr, Attorney
Snell & Wilmer
400 Security Building
Phoenix, Arizona 85004

Cooper Nuclear Station
ATTN: Mr. L. Lessor
Station Superintendent
P. O. Box 98
Brownville, Nebraska 68321

Auburn Public Library
118 - 15th Street
Auburn, Nebraska 68305

Docket No. 50-220

Niagara Mohawk Power Corporation
ATTN: Mr. D. P. Dise
Vice President - Engineering
300 Erie Boulevard West
Syracuse, New York 13202

cc: Eugene B. Thomas, Jr., Esquire
LeBoeuf, Lamb, Leiby & MacRae
1757 N Street, N. W.
Washington, D. C. 20036

Oswego County Office Building
46 E. Bridge Street
Oswego, New York 13126

Docket Nos. 50-245
and 50-336

Northeast Nuclear Energy Company
ATTN: Mr. D. C. Switzer
President
P. O. Box 270
Hartford, Connecticut 06101

cc: William H. Cuddy, Esquire
Day, Berry & Howard
Counselors at Law
One Constitution Plaza
Hartford, Connecticut 06103

Northeast Nuclear Energy Company
ATTN: Superintendent
Millstone Plant
P. O. Box 128
Waterford, Connecticut 06385

Waterford Public Library
Rope Ferry Road, Route 156
Waterford, Connecticut 06385

Docket Nos. 50-282
and 50-306

Northern States Power Company
ATTN: Mr. L. O. Mayer, Manager
Nuclear Support Services
414 Nicollet Mall - 8th Floor
Minneapolis, Minnesota 55401

cc: Mr. F. P. Tierney
Plant Manager
Prairie Island Nuclear Generating Plant
Northern States Power Company
Route 2
Welch, Minnesota 55089

Jocelyn F. Olson, Esquire
Special Assistant Attorney General
Minnesota Pollution Control Agency
1935 West County Road B-2
Roseville, Minnesota 55113

Mr. Robert L. Nybo, Jr., Chairman
Minnesota-Wisconsin Boundary Area Commission
619 Second Street
Hudson, Wisconsin 54016

The Environmental Conservation Library
Minneapolis Public Library
300 Nicollet Mall
Minneapolis, Minnesota 55401

Docket No. 50-263

Northern States Power Company
ATTN: Mr. L. O. Mayer, Manager
Nuclear Support Services
414 Nicollet Mall - 8th Floor
Minneapolis, Minnesota 55401

cc: Arthur Renquist, Esquire
Vice President - Law
Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401

Mr. L. R. Eliason
Plant Manager
Monticello Nuclear Generating Plant
Northern States Power Company
Monticello, Minnesota 55362

Russell J. Hatling, Chairman
Minnesota Environmental Control
Citizens Association (MECCA)
Energy Task Force
144 Melbourne Avenue, S. E.
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Mr. Kenneth Dzugan
Environmental Planning Consultant
Office of City Planner
Grace Building
421 Wabasha Street
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Sandra S. Gardebring
Executive Director
Minnesota Pollution Control Agency
1935 W. County Road B2
Roseville, Minnesota 55113

Mr. Steve Gadler
2120 Carter Avenue
St. Paul, Minnesota 55108

The Environmental Conservation Library
Minneapolis Public Library
300 Nicollet Mall
Minneapolis, Minnesota 55401

Docket No. 50-285

Omaha Public Power District
ATTN: Mr. Theodore E. Short
Division Manager - Production Operations
1623 Harney Street
Omaha, Nebraska 68102

cc: Margaret R. A. Pardis
LeBoeuf, Lamb, Leiby & MacRae
1757 N Street, N. W.
Washington, D. C. 20036

Blair Public Library
1665 Lincoln Street
Blair, Nebraska 68008

Docket No. 50-133

Pacific Gas and Electric Company
ATTN: Mr. John C. Morrissey
Vice President and
General Counsel
77 Beale Street
San Francisco, California 94106

cc: Philip A. Crane, Jr.
Pacific Gas and Electric Company
77 Beale Street
San Francisco, California 94106

Mr. James Hanchett
Public Information Officer
Region V - IE
U. S. Nuclear Regulatory Commission
1990 N. California Boulevard
Walnut Creek, California 94596

Humboldt County Library
636 F Street
Eureka, California 95501

Docket Nos. 50-277
and 50-278

Philadelphia Electric Company
ATTN: Mr. Edward S. Bauer, Jr., Esquire
Vice President and General Counsel
2301 Market Street
Philadelphia, Pennsylvania 19101

cc: Eugene Bradley
Philadelphia Electric Company
Assistant General Counsel
2301 Market Street
Philadelphia, Pennsylvania 19101

Troy B. Conner, Jr.
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Raymond L. Hovis, Esquire
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Warren K. Rich, Esquire
Assistant Attorney General
Department of Natural Resources
Annapolis, Maryland 21401

Philadelphia Electric Company
ATTN: Mr. W. T. Ullrich
Peach Bottom Atomic
Power Station
Delta, Pennsylvania 17314

Martin Memorial Library
159 E. Market Street
York, Pennsylvania 17401

Mr. M. J. Cooney, Superintendent
Generation Division - Nuclear
Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101

Docket No. 50-344

Portland General Electric Company
ATTN: Mr. Charles Goodwin, Jr.
Assistant Vice President
621 SW Alder Street
Portland, Oregon 97205

cc: Mr. H. H. Phillips
Portland General Electric Company
621 Southwest Alder Street
Electric Building
Portland, Oregon 97205

Warren Hastings, Esquire
Phillips, Coughlin, Buell
Stoloff and Black
807 Electric Building
Portland, Oregon 97205

Mr. J. L. Frewing, Manager
Generation Licensing and Analysis
Portland General Electric Company
621 Southwest Alder Street
Portland, Oregon 97205

Columbia County Courthouse
Law Library, Circuit Court Room
St. Helens, Oregon 97051

Docket No. 50-333

Power Authority of the State
of New York
ATTN: Mr. George T. Berry
General Manager and
Chief Engineer
10 Columbus Circle
New York, New York 10019

cc: Lewis R. Bennett, General Counsel
Power Authority of the State of New York
10 Columbus Circle
New York, New York 10019

Rear Admiral Paul J. Early
Assistant Chief Engineer - Projects
Power Authority of the State of New York
10 Columbus Circle
New York, New York 10019

Manager-Nuclear Operations
Power Authority of the State of New York
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New York, New York 10019

J. D. Leonard, Jr., Resident Manager
James A. FitzPatrick Nuclear Power Plant
P. O. Box 41
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Director, Technical Development
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State of New York Energy Office
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Power Authority of the State of New York
10 Columbus Circle
New York, New York 10019

Oswego County Office Building
46 E. Bridge Street
Oswego, New York 13126

Docket No. 50-272

Public Service Electric & Gas Company
ATTN: Mr. R. P. Librizzi
General Manager - Electric Production
Production Department
80 Park Place, Room 7221
Newark, New Jersey 07101

cc: Richard Fryling, Jr., Esquire
Assistant General Counsel
Public Service Electric & Gas Company
80 Park Place
Newark, New Jersey 07101

Troy B. Conner, Jr., Esquire
1747 Pennsylvania Avenue, N. W.
Washington, D. C. 20006

Gene Fisher
Bureau Chief
Bureau of Radiation Protection
380 Scotts Road
Trenton, New Jersey 08628

State House Annex
ATTN: Deputy Attorney General
State of New Jersey
36 West State Street
Trenton, New Jersey 08625

Attorney General
Department of Law & Public Safety
State House Annex
Trenton, New Jersey 08625

Public Service Electric & Gas Company
ATTN: Herbert J. Heller
Manager, Salem Nuclear Generating
Station
Hancocks Bridge, New Jersey 08038

Salem Free Library
112 West Broadway
Salem, New Jersey 08079

Public Service Electric & Gas Company
ATTN: R. L. Mittl
General Manager - Licensing
and Environment
80 Park Place
Newark, New Jersey 07101

Docket No. 50-244

Rochester Gas & Electric Corporation
ATTN: Mr. Leon D. White, Jr.
Vice President
Electric and Steam Production
89 East Avenue
Rochester, New York 14604

cc: Lex K. Larson, Esquire
LeBoeuf, Lamb, Leiby & MacRae
1757 N Street, N. W.
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Mr. Michael Slade
1250 Crown Point Drive
Webster, New York 14580

Rochester Committee for
Scientific Information
Robert E. Lee, Ph.D
Post Office Box 5236
River Campus Station
Rochester, New York 14627

Jeffrey Cohen
New York State Energy Office
Swan Street Building
Core 1, Second Floor
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Albany, New York 12223

Rochester Public Library
115 South Avenue
Rochester, New York 14627

Docket No. 50-312

Sacramento Municipal Utility District
ATTN: Mr. J. J. Mattimoe
Assistant General Manager
and Chief Engineer
6201 S Street
P. O. Box 15830
Sacramento, California 95813

cc: David S. Kaplan, Secretary and
General Counsel
6201 S Street
P. O. Box 15830
Sacramento, California 95813

Business and Municipal Department
Sacramento City-County Library
828 I Street
Sacramento, California 95814

Docket No. 50-206

Southern California Edison Company
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Vice President
2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770

cc: Rollin E. Woodbury, Vice President
and General Counsel
Southern California Edison Company
Post Office Box 800
Rosemead, California 91770

Chickering & Gregory, General Counsel
ATTN: C. Hayden Ames, Esquire
San Diego Gas & Electric Company
111 Sutter Street
San Francisco, California 94104

Mission Viejo Branch Library
24851 Chrisanta Drive
Mission Viejo, California 92676

Docket Nos. 50-259
50-260
and 50-296

Tennessee Valley Authority
ATTN: Mr. Godwin Williams, Jr.
Manager of Power
818 Power Building
Chattanooga, Tennessee 37201

cc: H. S. Sanger, Jr., Esquire
General Counsel
Tennessee Valley Authority
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E 11B 33 C
Knoxville, Tenessee 37902

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Tennessee Valley Authority
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Chattanooga, Tennessee 37401

Mr. William E. Garner
Route 4, Box 354
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Athens Public Library
South and Forrest
Athens, Alabama 35611

Mr. C. S. Walker
Tennessee Valley Authority
400 Commerce Avenue
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Knoxville, Tennessee 37902

Docket Nos. 50-280
and 50-281

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cc: Michael W. Maupin, Esq.
Hunton, Williams, Gay & Gibson
P. O. Box 1535
Richmond, Virginia 23213

Swem Library
College of William & Mary
Williamsburg, Virginia 23185

Docket Nos. 50-266
and 50-301

Wisconsin Electric Power Company
Wisconsin Michigan Power Company
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Executive Vice President
231 West Michigan Street
Milwaukee, Wisconsin 53201

cc: Mr. Arthur M. Fish
Document Department
University of Wisconsin -
Stevens Point Library
Stevens Point, Wisconsin 54481

Docket No. 50-305

Wisconsin Public Service Corporation
ATTN: Mr. E. W. James
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314 Milwaukee Street
Kewaunee, Wisconsin 54216

Docket No. 50-29

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Greenfield Public Library
40 Main Street
Greenfield, Massachusetts 01581

Docket No. 50-271

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Power Corporation
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Mr. Donald E. Vandenburgh
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John A. Calhoun
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Montpelier, Vermont 05602

Brooks Memorial Library
224 Main Street
Brattleboro, Vermont 05301

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Radiation Control Agency
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Concord, New Hampshire 03301

John W. Stevens
Conservation Society of
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Townshend, Vermont 05353

Mr. David M. Scott
Radiation Health Engineer
Agency of Human Services
Division of Occupational Health
P. . Box 607
Barre, Vermont 05641

New England Coalition on
Nuclear Pollution
Hill and Dale Farm
West Hill - Faraway Road
Putney, Vermont 05346

Public Service Board
State of Vermont
120 State Street
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Docket No. 50-309

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Wiscasset Public Library Association
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Wiscasset, Maine 04578

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Augusta, Maine 04330

Mrs. Cali Hollander, President
SAFE POWER FOR MAINE
Stockton Springs, Maine 04981

Questionnaire

for

NUCLEAR REGULATORY COMMISSION
RELIABILITY STUDY

of

Standby Diesel Generator Units

Date Questionnaire Completed: _____

Plant Name: _____ Unit No. _____

Diesel Manufacturer: _____ Model: _____

Number of Units: _____

Size Kw/Unit: _____ Rated Speed: _____

Average Operating Hours Per Unit to Date: _____

DIESEL GENERATOR STATUS

A. Engine:

1. Problems are caused chiefly by (give estimated number)

   a. Defective parts _____
   b. Installation errors: _____
   c. Failure of system to respond properly in function or sequence: _____
   d. Faulty adjustment: _____

2. Would more stringent inspection and testing requirements during acceptance or preoperational tests significantly improve the diesel-generator power plant performance?
   Yes _____ No _____

B. Starting Systems (indicate which):

1. Air-to-cylinder cranking. _____
   Air cranking motor _____ Mfr. _____ Model No. _____
   Electric cranking motor ____ Mfr. _____ Model No. _____

2. If air cranking, then:

Give size of starting air tank: Length _____ Diameter _____

Normal standby air tank pressure _____ psi.

Is pressure reducer used? Yes _____ No _____
Reducer pipe size? _____ inches.

Starting air control admission valve pipe size in air piping system, _____ inches.

Minimum air tank pressure for engine cranking _____ psi.

Number of five-second cranking periods between above pressures with no tank recharging _____.

Number of air tanks per engine _____.

Can starting air tanks serve more than one engine?
Yes _____ No _____

Is air pipe to engine from top of air tank? Yes _____ No ____

Does starting air tank have water condensate drain?
Yes ____ No ___

Does starting air pipe have water condensate trap and drain near engine? Yes ____ No ___

Is starting air piping horizontal? Yes ____ No ____

Does it slant toward drain? Yes ____ No ____

If water condensate drains are provided, then is draining:

a. Automatic through float valve? Yes ___ No ___
b. Manual by hand valve? Yes ___ No ___
c. If manual, then is draining water condensate done:

daily? ____
weekly? ___
monthly? ___
before each start if manual? ___
no procedure? ___

Is dirt and rust filter provided in starting air pipe?
Yes ___ No ___

If provided, where installed? _____

_____

How is it cleaned? _____

How often and when? _____

Give pipe size of filter: _____ inches.

How is it known whether filter is plugged or has high pressure drop? _____

_____

Is starting air pipe to engine positioned:

a. Below floor? ___
b. On the floor? ___
c. Overhead? ___

What is air pressure drop from air tank to engine during cranking _____ psi

Give approximate length (nearest ten feet) of starting air pipe for individual engine or all engines from air tank to:

a. Nearest engine ____ feet
b. Furthest engine ____feet

Diameter of starting air pipe from:

a. Air tank to starting valve ____ inches
b. At air starting valve ____ inches
c. At engine ____ inches

What is the primary source of power for the starting air system? _____

Is there a duplicate and redundant motor and air compressor set? Yes ___ No ___

What is the time required to recharge one air tank? _____ minutes

Does starting air supply system have independent secondary power supply for compressor? Yes ___ No ___

If yes, then by:

a. Gasoline engine? ____
b. Motor driven? ____
c. Other? (Specify) _____

3. If electric (Battery powered) cranking, then:

a. Battery charging: Continuous trickle charger _____
Intermittent charging _____

If so, how is charging requirement determined?

Time cycle _____
Test _____
Other _____

b. Battery used: Common Plant _____
Individual Unit _____
Other _____

Starting cable size ____ ; Length: Battery to engine (longest) _____

C. Fuel Oil System: Bulk Tank to Day Tank

1. Does the bulk tank to day tank fuel supply system (viz: pump, motor, etc.) have redundant independent power supplies? Yes ____ No ____

   Does this system have a hand-operated emergency fuel pump? Yes ____ No ____

   If yes, is this hand-operated pump and piping in immediate operating condition? Yes ____ No ___

2. Is there a water and sediment drain from the very bottom of the:

   a. Bulk tank? Yes ____ No ____
   b. Day tank? Yes ___ No ____

3. Is the regular functional fuel oil outlet slightly above (two to three inches) the bottom of the:

   a. Bulk tank? Yes ___ No ____
   b. Day or integral tank? Yes ___ No ____

4. Is bottom of day tank and/or integral tank above all parts and piping of the engine fuel injection systems? Yes ____ No ____

   If yes,

   Give approximate amount inches ____ feet ____

5. Does the engine fuel system have a fuel bleed return line to the fuel day tank and/or integral tank? Yes ____ No ____

   During extended operation, such as more than two to three hours, does the fuel in the day tank become: (yes or no)

   a. Warm? ____
   b. Hot? ____ (above 130°F)

What is fuel oil return line size (nominal)?

a. Pipe size _____ inches
b. Tubing size ____ inches

6. Do engine fuel oil filters have air bleed or vent valves readily accessible? Yes ____ No ____

7. How is fuel transferred from day tank to engine fuel system?

a. By gravity ____
b. Engine driven pump ____
c. Electric motor driven pump ____
d. Is a manual pump also provided for injection system filling and/or air venting after servicing or replacement of parts in the fuel injection system? Yes ____ No ____

If yes, is the manual pump in immediate operating condition? Yes ____ No ____

8. Type of fuel (e.g., #1, #2, #3, JP-4, etc.) _____.

9. Approximate bulk tank capacity, _____ gallons.

10. Typical frequency of refilling (weekly, monthly, etc.) _____.

11. Typical refill (gallons),_____.

D. Lube Oil System

1. Lube oil

a. Type _____
b. Viscosity _____
c. Specification number _____
d. Oil change determined by:

Time interval: Yes ___ No ____
Give interval _____ monthly, yearly
By oil analysis: Yes _____ No ____

2. Lube oil filters are:

   a. Full flow _____
   b. Bypass _____
   c. Combination _____

3. Interval and/or basis for changing filter cartridge:

   a. Monthly _____
   b. Yearly _____
   c. By running time _____ hours
   d. By oil analysis. Yes ____ No ____
   e. By pressure drop. Yes ____ No ____
   f. Does provisions exist for changing cartridges during engine operation? Yes ___ No ___

4. Oil Pressure Monitoring

   a. Normal operating pressure ____ psi
   b. Alarm _____ psi
   c. Shutdown _____ psi

5. Oil temperature control:

   a. By standby heater in engine sump _____ °F.
   b. Heating means for maintaining standby temperature:

      Direct in oil _____
      Oil-to-water heat exchanger _____
      Other (Specify)_____

E. Cooling System - Engine Water

1. Temperature control by:

   a. By thermostat in water? Yes ____ No ____

      If yes, then:

      Bypass thermostat? Yes ____ No ____
      Throttle thermostat? Yes ____ No ____

b. By radiator shutter:

Automatic ____
Manual ____
Other (give type) _____

2. Corrosion control (water additive)? Yes _____ No ____

If yes, give chemical additive or name of compound.

_____

Proportion or concentration control:

a. By additive measurement? Yes ____ No ___
b. By water coolant analysis? Yes ___ No ___

3. Engine cooling water cooled by:

a. Radiator? _____
b. Heat exchanger from sea, river or other water? ____
c. Other? (give type) _____

4. Engine cooling water temperature-monitoring

a. Standby temperature _____ °F
b. Normal operating temperature _____ °F
c. Alarm temperature _____ °F
d. Shutdown temperature _____ °F
e. Water circulation during standby:

Thermo-syphon _____
Pump _____

5. Water Pressure Monitoring: Yes ____ No ____

a. Alarm _____
b. Shutdown _____
c. Both _____

6. Water temperature Sensor Position:

   a. In piping from engine _____
   b. In engine piping _____
   c. In engine direct _____

7. Water surge or supply tank in system. Yes ____ No ____

   If yes, then bottom connected to:

   a. Water pump suction? Yes ____ No ____
   b. Top of system? Yes ____ No ____
   c. Both of above? Yes ____ No ____
   d. Is bottom of surge tank above top of engine system? Yes ____ No ____
   e. Does engine have constant air bleed from top of engine water piping to surge or supply tank? Yes ____ No ____
   f. Give size of bleed or vent line, _____ inches.
   g. Manual air bleed only? Yes ____ No ____

F. Governor - Speed Control

Manufacturer _____
Electric (speed sensing) _____
Hydraulic _____
Type or code (such as EGB-35, LSG-10, etc.) _____
Automatic load sharing? Yes ____ No _____

1. Is compensation or stability control and/or speed of response manually adjustable? Yes ____ No ____

   If yes, adjusted by:

   a. Eye and ear?
   b. Test and specification? _____
   c. Other? (Specify) _____.

2. Engine - generator normal shutdown or stopping means and method.

Is the engine stopped:

a. Manually? Yes ____ No ____

If yes, then:

Directly at engine? Yes ___ No ____
Through local control panel? Yes ___ No ___

b. Automatically through the controls in the control room? Yes ___ No ___

c. By setting governor to "fuel-off" position? Yes ____ No ___

d. By over-ride of governor settings and control position directly to fuel injection pumps? Yes ____ No ____

e. Other means. Describe briefly. _____

_____

3. When engine is stopped, is fuel control in:

a. Full fuel or maximum fuel position? ____
b. Full off or no fuel position? _____
c. Intermediate? _____
d. Random? _____

(If not consistent and typical in above, then give the usual.)

4. When starting from the standby condition after shutdown for at least 24 hours, give number of seconds from start-to-crank to full fuel or maximum fuel position of governor and fuel control, _____ seconds.

G. Governor - Overspeed (shutdown)

1. Speed sensing?

   a. Electrical ____
   b. Flyball ____
   c. Other (Specify) _____

2. Fuel shutoff force generated by:

   a. Spring? ____
   b. Air? ____
   c. Hydraulic? ____
   d. Electrical? ____
   e. Other? (Specify) _____

3. Overspeed sensing setting? (in terms of full speed)

   a. 115% ____
   b. 110% ____
   c. Other (Specify) _____

4. Is overspeed tripping set point tested periodically?
   Yes ____ No ____

   If yes, then how often? _____ (yearly, monthly, etc.)

H. 1. Generator Mfr. _____ Model No. _____
   Single bearing or two bearings? _____
   Does generator have damper windings? Yes ____ No ____

2. Does generator have any obvious fault or difficulty?
   Yes ____ No ____

   Is problem repetitive? Yes ____ No ____

   If yes, then describe briefly. _____

I. Exciter and Voltage Regulator

1. Exciter Manufacturer: _____ Model _____

   Type: Rotating _____ Static _____

   If rotating drive? Direct _____
   Belt or Chain _____
   DC with field control _____
   Brushless with rectifier _____

2. Voltage Regulator: Manufacturer _____ Model _____

   Type: Mechanical _____ Static _____

3. Are paralleled units of automatic load sharing control of fully automatic type? Yes ____ No ____

   If yes, has any obvious influence or interrelationship been noted between the stability and response time of the engine governor and the stability and voltage control of the generators? Yes ___ No ___

4. Have engine governor and voltage regulator/exciter adjustments been made on the site or under any conditions since any of the units have been placed in service? Yes ___ No ____

   If yes, by means of what tests and what standards? Give name or very brief description. _____

   _____

5. If any difficulties have occurred, give approximate number of problems.

   a. Components ____
   b. Wiring _____
   c. Other (damage in service or dropping of miscellaneous hardware into switchboard, etc.) _____.

J. Paralleling: Engine-Generator Units

1. Do all units consistently have the proper voltage output? Yes ____ No ____

2. Do all units automatically share both the "real" or in-phase load and also the reactive load reasonably well? Yes ____ No ___

3. At the same Kw load, are both the field and the armature line currents of the several units consistently close to the same value? Yes ____ No ____

   If no, approximate percent difference. _____

4. Synchronizing

   a. In automatic synchronizing do circuit breakers close immediately after reaching full synchronous speed? Yes _____ No _____

   b. If "no" above then, does speed of some units drift slowly while failing to synchronize and close circuit breakers?

      How many seconds? _____

      Occasionally _____
      Always _____
      Never _____

K. Switch Gear and Electrical Con (other than exciter/ voltage regulator)

1. If any difficulties have occurred, then give approximate number of problems.

   a. Components _____
   b. Wiring _____
   c. Other (damage in service or dropping of miscellaneous hardware into switchboard, etc.) _____
   d. Design concept faults. That is, does the switch gear and its controls perform the proper functions and in proper sequence and timing. _____

2. a. Do the on-site diesel generator units and related support equipment have any storage battery power systems for any service whatsoever? Yes ____ No ___

   b. Identify each storage battery power system associated with the on-site diesel generator unit and its function. _____
   _____
   _____

   c. Does each system identified above adequately fulfill the service requirements for which it is intended? Yes ____ No ____

   If no, briefly describe. _____
   _____
   _____

   d. Is there a DG battery maintenance program? Yes ____ No ____

L. Safety Shut downs

Give safety shut down settings compared to equilibrium operating conditions.

1. Engine and generator speed. Give rpm or hertz:

   a. Synchronous and usual _____ rpm or _____ Hz
   b. Overspeed shutdown setting _____ rpm or _____ Hz

2. Engine cooling water (see E.4)

   a. Equilibrium _____°F
   b. Alarm _____°F
   c. Shut down _____°F

3. Lube oil pressure (see D.4)

   a. Equilibrium _____ psi
   b. Alarm _____ psi
   c. Shut down _____ psi

4. Lube oil temperature

   a. Equilibrium _____ °F
   b. Alarm _____ °F
   c. Shutdown _____ °F

5. Indicate all other protective interlocks (give name and;)

   a. Usual or proper condition _____

   _____

   b. Shutdown condition _____

   _____

6. a. What source of power is provided to operate alarms and shutdown controls? (See G.2) _____

   b. Do the generator units automatically shutdown in case of the electrical power loss to its control system? Yes ____ No ___

M. Emergency or Alert Conditions

1. Are all safety shutdown and safety interlocks bypassed during emergency conditions? Yes ____ No ____

2. If "no" above, then which are not bypassed. Name items.

   _____

   _____

3. For each interlock not bypassed is coincident logic used? Yes _____ No _____

   If yes, is it testable? Yes_____ No ____

N. Maintenance

1. Does plant have regularly scheduled maintenance procedures? _____

   If so, return copy of these procedures with questionnaire.

2. When need for minor adjustments obviously exists, then:

   a. Is remedial action taken immediately or at earliest practical opportunity? Yes ____ No ____

   b. Is remedial action taken only at periodic prescheduled or programmed times and conditions? Yes _____No ____

   c. For best performance record which of above appears better:

      immediate or early action? _____
      as scheduled only? _____

   d. Must permission for minor maintenace be obtained from some higher out-of-plant authority? Yes _____ No ____

   e. Is maintenance referred to above allowed and encouraged? Yes ____ No _____

   f. In periodic surveillance tests, simulated alert standby tests, etc., is the criteria "pass/not pass" the test used? Yes ____ No ____

   g. Is there a conscious continuing policy to detect and remedy marginal conditions or imminent trouble: for examples: lube oil pressure shutdown only two to five psi below operating pressure or, perhaps overspeed governor setting only one or two percent above starting speed surge or etc.? Yes ____ No ____

   h. Are efforts to remedy marginal or questionable conditions as mentioned above encouraged by plant management? _____

      Yes _____ No _____

   i. Are remedial steps on items similar to the above taken or allowed when the unit has started and operated satisfactorily within specified limits or conditions? Yes _____ No _____

O. <u>Starting Conditions</u>

1. Give starting or necessary cranking time as experienced.

   a. Starting time per specification _____ seconds
   b. Usual starting time _____ seconds
   c. Maximum starting time observed _____ seconds

2. Give usual time intervals as follows:

   a. Time from start-to-crank to first firing of any cylinder. _____ seconds

   b. Time from start-to-crank to approximate full firing of all cylinders. _____ seconds

3. Give maximum speed surge when starting; use both tachometer and frequency meter if possible.

   a. Usual conditions _____ rpm
      _____ Hz

   b. Maximum observed _____ rpm
      _____ Hz

4. During a surveillance test, give time from start-to-crank to when steady synchronous speed is attained and maintained.

   a. Usual _____ seconds
   b. Maximum _____ seconds
   c. As specified _____ seconds.

5. Give briefly the most troublesome problems in starting.

   a. Most troublesome _____.

   b. Next to most troublesome _____.

P. Air Cleaner or Air Filter - Combustion Air

1. Combustion air source: taken from engine room or inside the building, or from outdoors?

   a. Indoors _____
   b. Outdoors _____

2. Give type and make of air cleaners or air filters:

   a. Oil bath _____ Make _____
   b. Oil wetted screen _____ Make _____
   c. Paper _____ Make _____
   d. Other _____ Make _____
   e. Precleaner: Yes ____ No ____

3. Excessive air flow restriction and servicing need determined by?

   a. Instrument such as:

      manometer _____
      If other give type _____
   b. Personal judgement by appearance, etc. _____
   c. By smoking exhaust _____
   d. Time schedule _____
   e. Other (Specify) _____

4. Are climatic extremes normally experienced such as:

   a. Air heavily loaded with water mist, high humidity and low temperature? Yes _____ No ____
   b. Blowing sand and dust? Yes _____ No _____
   c. Blowing snow (blizzards)? Yes ____ No ____
   d. Other-Name _____

5. Are climatic extremes potentially possible such as:

   a. Air heavily loaded with water mist, high humidity and low temperature? Yes _____ No _____
   b. Blowing sand and dust? Yes _____ No _____
   c. Blowing snow (blizzards)? Yes ___ No ____
   d. Other-Name _____

Q. Temperature Conditions

1. Ambient outside hottest _____°F.

2. Ambient outside coldest _____ °F.

3. Engine-generator room hottest _____°F.

4. Engine-generator room coldest _____°F.

5. Inside switch gear hottest ___

R. Operator Qualifications (as presently exists, and suggested minimums if different)

1. Minimum education required (check)

	Existing	Suggested
a. High School	_____	_____
b. Trade School	_____	_____
c. Technical School	_____	_____
d. No minimum	_____	_____

2. Minimum Years of operating experience (diesel electric generator)

	Existing	Suggested
a. 0-3	_____	_____
b. 3-6	_____	_____
c. 6-10	_____	_____
d. 10-15	_____	_____

3. Operator training

	Existing	Suggested
a. Military	_____	_____
b. Industrial	_____	_____
c. On-the-job	_____	_____
d. Combination of a, b, and c (indicate which)	_____	_____

4. Licensing required

	Existing	Suggested
a. State	_____	_____
b. Federal	_____	_____
c. Utility or self	_____	_____
d. None	_____	_____

S. Are any foreign gases such as propane, freon, halon, carbon dioxide, etc. stored in the: Diesel Engine room? Yes _____ No _____ or adjacent buildings? Yes ___ No ____

If yes, (other than hand portable fire extinguishers), then identify gases and give approximate tank size.

Gases	Volume (ft^3)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

T. Does control system automatically bypass, in emergency starting, any engine temporarily out of service for maintenance? Yes _____ No _____

If yes, then how many failures to bypass have occured?

_____

U. Does the control system automatically override the test mode under emergency conditions? Yes _____ No _____

V. Have repetitive mechanical failures occurred in any component part or subsystem of the engine, generator, or switch gear, etc.? Yes ____ No ____

If yes, then which part or subsystem? _____

How many failures? _____

Give nature of failure. _____

_____

_____

W. Would periodic (yearly or other) evaluation and/or testing by "outside experts" contribute significantly to the diesel-generator reliability? Yes _____ No _____

Give brief reasons for the answer. _____

_____

_____

_____

X. 1. Give the accumulated time-load operating record for each diesel-generator unit from installation to the present (Running Hours):

Preoperational test Date _____

Engine Serial No.	Surv. Testing & Maintenance Hrs. No Load	Surv. Testing & Maintenance Hrs. Loaded	Emergency and Other Service Hrs.	Total Hours

2. Surveillance test load (percent of continuous rating) _____

3. Give the projected or planned time-load operation for each diesel-generator unit during the next 12 months.

Surveillance & Maintenance Hrs.	Emergency and other Service Hrs.	Total Hours	

4. Provide the following summary of the periodic surveillance testing experience:

a. Starting date of surveillance testing (OL date) _____
b. Periodic test interval _____
c. Total number of surveillance tests performed _____
d. Total number of test failures _____

failure to start _____ failure to accept load _____
failure to carry load _____ failures due to operator error _____
failure due to equipment not being operative during emergency conditions _____

e. Supply a copy of the surveillance test procedures with this completed questionnaire.

Additional Comments

_____

_____

_____

_____

_____

_____

Y. General Suggestions

Briefly give constructive criticism or suggestions as to improvement in reliability of the diesel generators. These remarks may cover tests, maintenance, practices, orders, policy, adjustments, etc.