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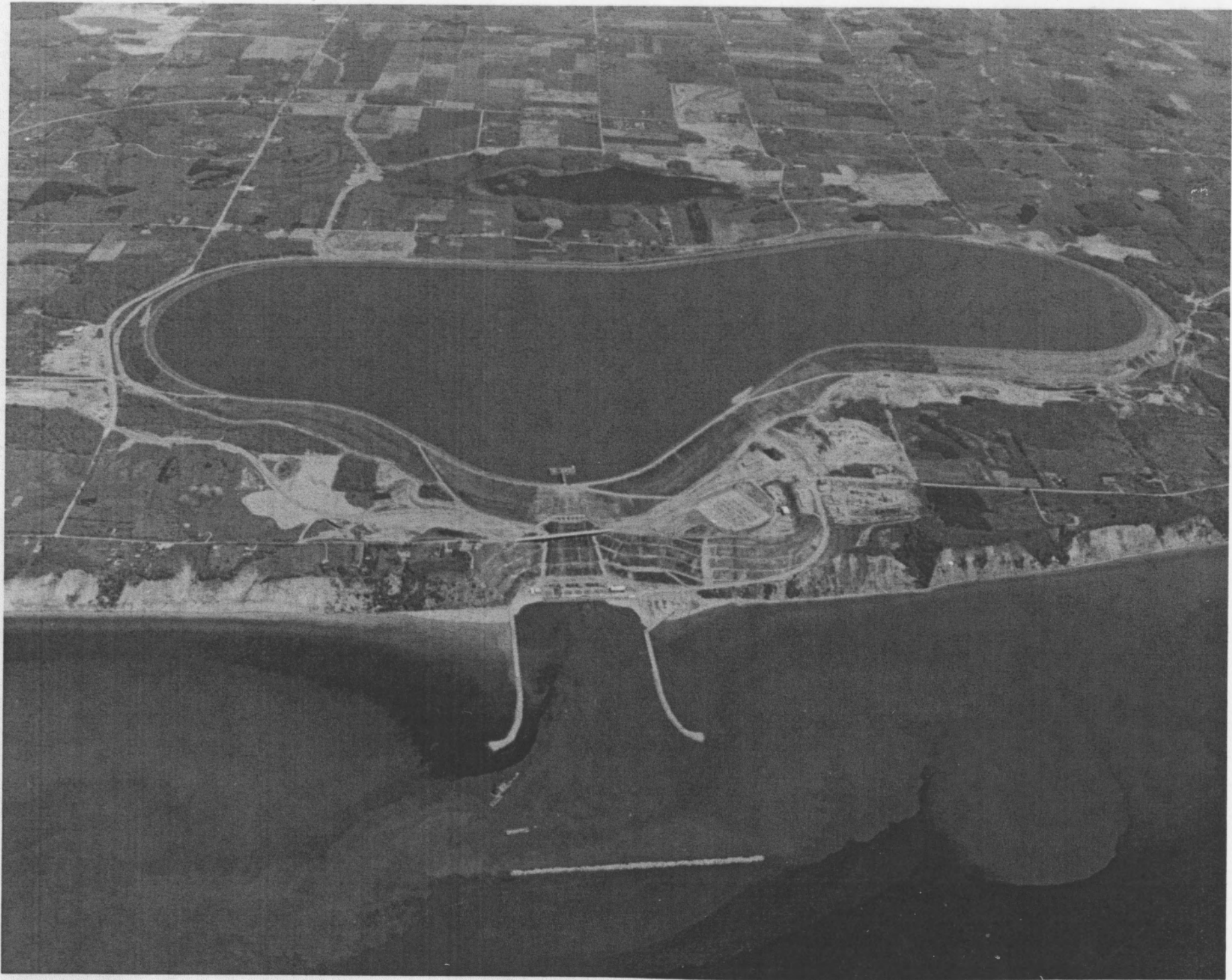
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P.



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 Book Collection
 Ford Museum in Grand Rapids

Item:

8x10 color photograph of body of water

Note with photo reads:

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The item was transferred from:

Philip Buchen Files

Box: 49

Folder: President – Personal: Family – Christie Bloomer (1)

Initials/Date TMH / 2/17/2016

SUBJECT: Ludington Environmental Review Outline
DATE: 4/21

Per your request, J. Reynolds has serped a reasonable approach toward developing an environmental report for Ludington from this you can get an idea of what work and studies would yet be required for the report. As we prepared to be assemble the portions specifically related to environmental case Project personnel will probably wish to coordinate the remainder of

PLEASE REPLY TO → SIGNED Let me know when you want to discuss it.

SHA Assessing additional studies do not have to be performed, R Wells estimates it would take minimum of 4 weeks to prepare his portion. CRB

CRB - OK lets hold at this point but let keep our fingers on the pulse so we can

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move rapidly if we have to 500 5-8-72

April 1972 - recognizing adverse effect of jetties

PLAINTIFF'S EXHIBIT
31

Ludington Project Environmental Impact Statement
(Preliminary Outline)

The following outline assumes that the content of any environmental statement would be limited to matters associated with the impact of operations and/or outstanding construction items. The possibility exists, of course, that we would be required to go back to "day one", as for the AEC, but such a report would be practically impossible to complete in time for preoperational deliberations.

I. INTRODUCTION

th. 8/28/68
leave
A. Need for Power

(Data on load predictions as related to the scheduling of Ludington Operations)

B. History of Project

(General discussions on site selection, license application and approval, other regulatory requirements, etc)

II. THE SITE

A. Location of Plant

(Description of area surrounding project site)

B. Environmental Features

1. Topography and Geological Information

2. Groundwater

3. Climate

4. Terrestrial Ecology

5. Aquatic Environment and Biota

(Each of the preceding sections would be merely descriptions of known information with compilations of existing data)



III. THE PLANT

- A. External Appearance
- B. Transmission Lines and Associated Facilities
- C. Planned Operations
 - 1. Pumping and Generating Schedules
 - 2. Water Level Fluctuations
 - 3. Liquid and Sanitary Wastes
 - 4. Other Wastes
- D. Auxiliary Facilities

(Each of the preceding sections would be brief descriptions of the plant features as designed with status of construction identified)

IV. ENVIRONMENTAL IMPACT OF REMAINING CONSTRUCTION

(Summary of remaining construction activity with areas of construction identified, manpower to be used and any identifiable impact)

V. ENVIRONMENTAL IMPACT OF PLANT OPERATION

- A. Land Use
- B. Water Use
- C. Biological Impact
 - 1. Terrestrial
 - 2. Aquatic



(Most discussion would center around water use, recreation facilities and potential effects on fish)

VI. SUMMARY OF PROBABLE ADVERSE EFFECTS

(From above sections, discussion of land ~~EXEMPTION~~ pre-emption, obstruction by jetties, adverse visual effects, fish mortalities, etc)

VII. SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

(Discussion of plant life, utilization of resources, method of plant retirement, probability of site restoration, energy use implications, etc)

VIII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

(Summary of permanent resource commitments as per above discussion)

IX. ALTERNATIVES TO PLANT OPERATION AND COST-BENEFIT ANALYSIS OF ENVIRONMENTAL EFFECTS

A. Alternatives

1. Abandon Project
2. Operate at partial load
3. Operate on a different schedule
4. Modify Project

B. Cost and Benefit of Alternatives

(Above sections should include listing of identifiable costs and benefits (monetary where possible) with each alternative, including generation, employment, taxes, recreation, agriculture, air and water quality, ~~xxx~~ aesthetics, etc)

X. SUMMARY

(Should conclude that based on above analysis the only reasonable course of action is to operate the plant as designed)



TO: CR Bilby
MP Shrontz
MPS / ~~CRB~~

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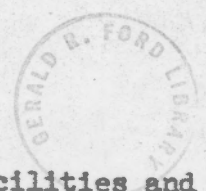
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UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION
(18 CFR 2.81(a), 2.82(a) and Appendices)

Thelma



Before Commissioners: John N. Nassikas, Chairman;
Albert B. Brooke, Jr., and Rush Moody, Jr.

Implementation of the National)
Environmental Policy Act)
of 1969)

Docket No. R-473

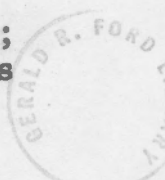
ORDER NO. 485

ORDER AMENDING PART 2 OF THE GENERAL RULES TO
PROVIDE GUIDELINES FOR THE PREPARATION OF
APPLICANTS' ENVIRONMENTAL REPORTS
PURSUANT TO ORDER NO. 415-C

(Issued June 7, 1973)

On March 2, 1973, the Federal Power Commission gave notice of proposed Guidelines and solicited comments in this Docket concerning its intention to amend Part 2 of its General Rules by adding Guidelines for preparation of Applicants' environmental reports pursuant to the requirements of Order No. 415-C. (38 Fed. Reg. 6401, March 9, 1973) Comments were to be filed on or before April 12, 1973. By notice dated April 4, 1973, the period for comments was extended to April 23, 1973. A subsequent request for a further extension of time was denied by notice issued April 15, 1973. A total of thirty-five comments were filed. 1/

1/ Twenty-nine comments were timely filed: Alabama Power Company; Alaskan Arctic Gas Study Company; State of California, Department of Water Resources; Colorado Interstate Gas Company; Columbia Gas System Service Corporation; Consolidated Natural Gas System Companies; Consumers Power Company; Continental Oil Company; Dames



Notwithstanding the fact that several comments were filed late, the merits of all comments were given careful consideration. In general, the comments reflected an awareness of the Commission's purpose in proposing the Guidelines, and we have made many minor suggested changes; such changes, however, do not touch the substance or the intent of the proposals, but were made solely to provide increased clarification and guidance. Some of the changes are simply editorial in nature and others eliminate unnecessary duplication.

A substantial number of the comments requested a public conference. Since all comments were carefully considered we see no value to a public conference. The necessity for providing these guidelines without further delay has been measured against the uncertainty of achieving substantive results from a public conference. No public conference will be held.

As a result of the case of Greene County v. F.P.C., 455 F.2d 412, cert. den. 409 U.S. 849 (1972), the Commission on December 18, 1972, issued Order No. 415-C.

1/ footnote continued from page 1

& Moore; Duke Power Company; El Paso Natural Gas Company; Environmental Defense Fund; Environmental & Energy Systems, Inc.; Georgia Power Company; Independent Natural Gas Association of America; Michigan-Wisconsin Pipe Line Company; National Wildlife Federation; Natural Gas Pipeline Company of America; Natural Resources Defense Council, Inc. (Striped Bass Fund); New York State Society of Professional Engineers, Albany County Chapter; Northern Natural Gas Company; Public Service Electric and Gas Company; Resources Advisory Board (comments filed March 23, 1973, supplemented March 28, 1973); Transcontinental Gas Pipeline Corporation; Tennessee Gas Pipeline Company; Texas Eastern Transmission Corporation; Texas Gas Transmission Corporation; and Virginia Electric and Power Company.

Six comments were filed late; The Conservation Foundation; GPU Service Corporation; Pacific Gas and Electric Company; Southern California Edison Company; Southern California Gas Company; and United States Department of the Interior.

That Order amended the Commission's regulations implementing the National Environmental Policy Act to comply with the mandate of Greene County. Among other things, Order No. 415-C requires the Staff to collect environmental information, conduct an independent analysis of such information, prepare a draft environmental statement, circulate it for comment, and revise the draft as necessary to produce a final environmental impact statement. In order to assist Staff collecting the necessary environmental information, Order No. 415-C requires an Applicant for certain licenses under Part I of the Federal Power Act, and certificates under Section 7 of the Natural Gas Act, to submit with its application a "detailed report" of certain environmental factors. Several of those parties commenting on the proposed Order No. 415-C requested more guidance in preparing this report.

In the notice we emphasized that the current energy crisis cries for speedy and creative solutions of environmental problems associated with our jurisdictional responsibilities. To that end we proposed these Guidelines both to assist the Staff in assimilating the necessary environmental information and to provide guidance to the Applicant in preparing the required environmental report.

The Guidelines have been structured to indicate to the Applicant both the relevant information and the differing viewpoints which must be taken into account in the preparation of its environmental report. The environmental report should be a substantially self-supporting public document in which the presentation is well-documented by data and other key information. Though a certain amount of cross-referencing is permitted, information which is highly pertinent to assessment of environmental impact must be included in its text. In response to comments, we wish to make it clear that the Guidelines are intended to provide guidance in the preparation of the environmental report and do not impose rigid requirements as to format. The essential point which must be understood is that the report must be presented in a form which is readily understandable by the Commission staff and the public; we call for a good-faith effort on the part of the Applicant to provide the necessary information in order to assist the Commission in meeting the requirements of applicable laws and regulations. For in the final analysis, it is this Commission which has the ultimate responsibility for successfully meshing its various statutory mandates.

We wish at this point to make it clear that we do not intend that the foregoing be read as permission to slight the necessary substantive information. Some of the comments stated that the material required appears to be redundant. The fact is that though the material may be similar to that previously requested, the viewpoint from which it is considered is substantially different, and thus the basic information is repetitive only to the extent made necessary by the different viewpoint. This does not prohibit appropriate cross-referencing of information within the Applicant's report. We expect the Applicant to make the detail of the environmental report commensurate with the complexity of the possible environmental impact of the proposed action. We expect the Applicant to utilize an imaginative, comprehensive, interdisciplinary approach with a broad physical, biological and social overview while planning its proposal. This shall include site selection, design, methods of construction, operation/maintenance, and abandonment where necessary. We expect the Applicant to consult with appropriate Federal, regional, state, and local entities during the preliminary planning stages of its proposed action to assure identification of relevant environmental factors. Applicant is expected to conduct all necessary studies to determine impact of the proposed action on the "human environment" and to propose reasonable measures which may be necessary to protect the existing values of the affected area.

Several comments reflected confusion regarding whether a proposed action would be a "major Federal action significantly affecting the quality of the human environment" within the meaning of NEPA so as to require application of Order No. 415-C and these Guidelines. We wish to clarify these matters at this point. Sections 2.81(a)/2.82(a) of Order No. 415-C require that certain applications be accompanied by an Applicant's

detailed environmental report. 2/ These applications were carefully selected by the Commission on the theory that actions proposed under the relevant sections of the Power and Gas Acts would often be major Federal actions significantly affecting the quality of the human environment. This report must be prepared in accordance with these Guidelines, but should be prepared with the thought in mind that it be commensurate with the complexity of the possible environmental impact of the proposal. Upon receipt of the application and the environmental report, the Commission Staff will make an initial review of the materials submitted. After that review, the determination will be made whether the proposal, if granted, will in fact be a major Federal action significantly affecting the quality of the human environment. If not, Staff will not prepare an environmental impact statement. If it is determined that the proposed action would be a major Federal action significantly affecting the quality of the human environment Staff will proceed to prepare an environmental impact statement in compliance with Order No. 415-C. An Applicant may confer with Staff prior to submission of an application for guidance as to whether approval would probably constitute a major Federal action significantly affecting the quality of the human environment; it must be realized, however, that such a conference would in no way constitute a bar to a later determination that a major Federal action is involved.

Questions were raised as to whether the Guidelines replaced Exhibit F-IV which is required by Sections 157.14(a) (6-d) and 157.7 of Commission Regulations to accompany abbreviated applications filed in accordance with Sections 157.7(b), (c) and (d) of Commission Regulations. Those

2/ Section 2.81(a) requires, among other things, that all applications under Part I of the Federal Power Act for license or relicense for major projects or for regulatory reservoirs, and all applications for surrender or amendment of a license proposing certain actions must be accompanied by an Applicant's detailed environmental report.

Section 2.82(a) requires that all certificate applications filed under Section 7(c) of the Natural Gas Act, with certain exceptions, must be accompanied by an Applicant's detailed report.

applications do not require a detailed environmental report prepared pursuant to Order No. 415-C and in accordance with these Guidelines but do require an Exhibit F-IV. These distinctions were carefully explained in Order No. 415-C.

Many of the comments expressed concern with the scope and breadth of the proposed section which deals with alternatives. It is true that it is broad in concept; however, a rigorous discussion of alternatives is required by NEPA and judicial interpretations of NEPA. 3/ Some of those filing comments pointed out that it is the task of the Commission, not the Applicant, to consider alternatives to its application which are neither within the jurisdiction of the Commission nor within the responsibilities and capabilities of the Applicant; such an examination, they contend, is the proper function of the Commission. Certainly, the Commission has a responsibility under NEPA to consider alternatives, but this does not relieve the Applicant of any responsibility for supplying the substantive information necessary to assist the Commission in making its determination. Therefore, we will not alter the requirements of the Guidelines in this respect. In line with these comments, it may be pointed out that the extent of discussion of alternatives will vary with the magnitude and complexity of any proposal and, in any event, this discussion must be construed in the light of the standard of reasonableness set forth in the Morton decision.

We point out that the Court in Morton held an agency responsible for consideration of environmental effects of reasonable alternatives, 4/ and that it stated that "crystal ball" inquiry was not required in the agency consideration:

. . . NEPA was not meant to require detailed discussion of the environmental effects of 'alternatives' put forth in comments when these effects cannot be readily ascertained and the alternatives are deemed only remote and speculative possibilities. 5/

3/ Natural Resources Defense Council v. Morton, 458 F.2d 827 (CADC, 1972)

4/ Id. at 834.

5/ Id. at 837, 838.

This rule of reasonableness may be applied equally to Applicant's report and the Environmental Impact Statement of the Commission.

Several comments expressed concern that certain technical information required by the Guidelines would violate proprietary information. We do not consider this to be a serious problem, for we do not feel it will arise in the vast majority of cases. In the event the problem does arise, Applicant may submit the information to Staff with a request that it remain confidential. Staff will make its determination on a case-by-case basis.

These Guidelines are to become effective as of the date of issuance. All relevant applications filed after this date must be filed in compliance with these Guidelines. Moreover, in relevant applications now pending before the Commission, Staff shall use the Guidelines to determine deficiencies in the information submitted and to request necessary additional information.

The Commission finds:

(1) The Guidelines herein adopted result from a recognition that it is the responsibility of the Commission to take all possible steps to relieve the current shortage of supplies of energy within its regulatory responsibility. Accordingly, the Commission has determined that these Guidelines, together with existing Commission Regulations, provide one method of quickly resolving environmental problems in the sectors of the energy industry regulated by the Federal Power Commission.

(2) The modifications to the Guidelines prescribed herein which were not included in the notice are of a minor nature, and are consistent with the substantive intent of the proposal; therefore further notice thereof is unnecessary.

(3) The amendments to the Commission's General Rules and Regulations adopted herein are necessary and appropriate for carrying out the provisions of the Federal Power Act, the Natural Gas Act, and the National Environmental Policy Act.

(4) Good cause exists that the amendments adopted herein become effective upon issuance of this order. The Commission acting pursuant to the provisions of the Federal Power Act, particularly sections 4, 10, 15, 307, 309, 311 and 312 (41 Stat. 1065, 1066, 1068, 1070; 46 Stat. 798; 49 Stat. 839, 840, 841, 842, 843, 844, 856, 857, 858, 859, 860; 61 Stat. 501; 82 Stat. 617; 16 U.S.C. 797, 803, 808, 825f, 825h, 825j, 825k) and the Natural Gas Act, particularly sections 7 and 16 (52 Stat. 824, 825, 830; 56 Stat. 83, 84; 61 Stat. 459; 15 U.S.C. 717f, 717o), and the National Environmental Policy Act 1969, Public Law 91-190, approved January 1, 1970, particularly sections 102 and 103 (83 Stat. 853, 854).

orders:

(A) The Statement of General Policy to implement procedures for compliance with the National Environmental Policy Act of 1969 in Part 2 - General Policy and Interpretations, is revised to read as follows:

§2.81 Compliance with the National Environmental Policy Act of 1969 under Part I of the Federal Power Act.

(a) All applications for major projects (those in excess of 2,000 horsepower) or for reservoirs only providing regulatory flows to downstream (major) hydroelectric projects under Part I of the Federal Power Act for license or relicense, shall be accompanied by Exhibit W, the applicant's detailed report of environmental factors specified in §2.80, §4.41, and Appendix A of Part 2 of this chapter. All applications for surrender or amendment of a license proposing construction, or operating change of a project shall be accompanied by the applicant's detailed report of environmental factors specified in §2.80 and Appendix A. Notice of all such applications shall continue to be made as prescribed by law.

* * * * *

§2.82 Compliance with the National Environmental Policy Act of 1969 under the Natural Gas Act.

(a) All certificate applications filed under section 7(c) of the Natural Gas Act (15 U.S.C. 717(c)) for construction of pipeline facilities, except abbreviated applications filed pursuant to §157.7(b), (c), and (d), of Commission regulation and producer applications for the sale of gas filed pursuant to §§157.23-29 of Commission regulations, shall be accompanied by the applicant's detailed report of the environmental factors specified in §2.80 and Appendix B. Notice of all such applications shall continue to be made as prescribed by law.

* * * * *

(B) Part 2 of the General Rules are amended to add the following:

APPENDIX A

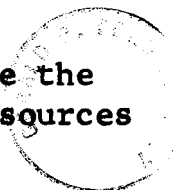
GUIDELINES FOR THE PREPARATION OF APPLICANTS'
ENVIRONMENTAL REPORTS FOR APPLICATIONS
UNDER PART I OF THE FEDERAL POWER ACT
PURSUANT TO ORDER NO. 415-C

These guidelines:

- . . . Identify the kinds of information to be supplied by applicants to assist Federal Power Commission staff in an independent assessment of major Federal actions significantly affecting the quality of the human environment;
- . . . Pertain to actions under the Commission's Order No. 415-C (issued December 18, 1972) amending §§ 2.80-2.82, Title 18, Code of Federal Regulations;
- . . . Provide the basis for the preparation of an environmental report (or Exhibit W) being prepared pursuant to § 2.81(a) by applicants for hydroelectric and related developments under the jurisdiction of the Commission, and
- . . . Provide an insight into the rationale and scope of environmental reports to assure a balanced interdisciplinary analysis of actions significantly affecting the quality of the human environment.

It is the general policy of the Federal Power Commission to expect applicants to take the following actions in carrying out their environmental evaluation responsibilities:

- . . . Consult with the appropriate Federal, regional, state and local entities during the preliminary planning stages of the proposed action to assure that all environmental factors are identified;
- . . . Conduct any studies which are necessary to determine the impact of the proposed action on the human and natural resources



and the measures which may be necessary to protect the values of the affected area. These analyses of impacts upon living and non-living elements which make up the environment shall be to the depth necessary for a valid assessment of the impacts;

. . . Utilize a sufficiently imaginative, comprehensive, interdisciplinary approach -- utilizing a broad physical, biological, and social overview -- during the development of the plans for a project, including the selection of its site, design, and methods of construction, operation/maintenance, and abandonment; and

. . . Prepare an environmental report for any proposed action that is considered to significantly affect the quality of the human environment. The environmental report should contain information and analyses to the extent appropriate to the proposed action. If the Applicant believes that his proposal, if granted, will not involve a major Federal action significantly affecting the quality of the human environment, he may file an abbreviated report sufficient to support his conclusion. However, we point out that the Staff may disagree with Applicant's view, and may request any additional information it deems necessary to make its own determination of whether a major Federal action is involved. Applicants may confer with staff prior to submission of an application for guidance as to whether or not approval of a specific proposed action would likely be classified as a major Federal action significantly affecting the quality of the human environment; it must be realized, however, that such a conference would in no way constitute a bar to a later determination that a major Federal action is involved.

These guidelines have been prepared to relate to a wide range of possible actions that could come before the Commission for consideration. The applicant is expected to make the detail of the environmental report commensurate with the complexity of the possible environmental impact of the proposed action. It is important to recognize that there is some duplication in the information requested. Often a section asks for an evaluation from a different viewpoint rather than for absolutely new information. Upon review of the applicant's environmental report, staff may request additional information.

COMPONENTS OF AN ENVIRONMENTAL REPORT

1. DESCRIPTION OF PROPOSED ACTION

Provide, as an introductory paragraph, a brief description of the action under application. Then describe fully its:

- 1.1 PURPOSE -- Describe the primary purpose of the proposed action and such secondary purposes as water supply, navigation, flood control, low flow augmentation, recreation, fish, and wildlife. Describe how these purposes, both primary and secondary, fit into existing and future utility systems or aid in meeting system reliability or regional and national needs. List the increases in productivity and values for each purpose described, e.g., power capacity in kW and generation in kWh/year, navigation in tonnage, recreation in visitor days, water use in cfs and AF.
- 1.2 LOCATION -- Describe the geographical location of the action as related to other similar programs or developments in the same river basin. Locate the proposed action with respect to State boundaries, counties and major cities and, if necessary, by more specific geographical identification such as township and range; provide a map or maps of the area and such other graphic materials as are needed to locate the action.
- 1.3 LAND REQUIREMENTS -- Locate and indicate the area and use of lands to be utilized by the proposed action and any measures, other than construction procedures, involved in its use, including clearing, borrow and spoil areas, rip-rap, settling ponds or basins, relocation or development of roads, recreation and wildlife management programs, drilling of wells for water supply or aquifer recharge, and reserving project lands for future uses. Describe the length and width of all existing, joint, or new rights-of-way required by the proposed action and any land treatment programs proposed thereon, including activities on adjacent lands.
- 1.4 PROPOSED FACILITIES -- Provide dimensions where pertinent:

- 1.4.1 Project Works -- Describe and locate on functional drawings the project works proposed for construction, including dams, dikes, reservoirs, spillways, powerhouses, switchyards and transmission facilities, water intakes and outlets and conduits, navigation works, visitor centers and other public use facilities, fish ladders, fish hatcheries, and fish protective facilities. Provide dimensions, elevations, data on geological foundations, and other technical data as necessary to give functional design characteristics for safety and adequacy.
- 1.4.2 Reservoir -- Describe the reservoir and its outlet works giving dimensions in capacity, elevations, area, depth; thermal stratification if present or anticipated; currents, mixing actions, and flow-through of inflowing waters as related to water densities; and locate any water intake structures by elevations and in relation to the occurrence of a reservoir thermocline.
- 1.4.3 Tailwater Features -- Using a profile drawing, show elevations of the turbine or pump runners, maximum and minimum tailwaters, and of any tailrace excavations.
- 1.4.4 Transmission Facilities -- Describe any transmission lines, rights-of-way, and substations existing or planned for future development, not included as part of the action under application but considered a necessary adjunct thereto.
- 1.5 CONSTRUCTION PROCEDURES -- Describe procedures to be taken prior to or during construction of project works such as the relocation of homes and commercial and industrial facilities, clearing, preparation of any diversion works, surveying, land acquisition and environmental planning. Provide a schedule of construction of major project works and how this will meet future power needs and avoid such limiting factors as floods, severe climatic conditions, or migrations of fish. Include schedules for needed relocations or development of transportation and other public use facilities and methods of maintaining service during these activities. Indicate the source of the work forces, numbers involved, and their housing needs in the area.

- 1.6 OPERATIONAL AND MAINTENANCE PROCEDURES -- Describe the proposed operational modes and the reasons therefor. Show how the water resources of the area are to be utilized (provide usable reservoir storage capacities for respective purposes, area-capacity curves, hydrology data, drawdowns, and flow duration curves applicable to project operation during dry, average, and wet years). Include a discussion of the quantity and quality of water flows as they enter, pass through the project, and are released to maintain the downstream aquatic habitat; and of any diversions of water for other uses including municipal or industrial uses, or fish ladders or hatcheries. For pumped storage projects describe the daily, weekly, and seasonal exchanges of waters between upper and lower reservoirs and the water currents and temperature changes produced by this pseudo-tidal action. Include also a discussion of any pollutants (and their sources) which would be discharged as a result of the proposed action. Describe maintenance of proposed project works under normal conditions; include types of expected maintenance, and how system or area needs will be met during shutdown for maintenance. Describe capacity of project works to withstand both usual and unusual, but possible, natural phenomena and accidents (e.g., earthquakes, floods, hurricanes or tornadoes, slides); describe any related geological or structural problems, and measures to be taken to minimize problems arising from malfunctions and accidents.
- 1.7 FUTURE PLANS -- Describe plans or potential for future expansion of facilities including land use and the compatibility of these plans with the proposed action.

2. DESCRIPTION OF THE EXISTING ENVIRONMENT

Provide an overall description of existing conditions or resources which might be affected directly and indirectly by the proposed action; include a discussion of such pertinent topics as:

2.1 LAND FEATURES AND USES -- Identify present uses and describe the characteristics of the land area.

2.1.1 Land Uses -- Describe the extent of present uses, as in agriculture, business, industry, recreation, residence, wildlife, and other uses, including the potential for development; locate major nearby transportation corridors, including roads, highways, ship channels, and aviation traffic patterns; locate transmission facilities on or near the lands affected by the proposed action and their placement (underground, surface, or overhead).

2.1.2 Topography, Physiography, and Geology -- Provide a detailed description of the topographic, physiographic, and geologic features within the area of the proposed action. Include U. S. Geological Survey Topographic Maps, aerial photographs, and other such graphic material.

2.1.3 Soils -- Describe the physical and chemical characteristics of the soils. Sufficient detail should be given to allow interpretation of the nature of and fertility of the soil and stability of slopes.

2.1.4 Geological Hazards -- Indicate the probability of occurrence of geological hazards in the area, such as earthquakes, slumping, landslides, subsidence, permafrost, and erosion.

2.2 SPECIES AND ECOSYSTEMS -- Identify those species and ecosystems that will be affected by the proposed action.

2.2.1 Species -- List in general categories, by common and scientific names, the plant and wildlife species found in the area of the proposed action and indicate those having commercial and recreational importance.

2.2.2 Communities and Associations -- Describe the dominant plant and wildlife communities and associations located

within the area of the proposed action. Provide an estimate of the population densities of major species. If data are not available for the immediate area of the proposed action, data from comparable areas may be used.

- 2.2.3 Unique and Other Biotic Resources -- Describe unique ecosystems or communities, rare or endangered species, and other biotic resources that may have special importance in the area of the proposed action. Describe any areas of critical environmental concern, e.g., wetlands and estuaries. Summarize findings of any studies conducted thereon.
- 2.3 SOCIO-ECONOMIC CONSIDERATIONS -- If the proposed action could have a significant socio-economic effect on the local area, discuss the socio-economic future, including population and industrial growth, of the area without the implementation of the proposed action; describe the economic development in the vicinity of the proposed action, particularly the local tax base and per capita income; and identify trends in economic development and/or land use of the area, both from a historical and prospective viewpoint. Describe the population densities of both the immediate and generalized area. Include distances from the site of the proposed action to nearby residences, cities, and urban areas and list their populations. Indicate the number and type of residences, farms, businesses, and industries that will be directly affected and those requiring relocation if the proposed action occurs.
- 2.4 AIR AND WATER ENVIRONMENTS -- Describe the prevailing climate and the quality of the air (including noise) and water environments of the area. Estimate the quality and availability of surface water resources in the proposed project area.
- 2.4.1 Climate -- Describe the historic climatic conditions that prevail in the vicinity of the proposed action; extremes and means of monthly temperatures, precipitation, and wind speed and direction. In addition, indicate the frequency of temperature inversions, fog, smog, icing, and destructive storms such as hurricanes and tornadoes.

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- 2.4.3 Air, Noise, and Water Quality Monitoring -- Provide data on the existing quality of the air and water, indicate the distance(s) from the proposed action site to monitoring stations and the mean and maximum audible noise and radio interference levels at the site boundaries.
- 2.5 UNIQUE FEATURES -- Describe unique or unusual features of the area, including historical, archeological, and scenic sites and values.

3. ENVIRONMENTAL IMPACT OF THE PROPOSED ACTION

Describe all known or expected significant environmental effects and changes, both beneficial and adverse, which will take place should the action be carried out. Include the impacts caused by (a) construction, (b) operation, including maintenance, breakdown, and malfunctions, and (c) termination of activities, including abandonment. Include both direct and primary indirect changes in the existing environment in the immediate area and throughout the sphere of influence of the proposed action. 1/

3.1 CONSTRUCTION

3.1.1 Land Features and Uses -- Assess the impact on present or future land use, including commercial use, mineral resources, recreational areas, public health and safety, and the aesthetic value of the land and its features. Describe any temporary restriction on land use due to construction activities. State the effect of construction related activities upon local traffic patterns, including roads, highways, ship channels, and aviation patterns.

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- 3.1.4 Air and Water Environment -- Estimate the qualitative and quantitative effects on air, noise, and water quality, including sedimentation, and whether regulatory standards in effect for the area will be complied with.
- 3.1.5 Waste Disposal -- Discuss the impact of disposal of all waste material such as spoils, vegetation, and construction materials.
- 3.2 OPERATION AND MAINTENANCE
- 3.2.1 Land Features and Uses -- Outline restrictions on existing and potential land use in the vicinity of the proposed action, including mineral and water resources. State the effect of operation related activities upon local traffic patterns including roads, highways, ship channels, and aviation patterns, and the possible need of new facilities.

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Assess the impact of obtaining and using these resources.

3.2.7 Maintenance -- Discuss the impact of maintenance programs, such as subsequent clearing or treatment of rights-of-way. Discuss the potential impact of major breakdowns and shutdowns of the facilities and how service will be maintained during shutdowns.

3.2.8 Accidents and Catastrophes -- Describe any impacts resulting from accidents and natural catastrophes, which might occur, and provide an analysis of the capability of the area to absorb predicted impacts.

3.3 TERMINATION AND ABANDONMENT -- Discuss the impact on land use and aesthetics of the termination and/or abandonment of facilities resulting from the proposed action.

4. MEASURES TO ENHANCE THE ENVIRONMENT OR TO AVOID OR MITIGATE ADVERSE ENVIRONMENTAL EFFECTS

Identify all measures which will be undertaken to enhance the environment or eliminate, avoid, mitigate, protect, or compensate for adverse and detrimental aspects of the proposed action, as described under Part 3, above, including engineering planning and design, design criteria, contract specifications, selection of materials, construction techniques, monitoring programs during construction and operation, environmental trade-offs, research and development, and restoration measures which will be taken routinely or as the need arises.

- 4.1 PREVENTATIVE MEASURES AND MONITORING -- Discuss provisions for pre- and post-monitoring of significant environmental impacts of the proposed action. Include programs for monitoring changes in operational phases. Describe proposed measures for detecting and modifying noise levels, monitoring air and water quality, inventorying key species in food chains, and detecting induced changes in the weather. Describe measures, including equipment, training procedures, and vector^{2/} control measures, to be taken for protecting the health and welfare of workers and the public at the project during its construction, operation, and maintenance, including structures to exclude people from hazardous areas or to protect them during changes in operations; include sanitary and solid and liquid waste disposal facilities for workers and the public during construction and operation. Discuss measures to be undertaken to minimize problems arising from malfunctions and accidents (with estimates of probability of occurrence). Identify standard procedures for protecting services and environmental values during maintenance and breakdowns. Discuss proposed and alternative construction timetables to prevent significant environmental impacts and plans for implementation of changes whenever necessary to reduce environmental impact.
- 4.2 ENVIRONMENTAL RESTORATION AND ENHANCEMENT -- Discuss all measures to be taken to restore and enhance the environment, including measures for restoration, replacement, or protection of flora and fauna and of scenic, historic, archeological, and other natural values, describe measures 2/ Carriers (e.g., ticks, mosquitoes, and rodents) of diseases.

to facilitate animal migrations and movements to protect their life processes (e.g., spawning and rearing of fish); describe programs for landscaping and horticultural practices; describe selection and use of any chemicals needed during construction, operation, and maintenance so as to prevent their entry into waters in the area; discuss programs to assist displaced families and businesses in their relocations; describe provisions for public access to, and use of, lands and waters in the area of the proposed action; and discuss the preparation of lands prior to and following their use.

5. UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

Discuss all significant environmental effects which cannot be avoided by measures outlined in Section 4 above.

- 5.1 HUMAN RESOURCES IMPACTED -- Indicate those human resources and values which will sustain significant, unavoidable adverse effects and discuss whether the impact will be transitory, a one-time but lasting effect, repetitive, continual, incremental, or synergistic to other effects and whether secondary adverse consequences will follow. Focus on the displacement of people by the proposed action and its local, economic, and aesthetic implications; on human health and safety; and on aesthetic and cultural values and standards of living which will be sacrificed or endangered. Where possible provide quantitative evaluations of these effects.
- 5.2 USES PREEMPTED AND UNAVOIDABLE CHANGES -- Discuss all significant, unavoidable environmental impacts on the land and its present use, caused by inundation, clearing, excavation, and fills; losses to wildlife habitat, forests, unique ecosystems, minerals, and farmlands; effects on fish habitat and migrations; on relocation of populations and man-made facilities, such as homes, roads, highways, and trails; on historical, recreational, archeological, and aesthetic values or scenic areas.
- 5.3 LOSS OF ENVIRONMENTAL QUALITY -- Discuss any significant, unavoidable adverse changes in the air, including dust and emissions to the air, and noise levels; impacts resulting from solid wastes and their disposal; effects on the water resources of the area, including consumptive uses.

6. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Compare the benefits to be derived from the immediate or short-term use of the environment, with and without the proposed action, and the long-term consequences of the proposed action. ^{3/} Actions which diminish the diversity of beneficial uses of the environment or preempt the options for future uses or needs require detailed analysis, to assure that short-sighted decisions are not made which may commit future generations to undesirable courses of actions.

- 6.1 SHORT-TERM USES -- Assess the local short-term uses of man's environment in terms of the proposed action's benefit to man, land use, alterations to the ecosystem, use of resources, and public health and safety.
- 6.2 LONG-TERM PRODUCTIVITY -- Discuss any cumulative long-term effects which may be caused by the proposed action in terms of land use, alterations to the ecosystem, use of resources and public health and safety.

^{3/} Duration of Impacts -- Short-term impacts and benefits generally are those which occur during the development and operation of a project. Long-term productivity related to an effect that remains many years (sometimes permanently) after the cause. As examples, strip mining without restoration and land inundation by reservoirs have obvious long-term effects.

7. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES
Discuss, and quantify when possible, any irrevocable commitments of resources which would be involved in the implementation of the proposed action.
- 7.1 LAND FEATURES AND USES -- Discuss any permanent changes in land features and/or land use.
- 7.2 ENDANGERED SPECIES AND ECOSYSTEMS -- Assess the possibility of eliminating any endangered species or the loss or alteration of an ecosystem.
- 7.3 SOCIO-ECONOMIC CONSIDERATIONS -- Discuss probable indirect actions (e.g., new highway systems or wastewater treatment facilities, housing developments, etc.) made economically feasible by the implementation of the proposed action that would likely be triggered and would irrevocably commit other resources under our free enterprise system. Identify the destruction of any historical, archeological, or scenic areas.
- 7.4 RESOURCES LOST OR USES PREEMPTED -- Analyze the extent to which the proposed action would curtail the range of beneficial uses of the environment. Determine whether, considering presently known technology, the proposed use of resources or any resource extraction method would contaminate other associated resources or foreclose their usage.
- 7.5 FINITE RESOURCES -- Indicate the irreversible and/or irretrievable resources that would be committed as a result of the proposed action, such as fossil fuels, and construction materials.

8. ALTERNATIVES TO THE PROPOSED ACTION

Discuss the systematic procedure used to arrive at the proposed action, starting with the broadest, feasible objectives of the action and progressively narrowing the alternatives to a specific action at a specific site or right-of-way. This systematic procedure should include the decision criteria used, the information weighed, and an explanation of the conclusion at each decision point. The decision criteria must show how environmental benefits/costs, even if not quantifiable, are weighed against economic benefits/costs and technology and procedural constraints. All realistic alternatives must be discussed even though they may not be within the jurisdiction of the Commission or the responsibilities and capabilities of the applicant. Modification of the proposed action may be among the alternatives. Describe the timeliness and the environmental consequences of each alternative discussed.

8.1 OBJECTIVE -- Explain the need for any proposed new energy supply.

8.2 ENERGY ALTERNATIVES -- Discuss the potential for accomplishing the proposed objectives through energy conservation and the potential for using realistic energy alternatives, such as natural and artificial gas, oil, and coal. Also discuss realistic electric energy alternatives, such as gas, oil, coal, and nuclear fueled power plants, and other conventional and pumped storage hydroelectric plants. Provide an analysis of environmental benefits and costs.

8.3 SITES AND LOCATIONS -- Discuss considerations given to alternative sites and locations. Include a description of each site, a summary of environmental factors of each site, the reasons for rejection, and an analysis of environmental benefits and costs.

- 8.4 DESIGNS, PROCESSES, AND OPERATIONS -- Describe alternative facility designs, processes (e.g., handling of waste water and solid wastes), and/or operations that were considered and discuss the environmental consequences of each, the reasons for rejection, and an analysis of environmental benefits and costs.
- 8.5 NO ACTION -- Discuss the alternative of no action with an evaluation of the consequences of this option on a national, regional, state, or local level, as appropriate. Present a brief perspective of what future use the proposed site (area) may assume if the proposed facilities are not constructed and summarize the environmental benefits and costs.

9. PERMITS AND COMPLIANCE WITH OTHER REGULATIONS AND CODES
- 9.1 PERMITS -- Identify all necessary Federal, regional, state and local permits, licenses, and certificates needed before the proposed action can be completed, such as permits needed from state and local agencies for construction and waste discharges. Describe steps which have been taken to secure these permits and any additional efforts still required.
- 9.1.1 Authorities Consulted -- List all authorities consulted for obtaining permits, licenses, and certificates, including zoning approvals needed to comply with applicable statutes and regulations.
- 9.1.2 Dates of Approval -- Give dates of consultations and of any approvals received.
- 9.2 COMPLIANCE WITH HEALTH AND SAFETY REGULATIONS AND CODES Identify all Federal, regional, state, and local safety and health regulations and codes which must be complied with in the construction, maintenance, and operation of the proposed project. Also identify other health and safety standards and codes that will be complied with, such as underwriter codes and voluntary industry codes.
- 9.2.1 Authorities Consulted -- List all authorities and professional organizations consulted in identifying pertinent regulations and codes.
- 9.2.2 Procedures to be Followed -- Describe any specific procedures or actions that will be taken to assure compliance with each such regulation and code.
- 9.3 COMPLIANCE WITH OTHER REGULATIONS AND CODES -- Identify all other Federal, regional, state and local regulations and codes which must be complied with in the construction, maintenance, and operation of the proposed project.
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- 9.3.2 Procedures to be Followed -- Explain the specific procedures or actions that will be taken to assure compliance with each such regulation and code.

10. SOURCE OF INFORMATION

10. 1 PUBLIC HEARINGS -- Describe any public hearings or meetings held, summarize the general tenor of public comments with the proportions of proponents to those in dissent, and include any public records resulting from these meetings. Include a description of the manner in which the public was informed of the time and place of the hearings. Fully discuss efforts made for seeking constructive inputs from affected people and how their concerns were accommodated.
- 10.2 OTHER SOURCES -- Identify all other sources of information utilized in the preparation of the environmental report, including:
- 10.2.1 Meetings with Governmental and Other Entities -- List meetings held with Federal, regional, state, and local planning, commerce, regulatory, environmental and conservation entities, the subjects discussed (e.g., recreation, fish, wildlife, aesthetics, other natural resources, and values of the area, and economic development), and any environmental conclusions reached as a result of the meeting.
- 10.2.2 Studies Conducted -- Identify the studies conducted, including those by consultants, the general nature and major findings of those studies, and the title and availability of any reports thereon.
- 10.2.3 Consultants -- Give the names, addresses, and professional vitae of all consultants who contributed to the environmental report.
- 10.2.4 Bibliography -- Provide a bibliography of the books, other publications, reports, documents, maps, and aerial photographs consulted for background information, including county land use and other planning reports. Indicate by some method, as by asterisks or numbers, those bibliographic references specifically cited in the environmental report.
- 10.3 PROVIDE COPIES OF SUPPORTIVE REPORTS -- Supply at least a single copy of all technical reports prepared in conjunction with the preparation of the environmental report, such as model, heat budget, plankton, fish, and benthic sampling studies.

APPENDIX B

GUIDELINES FOR THE PREPARATION OF APPLICANTS'
ENVIRONMENTAL REPORTS FOR APPLICATIONS
UNDER SECTION 7C OF THE NATURAL GAS ACT
PURSUANT TO ORDER NO. 415-C

These guidelines:

- . . . Identify the kinds of information to be supplied by applicants to assist Federal Power Commission staff in independent assessments of major Federal actions significantly affecting the quality of the human environment;
- . . . Pertain to actions under the Commission's Order No. 415-C (issued December 18, 1972) amending §§ 2.80-2.82, Title 18, Code of Federal Regulations;
- . . . Provide the basis for the preparation of environmental reports being prepared pursuant to § 2.82(a) by applicants for the construction of pipeline facilities under the jurisdiction of the Commission, and
- . . . Provide an insight into the rationale and scope of environmental reports to assure a balanced interdisciplinary analysis of actions significantly affecting the quality of the human environment.

It is the general policy of the Federal Power Commission to expect applicants to take the following actions in carrying out their environmental evaluation responsibilities:

- . . . Consult with the appropriate Federal, regional, state and local entities during the preliminary planning stages of the proposed action to assure that all environmental factors are identified;
- . . . Conduct any studies which are necessary to determine the impact of the proposed action on the human and natural resources

and the measures which may be necessary to protect the values of the affected area. These analyses of impacts upon living and non-living elements which make up the environment shall be to the depth necessary for a valid assessment of the impacts;

. . . Utilize a sufficiently imaginative, comprehensive, interdisciplinary approach -- utilizing a broad physical, biological, and social overview -- during the development of the plans for a project, including the selection of its site, design, and methods of construction, operation/maintenance, and abandonment; and

. . . Prepare an environmental report for any proposed action that is considered to significantly affect the quality of the human environment. The environmental report should contain information and analyses to the extent appropriate to the proposed action. If the Applicant believes that his proposal, if granted, will not involve a major Federal action significantly affecting the quality of the human environment, he may file an abbreviated report sufficient to support his conclusion. However, we point out that the Staff may disagree with Applicant's view, and may request any additional information it deems necessary to make its own determination of whether a major Federal action is involved. Applicants may confer with staff prior to submission of an application for guidance as to whether or not approval of a specific proposed action would likely be classified as a major Federal action significantly affecting the quality of the human environment; it must be realized, however, that such a conference would in no way constitute a bar to a later determination that a major Federal action is involved.

These guidelines have been prepared to relate to a wide range of possible actions that could come before the Commission for consideration. The applicant is expected to make the detail of the environmental report commensurate with the complexity of the possible environmental impact of the proposed action. It is important to recognize that there is some duplication in the information requested. Often a section asks for an evaluation from a different viewpoint rather than for absolutely new information. Upon review of the applicant's environmental report, staff may request additional information.

COMPONENTS OF AN ENVIRONMENTAL REPORT

1. DESCRIPTION OF PROPOSED ACTION

Provide as an introductory paragraph, a brief description of the action under application. Then describe fully its:

- 1.1 PURPOSE -- Describe the primary purpose of the proposed facilities (onshore/offshore pipelines, LNG, gas storage fields, SNG, and others) and how the proposed action fits into Federal, regional, state, and local energy demand and supply requirements.
- 1.2 LOCATION -- Identify site(s) including all existing natural gas and other power and product pipelines in the general vicinity of the proposed action; locate with respect to state boundaries, counties and major cities; and illustrate with a suitable general location map(s).
- 1.3 LAND REQUIREMENTS -- Indicate the length and width and location of all existing, joint, or new right-of-way required by the proposed action; identify the size of each proposed plant and/or operational site; designate what portion of the land at the operation site which will remain unaffected by construction and operation; and identify auxiliary construction activities on adjacent land.
- 1.4 PROPOSED FACILITIES
 - 1.4.1 Plant/Operational Facilities -- Identify all plant and/or operation units to be constructed, such as compressors, unloading and storage facilities, liquefaction/gasification facilities. Provide plan, elevation, and perspective views of all plant facilities.
 - 1.4.2 Pipeline Facilities -- Describe the length and size of all transmission, lateral, looping, and gathering pipelines to be constructed.
- 1.5 CONSTRUCTION PROCEDURES -- Describe procedures to be taken prior to or during construction of proposed action such as the relocation of homes and commercial or industrial

facilities, clearing, surveying, land acquisition, and environmental planning. Discuss the methods of pipeline construction which would be used (such as the push method, flotation method, lay method, and barge laying method). Provide a schedule of construction of major facilities and how this will meet future energy needs and avoid such limiting factors as floods, ground slides, or severe climatic conditions. Include schedules for needed relocations or development of transportation and other public use facilities and methods of maintaining service during these activities. Indicate the source of the work forces, numbers involved, and their housing needs in the area.

- 1.6 OPERATIONAL AND MAINTENANCE PROCEDURES -- Describe fully the technical and operational considerations of the proposed action, including details of the process, catalyst involved, design, mass, heat and energy balances, flow diagrams, water purification treatment and facilities, waste product disposal facilities, and days and hours of operation. Describe maintenance under normal conditions; include types of expected maintenance, anticipated maintenance problems, and how system or area needs will be met during shutdown for maintenance. Describe capacity of proposed action to withstand both usual and unusual but possible natural phenomena and accidents (e.g., floods, hurricanes or tornadoes, slides, etc.).
- 1.7 FUTURE PLANS -- Describe plans or potential for future expansion of facilities including land use and the compatibility of these plans with the proposed action.

2. DESCRIPTION OF THE EXISTING ENVIRONMENT
Provide an overall description of existing conditions or resources which might be affected directly and indirectly by the proposed action; include a discussion of such pertinent topics as:
- 2.1 LAND FEATURES AND USES -- Identify present uses and describe the characteristics of the land area.
- 2.1.1 Land Uses -- Describe the extent of present uses, as in agriculture, business, industry, recreation, residence, wildlife, and other uses, including the potential for development; locate major nearby transportation corridors, including roads, highways, ship channels, and aviation traffic patterns; locate transmission facilities on or near the lands affected by the proposed action and their placement (underground, surface, or overhead).
- 2.1.2 Topography, Physiography, and Geology -- Provide a detailed description of the topographic, physiographic, and geologic features within the area of the proposed action. Include U. S. Geological Survey Topographic Maps, aerial photographs, and other such graphic material.
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- 3.1.3 Socio-Economic Considerations -- Discuss the effect on local socio-economic development in relation to labor, housing, local industry, and public services. Discuss

1/ Changes in the Environment Throughout the Sphere of Influence of Proposed Action. Direct and indirect effects are those effects which can be discerned as occurring primarily because the proposed action would occur. For example: (1) the impact of a borrow pit would be evaluated to the extent that it would be developed or expanded but the manufacture of conventional trucks to work the pit would not; (2) the impact of construction workers moving into the area would be evaluated but not the impact of their leaving present homes. However, the impact of their subsequent leaving this place must be considered.

the need for relocations of families and businesses. Describe the beneficial effects, both direct and indirect, of the action on the human environment, such as benefits resulting from the services and products, and other results of the action (include tax benefits to local and state governments, growth in local tax base from new business and housing development and payrolls). Describe the impact on human elements, including the need for increased public services (schools, health facilities, police and fire protection, housing, waste disposal, markets, transportation, communication, energy supplies, and recreational facilities).

- 3.1.4 Air and Water Environment -- Estimate the qualitative and quantitative effects on air, noise, and water quality, including sedimentation, and whether regulatory standards in effect for the area will be complied with.
- 3.1.5 Waste Disposal -- Discuss the impact of disposal of all waste material such as spoils, vegetation, construction materials, and hydrostatic test water.
- 3.2 OPERATION AND MAINTENANCE
 - 3.2.1 Land Features and Uses -- Outline restrictions on existing and potential land use in the vicinity of the proposed action, including mineral and water resources. State the effect of operation related activities upon local traffic patterns including roads, highways, ship channels, and aviation patterns, and the possible need of new facilities.
 - 3.2.2 Species and Ecosystems -- Assess the impact of operation upon terrestrial and aquatic species and habitats, including the importance on plant and animal species having economic or aesthetic value to man that would be affected by the action; provide pertinent information on animal migrations, foods, and reproduction in relation to the impacts; and describe any ecosystem imbalances that would be caused by the action and the possibility of major alteration to an ecosystem or the loss of an endangered species. Assess any effects of this action which would be cumulative to those of other similar, existing projects or proposed actions.
 - 3.2.3 Socio-Economic Considerations -- Discuss the effect on the local socio-economic development in relation to labor,

housing and population growth trends, relocation, local industry and industrial growth, and public service. Describe the beneficial effects, both direct and indirect, of the action on the human environment such as economic benefits resulting from the services and products, energy, and other results of the action (include tax benefits to local and state governments, growth in local tax base from new business and housing developments, and payrolls). Describe impacts on human elements, including any need for increased public service (schools, police and fire protection, housing, waste disposal, markets, transportation, communication and recreational facilities). Indicate the extent to which maintenance of the area is dependent upon new sources of energy or the use of such vital resources as water.

- 3.2.4 Air and Water Environment -- Assess the impact on present air quality due to process discharge quantities, and other discharging operational units. Assess the impact on present noise levels due to project-related noises. Assess the impact on present water quality, including sedimentation, due to cooling or heating system discharges, process effluents, sanitary and waste effluents, water use for hydrostatic testing, and water use for other operational units.
- 3.2.5 Solid Wastes -- Describe any impacts from accumulation of solid wastes and by-products that will be produced.
- 3.2.6 Use of Resources -- Quantify the resources necessary for operational processes; e.g., water (human needs and processes), energy requirements, raw products, and specialized needs. Assess the impact of obtaining and using these resources.
- 3.2.7 Maintenance -- Discuss the impact of maintenance programs, such as subsequent clearing or treatment of rights-of-way and hydrostatic testing and shutdowns. Discuss the potential impact of major breakdowns and shutdowns of the facilities and how service will be maintained during shutdowns.
- 3.2.8 Accidents and Catastrophes -- Describe any impacts resulting from accidents and natural catastrophes, which might occur, and provide an analysis of the capability of the area to absorb predicted impacts.

- 3.3 TERMINATION AND ABANDONMENT -- Discuss the impact on land use and aesthetics of the termination and/or abandonment of facilities resulting from the proposed action.

4. MEASURES TO ENHANCE THE ENVIRONMENT OR TO AVOID OR MITIGATE ADVERSE ENVIRONMENTAL EFFECTS

Identify all measures which will be undertaken to enhance the environment or eliminate, avoid, mitigate, protect, or compensate for adverse and detrimental aspects of the proposed action, as described under Part 3, above, including engineering planning and design, design criteria, contract specifications, selection of materials, construction techniques, monitoring programs during construction and operation, environmental trade-offs, research and development, and restoration measures which will be taken routinely or as the need arises.

- 4.1 PREVENTATIVE MEASURES AND MONITORING -- Discuss provisions for pre- and post-monitoring of significant environmental impacts of the proposed action. Include programs for monitoring changes in operational phases. Describe proposed measures for detecting and modifying noise levels, monitoring air and water quality, inventorying key species in food chains, and detecting induced changes in the weather. Describe measures, including equipment, training procedures, and vector^{2/} control measures, to be taken for protecting the health and welfare of workers and the public at the project during its construction, operation, and maintenance, including structures to exclude people from hazardous areas or to protect them during changes in operations; include sanitary and solid and liquid waste disposal facilities for workers and the public during construction and operation. Discuss measures to be undertaken to minimize problems arising from malfunctions and accidents (with estimates of probability of occurrence). Identify standard procedures for protecting services and environmental values during maintenance and breakdowns. Discuss proposed and alternative construction timetables to prevent significant environmental impacts and plans for implementation of changes whenever necessary to reduce environmental impact.
- 4.2 ENVIRONMENTAL RESTORATION AND ENHANCEMENT -- Discuss all measures to be taken to restore and enhance the environment, including measures for restoration, replacement, or protection of flora and fauna and of scenic, historic, archeological, and other natural values, describe measures
- 2/ Carriers (e.g., ticks, mosquitoes, and rodents) of diseases.

to facilitate animal migrations and movements and to protect their life processes; describe programs for landscaping and horticultural practices; discuss programs to assist displaced families and businesses in their relocations; and describe provisions for public access to, and use of, lands and waters in the area of the proposed action.

UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

Discuss all significant environmental effects which cannot be avoided by measures outlined in Section 4 above.

- 5.1 HUMAN RESOURCES IMPACTED -- Indicate those human resources and values which will sustain significant, unavoidable adverse effects and discuss whether the impact will be transitory, a one-time but lasting effect, repetitive, continual, incremental, or synergistic to other effects and whether secondary adverse consequences will follow. Focus on the displacement of people by the proposed action and its local, economic, and aesthetic implications; on human health and safety; and on aesthetic and cultural values and standards of living which will be sacrificed or endangered. Where possible provide quantitative evaluations of these effects.
- 5.2 USES PREEMPTED AND UNAVOIDABLE CHANGES -- Discuss all significant, unavoidable environmental impacts on the land and its present use, caused by inundation, clearing, excavation, and fills; losses to wildlife habitat, forests, unique ecosystems, minerals, and farmlands; effects on fish habitat and migrations; on relocation of populations and man-made facilities, such as homes, roads, highways, and trails; on historical, recreational, archeological, and aesthetic values or scenic areas.
- 5.3 LOSS OF ENVIRONMENTAL QUALITY -- Discuss any significant, unavoidable adverse changes in the air, including dust and emissions to the air, and noise levels; impacts resulting from solid wastes and their disposal; effects on the water resources of the area, including consumptive uses.

6. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Compare the benefits to be derived from the immediate or short-term use of the environment, with and without the proposed action, and the long-term consequences of the proposed action. ^{3/} Actions which diminish the diversity of beneficial uses of the environment or preempt the options for future uses or needs require detailed analysis, to assure that short-sighted decisions are not made which may commit future generations to undesirable courses of actions.

- 6.1 SHORT-TERM USES -- Assess the local short-term uses of man's environment in terms of the proposed action's benefit to man, land use, alterations to the ecosystem, use of resources, and public health and safety.
- 6.2 LONG-TERM PRODUCTIVITY -- Discuss any cumulative long-term effects which may be caused by the proposed action in terms of land use, alterations to the ecosystem, use of resources and public health and safety.

3/ Duration of Impacts -- Short-term impacts and benefits generally are those which occur during the development and operation of a project. Long-term productivity related to an effect that remains many years (sometimes permanently) after the cause. As examples, strip mining without restoration and land inundation by reservoirs have obvious long-term effects.

7. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES
Discuss, and quantify when possible, any irrevocable commitments of resources which would be involved in the implementation of the proposed action.
- 7.1 LAND FEATURES AND USES -- Discuss any permanent changes in land features and/or land use.
- 7.2 ENDANGERED SPECIES AND ECOSYSTEMS -- Assess the possibility of eliminating any endangered species or the loss or alteration of an ecosystem.
- 7.3 SOCIO-ECONOMIC CONSIDERATIONS -- Discuss probable indirect actions (e.g., new highway systems or wastewater treatment facilities, housing developments, etc.) made economically feasible by the implementation of the proposed action that would likely be triggered and would irrevocably commit other resources under our free enterprise system. Identify the destruction of any historical, archeological, or scenic areas.
- 7.4 RESOURCES LOST OR USES PREEMPTED -- Analyze the extent to which the proposed action would curtail the range of beneficial uses of the environment. Determine whether, considering presently known technology, the proposed use of resources or any resource extraction method would contaminate other associated resources or foreclose their usage.
- 7.5 FINITE RESOURCES -- Indicate the irreversible and/or irretrievable resources that would be committed as a result of the proposed action, such as fossil fuels, and construction materials.

8. ALTERNATIVES TO THE PROPOSED ACTION

Discuss the systematic procedure used to arrive at the proposed action, starting with the broadest, feasible objectives of the action and progressively narrowing the alternatives to a specific action at a specific site or right-of-way. This systematic procedure should include the decision criteria used, the information weighed, and an explanation of the conclusion at each decision point. The decision criteria must show how environmental benefits/costs, even if not quantifiable, are weighed against economic benefits/costs and technology and procedural constraints. All realistic alternatives must be discussed even though they may not be within the jurisdiction of the Commission or the responsibilities and capabilities of the applicant. Modification of the proposed action may be among the alternatives. Describe the timeliness and the environmental consequences of each alternative discussed.

- 8.1 OBJECTIVE -- Explain the need for any proposed new energy supply.
- 8.2 ENERGY ALTERNATIVES -- Discuss the potential for accomplishing the proposed objectives through energy conservation and the potential for using realistic energy alternatives, such as natural and artificial gas, oil, and coal. Also discuss realistic electric energy alternatives, such as gas, oil, coal, and nuclear fueled power plants. Provide an analysis of environmental benefits and costs.
- 8.3 SITES AND LOCATIONS -- Discuss considerations given to alternative sites and locations. Include a description of each site, a summary of environmental factors of each site, the reasons for rejection, and an analysis of environmental benefits and costs.

- 8.4 DESIGNS, PROCESSES, AND OPERATIONS -- Describe alternative facility designs, processes (e.g., handling of waste water and solid wastes), and/or operations that were considered and discuss the environmental consequences of each, the reasons for rejection, and an analysis of environmental benefits and costs.
- 8.5 NO ACTION -- Discuss the alternative of no action with an evaluation of the consequences of this option on a national, regional, state, or local level, as appropriate. Present a brief perspective of what future use the proposed site (area) may assume if the proposed facilities are not constructed and summarize the environmental benefits and costs.

9. PERMITS AND COMPLIANCE WITH OTHER REGULATIONS AND CODES
- 9.1 PERMITS -- Identify all necessary Federal, regional, state and local permits, licenses, and certificates needed before the proposed action can be completed, such as permits needed from state and local agencies for construction and waste discharges. Describe steps which have been taken to secure these permits and any additional efforts still required.
 - 9.1.1 Authorities Consulted -- List all authorities consulted for obtaining permits, licenses, and certificates, including zoning approvals needed to comply with applicable statutes and regulations.
 - 9.1.2 Dates of Approval -- Give dates of consultations and of any approvals received.
- 9.2 COMPLIANCE WITH HEALTH AND SAFETY REGULATIONS AND CODES Identify all Federal, regional, state, and local safety and health regulations and codes which must be complied with in the construction, maintenance, and operation of the proposed project. Also identify other health and safety standards and codes that will be complied with, such as underwriter codes and voluntary industry codes.
 - 9.2.1 Authorities Consulted -- List all authorities and professional organizations consulted in identifying pertinent regulations and codes.
 - 9.2.2 Procedures to be Followed -- Describe any specific procedures or actions that will be taken to assure compliance with each such regulation and code.
- 9.3 COMPLIANCE WITH OTHER REGULATIONS AND CODES -- Identify all other Federal, regional, state and local regulations and codes which must be complied with in the construction, maintenance, and operation of the proposed project.
 - 9.3.1 Authorities Consulted -- List all authorities and professional organizations consulted in identifying pertinent regulations and codes.
 - 9.3.2 Procedures to be Followed -- Explain the specific procedures or actions that will be taken to assure compliance with each such regulation and code.

9.4 SPECIAL CASES

- 9.4.1 Liquefied Natural Gas Facilities -- Provide detailed design specifications for all facilities to be used for the liquefaction, transport, storage and re-gasification of liquefied natural gas. Provide information on the flammability and flame resistance of all tank lining and insulation materials. Describe all construction, maintenance, and operational procedures with particular emphasis on procedures to protect public and worker safety and health. Identify and describe all pertinent safety regulations and codes and any revisions thereto including the Department of Transportation Regulations issued by the Office of Pipeline Safety as Amendment 192-10 (Liquefied Natural Gas Systems) to Part 192, "Transportation of Natural and other Gas by Pipeline: Minimum Federal Safety Standards" and by the U. S. Coast Guard as 33 CFR 6.14-1 (safety measures for waterfront facilities and vessels in port), 33 CFR 124.14 (notice in advance of arrival of a vessel laden with a dangerous cargo), 33 CFR, Part 126 (permits for handling of dangerous cargoes within or contiguous to waterfront facilities), and 46 CFR, Subchapter D (regulations governing tank vessels). Describe detailed procedures that will be used to comply with these safety regulations and codes. Identify all Federal, regional, state, and local Government agencies that have responsibilities for assuring compliance with these construction, maintenance, and operation regulations and codes. Describe safety reporting procedures, schedules, and recipients.
- 9.4.2 Ancillary Facilities -- Provide detailed design specifications for all ancillary facilities, owned and operated either by applicant or other parties, which will be constructed or operated in relation to the proposed project, such as processing plants and docking facilities. Describe all construction, maintenance, and operational procedures with particular emphasis on procedures to protect public and worker safety and health. Identify and describe all pertinent safety regulations and codes and describe detailed procedures that will be used to comply with these safety regulations and codes. Identify all Federal, regional, state and

local Government agencies that have responsibilities for assuring compliance with these construction, maintenance, and operation regulations and codes. Describe safety reporting procedures, schedules, and recipients.

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10. SOURCE OF INFORMATION

- 10.1 PUBLIC HEARINGS -- Describe any public hearings or meetings held, summarize the general tenor of public comments with the proportions of proponents to those in dissent, and include any public records resulting from these meetings. Include a description of the manner in which the public was informed of the time and place of the hearings. Fully discuss efforts made for seeking constructive inputs from affected people and how their concerns were accommodated.
- 10.2 OTHER SOURCES -- Identify all other sources of information utilized in the preparation of the environmental report, including:
- 10.2.1 Meetings with Governmental and Other Entities -- List meetings held with Federal, regional, state, and local planning, commerce, regulatory, environmental and conservation entities, the subjects discussed (e.g., recreation, fish, wildlife, aesthetics, other natural resources, and values of the area, and economic development), and any environmental conclusions reached as a result of the meeting.
- 10.2.2 Studies Conducted -- Identify the studies conducted, including those by consultants, the general nature and major findings of those studies, and the title and availability of any reports thereon.
- 10.2.3 Consultants -- Give the names, addresses, and professional vitae of all consultants who contributed to the environmental report.
- 10.2.4 Bibliography -- Provide a bibliography of the books, other publications, reports, documents, maps, and aerial photographs consulted for background information, including county land use and other planning reports. Indicate by some method, as by asterisks or numbers, those bibliographic references specifically cited in the environmental report.
- 10.3 PROVIDE COPIES OF SUPPORTIVE REPORTS -- Supply at least a single copy of all technical reports prepared in conjunction with the preparation of the environmental report, such as model, heat budget, plankton, fish, and benthic sampling studies.

Docket No. R-473

(C) The amendments adopted herein shall be effective upon issuance of this order.

(D) The Secretary shall cause prompt publication of this order to be made in the Federal Register.

By direction of the Commission.

(S E A L)

**Kenneth F. Plumb,
Secretary.**

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION
(18 CFR 2.80, 2.81, 2.82, 4.41, 157.7, 157.14(a))

Before Commissioners: John N. Nassikas, Chairman;
Albert B. Brooke, Jr., Pinkney Walker,
and Rush Moody, Jr.

Implementation of the)
National Environmental)
Policy Act of 1969)

Docket No. R-398

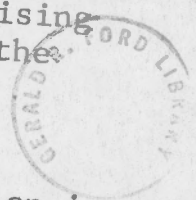
ORDER NO. 415-C

ORDER AMENDING SECTIONS
2.80, 2.81, 2.82, OF THE GENERAL RULES,
SECTION 4.41 OF THE REGULATIONS
UNDER THE FEDERAL POWER ACT AND
SECTIONS 157.7 AND 157.14(a) OF THE
REGULATIONS UNDER THE NATURAL GAS ACT

(Issued December 18, 1972)

On December 4, 1970, the Commission issued Order No. 415 (35 F.R. 18958, December 15, 1970), establishing regulations for the implementation of the National Environmental Policy Act of 1969 (83 Stat. 852) (NEPA), which prescribed §§2.80-2.82 of its General Policy and Interpretations (18 CFR 2.80-2.82) and various related amendments to the Commission's Regulations under the Federal Power Act and Natural Gas Act. Experience in applying these regulations, as amended, and the Guidelines for Preparation of Statements on Proposed Federal Actions Affecting the Environment (Guidelines) of the Council on Environmental Quality (36 F.R. 7724) demonstrated the desirability of revising the Commission's Regulations for Implementation of the National Environmental Policy Act of 1969.

Accordingly, on November 19, 1971, the Commission issued Order No. 415-B, amending §§2.80, 2.81, 2.82 of the General Rules of Practice and Procedure and §4.41 of the Regulations under the



Federal Power Act. (36 F.R. 22738, November 30, 1971). Because of petitions filed in this docket, Order No. 415-B was amended for clarification, and rehearing was granted for the purpose of further consideration, by order issued January 19, 1972 (37 F.R. 1162).

On January 17, 1972, the Court of Appeals for the Second Circuit ruled that these regulations were not in compliance with NEPA.^{1/} Having been unsuccessful in seeking a Petition for Rehearing En Banc from the Second Circuit, on June 8, 1972 the Commission filed a Petition for Writ of Certiorari with the Supreme Court. On October 10, 1972, the Supreme Court denied certiorari.^{2/}

Because of the finality of the judicial mandate in Greene County, on October 30, 1972 the Commission published notice of its intention to amend its regulations. (37 F.R. 23360, November 2, 1972). November 17, 1972 was given as the last day on which to file comments.^{3/}

Several of the comments requested a public conference for the purpose of discussing the proposals. In its notice, the Commission stated:

Because of the vital importance of the Commission's regulatory responsibilities and the great importance and urgency of environmental problems, it is essential that the Commission finalize its amended procedures respecting compliance with NEPA as soon as possible. Therefore, the Commission has determined that the time for public comment on these proposals will be 15 days from the date this notice is published in the Federal Register.

^{1/} Greene County Planning Board v. F.P.C., 455 F.2d 412 (CA2, 1972).

^{2/} F.P.C. v. Greene County Planning Board, No. 71-1597 (___ U.S. ___).

^{3/} Seventeen comments were timely filed: Alabama Power Company, Cities Service Gas Company, Columbia Gas System Service Corporation, Consolidated Edison Company, Inc., Debevoise &

Footnote continued.

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The Commission has considered all written comments, whether filed within the provided time limits or filed late. To allow a public conference in this matter would only serve to further delay implementation of these rules. Balanced against this certain delay is the uncertainty of deriving any substantive benefit from such a conference. Therefore, no conference will be held.

(1) A question frequently raised in the comments involved application of the revised regulations to pending cases.

As of the effective date of this order, this Commission shall apply the procedures adopted herein to each relevant case still pending before the Commission.

3/ Footnote continued from page 2.

Liberman, Environmental Defense Fund, Environmental & Energy Systems, Inc., Independent Natural Gas Association of America, Helen McGinnis, Milton Musicus (Chairman of Mayor's Interdepartmental Committee on Public Utilities, City of New York), National Wildlife Federation, Northern Natural Gas Company, Public Service Electric and Gas Company, San Diego Gas & Electric Company, Southern California Edison Company, the City of Seattle, and Transcontinental Gas Pipe Line Corporation.

Twelve comments were filed late: American Electric Power Service Corporation, Department of Interior, Duke Power Company, Environmental & Energy Systems, Inc. (supplement to comment filed November 10, 1972), Environmental Protection Agency, Georgia Power Company, New York State Society of Professional Engineers (Albany County Chapter), Panhandle Eastern and Trunkline Gas Company (Joint Comment), Sierra Club and West Virginia Highlands Conservancy, State of California Department of Water Resources, State of New York Department of Environmental Conservation, and United Gas Pipe Line Company.

All comments received in this docket have been considered.

(2) Section 2.80(a):

The proposal read:

(a) It shall be the general policy of the Federal Power Commission to adopt and to adhere to the objectives and aims of the National Environmental Policy Act of 1969 (NEPA) in its regulations under the Federal Power Act and the Natural Gas Act. The National Environmental Policy Act of 1969 requires, among other things, a detailed environmental statement in all major Federal actions and in all reports and recommendations on environmental legislative proposals which will significantly affect the quality of the human environment.

Some of the comments pointed out that this is a misstatement of the language of NEPA. To eliminate any possible misinterpretation, Section 2.80(a) has been amended to more precisely follow the language in Section 102(2)(C) of NEPA:

(a) It shall be the general policy of the Federal Power Commission to adopt and to adhere to the objectives and aims of the National Environmental Policy Act of 1969 (NEPA) in its regulations under the Federal Power Act and the Natural Gas Act. The National Environmental Policy Act of 1969 requires, among other things, all federal agencies to include a detailed environmental statement in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment.

(3) Section 2.80(b):

The proposal read:

(b) Therefore, in compliance with the National Environmental Policy Act of 1969 the Commission staff shall make a detailed environmental statement when the regulatory action taken by us under the Federal Power Act and Natural

Gas Act will have a significant environmental impact. A "detailed statement" prepared in compliance with the requirements of §§2.81 through 2.82 of this Part shall fully develop the five factors listed hereinafter in the context of such considerations as the proposed activity's direct and indirect effect on the air and water environment of the project or natural gas pipeline facility; on the land, air, and water biota; on established park and recreational areas; and on sites of natural, historic, and scenic values and resources of the area. The statement shall discuss the extent of the conformity of the proposed activity with all applicable environmental standards. The statement shall also fully deal with alternative courses of action to the proposal and, to the maximum extent practicable, the environmental effects of each alternative. Further, it shall specifically discuss plans for future development related to the application under consideration.

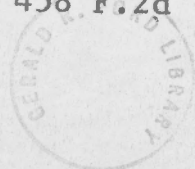
The above factors are listed to merely illustrate the kinds of values that must be considered in that statement. In no respect is this listing to be construed as covering all relevant factors.

The five factors which must be specifically discussed in the detailed statement are:

- (1) the environmental impact of the proposed action,
- (2) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (3) alternatives to the proposed action,
- (4) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (5) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Numerous comments were made on this section. The majority center on the proposals to amend the section in order to:
(a) comply with the consideration of alternatives required by the Morton case; 4/ and (b) meet the standard of planning under

4/ Natural Resources Defense Council v. Morton, 458 F.2d 827 (CADDC, 1972).



Section 10(a) 5/ of the Federal Power Act called for by Greene County. 6/

The relevant sentences read:

"The statement shall also fully deal with alternative courses of action to the proposal and to the maximum extent practicable, the environmental effects of each alternative. Further, it shall specifically discuss plans for future development related to the application under consideration."

This provision was criticized because the requirement that the statement "fully deal with alternative courses of action" was considered to be too broad, and the consideration of the environmental effects of each alternative "to the maximum extent practicable," was alleged to be too narrow.

It should be noted that this provision is to be construed in light of the standard of reasonableness put forth in the Morton decision. The Commission points out that, in addressing the responsibility of an agency for consideration of environmental effects of reasonable alternatives, the Court in Morton said that "crystal ball" inquiry is not required:

". . . NEPA was not meant to require detailed discussion of the environmental effects of 'alternatives' put forth in comments when these effects cannot be readily ascertained and the alternatives are deemed only remote and speculative possibilities . . ." 7/

5/ 16 U.S.C. 803(a)

6/ Greene County at 423, 424.

7/ Morton at 837, 838.

One comment suggests that the discussion of "plans for future development" should not be required unless such plans are "concrete," while another suggests that the discussion include all plans that are technically feasible.

Where the application under consideration is part of a larger plan for future development, we require a discussion of future plans in whatever detail is then available.

Some comments expressed concern that the proposed Section 2.80(b) does not give sufficient guidance in the preparation of impact statements. These regulations are meant to apply to actions involving a broad variety of activities; consequently, this section cannot provide detailed guidance for each application, but can offer only a broad framework within which individual statements must be prepared.

Section 2.80(b) is adopted as proposed.

(4) Section 2.80(c)(ii):

The proposal read:

Upon a finding that it is necessary and appropriate in the public interest the Commission may dispense with any time period specified in §§2.80-2.82.

At least one of the persons commenting misinterprets the purpose of this proposal, for it is assumed that the Commission intends to abrogate NEPA by acting without completing the required review. This is not the case.

The proposal did not contemplate taking action without completing the required environmental statement. It contemplates only a shortened time, in extraordinary circumstances, for review of draft and final statements prior to taking action on an application. Such action will be taken after due consideration of the interests of all, including concerned and responsible agencies as well as the parties to the proceeding.

Section 2.80(c)(ii) is adopted as proposed.

(5) Section 2.81(a):

The proposal read:

(a) All applications for major projects (those in excess of 2,000 horsepower) or for reservoirs only providing regulatory flows to downstream (major) hydroelectric projects under Part I of the Federal Power Act for license or relicense, shall be accompanied by Exhibit W, the applicant's detailed report of the environmental factors specified in §2.80 and §4.41. All applications for surrender or amendment of a license proposing construction, or operating change of a project shall be accompanied by the applicant's detailed report of the environmental factors specified in §2.80. Notice of all such applications shall continue to be made as prescribed by law.



One comment requests that application for projects "slightly in excess of 2,000 horsepower" be excluded from NEPA considerations on the grounds that such a project is not really a major project. This distinction is drawn from the Federal Power Act, 8/ wherein Congress determined that any project over 2,000 horsepower installed was a major project. We retain the distinction.

Section 2.81(a) is adopted as proposed.

(6) Section 2.82(a):

The proposal read:

All certificate applications filed under Section 7(c) of the Natural Gas Act (15 U.S.C. 717f(c)) for the construction of pipeline facilities, except abbreviated applications filed pursuant to Section 157.7(b), (c), (d) and (e) of Commission Regulations and producer applications for the sale of gas filed pursuant to Sections 157.23-29 of Commission Regulations, shall be accompanied by the applicant's detailed report of the environmental factors specified in §2.80. Notice of all such applications shall continue to be made as prescribed by law.

The comments raised the question as to whether the applicant's detailed report was the same as, in addition to, or in place of, Exhibit F-IV, required by Section 157.14(a)(6-d) of the Commission's Regulations under the Natural Gas Act. For the purpose of all certificate applications subject to §2.82(a), the applicant's detailed report of environmental factors specified in §2.80 replaces Exhibit F-IV. In those instances, Exhibit F-IV will not be required. However,

8/ 16 U.S.C. 803.

Exhibit F-IV will continue to be required in conjunction with all abbreviated applications filed in accordance with Sections 157.7(b), (c) and (d) of our Regulations under the Natural Gas Act. An appropriate clarifying amendment to these Regulations to this effect is provided hereinafter.

(7) Sections 2.81/2.82(b):

The proposal read:

The staff shall make an initial review of the applicant's report and, if necessary, require applicant to correct deficiencies in the report. If the proposed action is determined to be a major federal action significantly affecting the quality of the human environment, the staff shall conduct a detailed independent analysis of the action and prepare a draft environmental impact statement which shall be made available to the Council on Environmental Quality, the Environmental Protection Agency, other appropriate governmental bodies, and to the public, for comment. The Secretary of the Federal Power Commission shall cause prompt publication in the Federal Register of notice of the availability of the staff's draft environmental statement. All comments shall be made within 45 days of the date the notice of availability appears in the Federal Register. If any governmental entity, federal, state, or local, fails to comment within the time provided, it shall be assumed, absent a request for a specific extension of time, that such entity has no comment to make. All entities filing comments with the Commission shall submit ten copies of such comments to the Council on Environmental Quality. Upon expiration of the time for comment the staff shall consider all comments received and revise as necessary and finalize its environmental impact statement which, together with the comments received, shall accompany the proposal through the agency review and decision-making process and shall be made available to the Council

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on Environmental Quality and to the public. In the event the proposal is the subject of a hearing the staff's environmental statement will be offered in evidence at that hearing.

The first significant point raised by the comments deals with the obligation of Commission staff in the preparation of the draft and final environmental impact statements.

Apparently some of those filing comments feel that the requirement that staff "conduct a detailed independent analysis of the action and prepare a draft statement" does not adequately meet the command in Greene County that the staff prepare its own detailed statement.

Perhaps the notice was unclear as to what is meant by that requirement. It means that staff shall independently analyze all facets of the proposed action. That analysis shall include not only information supplied by applicant, but that available to staff from other sources. The analysis will most assuredly not be an "uncritical reliance" on applicant's filings.

Another comment requested that the Commission make it clear that staff would determine whether an action was a "major federal action." It is contemplated that staff will make an initial determination as to whether a staff draft environmental statement will be issued. However, that determination will be subject to review. The Commission feels there may be some instances in which it will have to make this determination itself, and hence reserves the right to do so.

Several comments were made on the length of time for filing comments. To those who criticize 45 days as an inadequate length of time in which to comment, the Commission points out that 45 days is half again as long as the 30-day period of time suggested by the Guidelines of the Council on

Environmental Quality. 9/

Another point concerned the provision for allowing governmental entities to request an extension of time for filing comments on the staff draft statement. Therefore, Sections 2.81/2.82(b) have been amended both to allow members of the public to request specific extensions of time, and to provide that no extension of time shall be granted to any entity except for good cause shown.

The proposal has also been amended to provide that all parties to the proceeding shall be served with draft and final environmental impact statements at the same time they are made available to the public.

Several of the comments requested that the Commission impose a strict time limit on its staff for the completion of each step in the procedures. The Commission will not do this, but will endeavor to ensure that these procedures will be implemented and followed with as little delay as possible.

Two points were made concerning the disposition of comments on the draft environmental impact statement.

The first dealt with the requirement that each entity making comment shall, at the time such comment is filed with the Commission, provide ten copies to the Council on Environmental Quality. It was suggested that this might be an undue burden to some, and that the Council "is the best judge of whether it needs 10 copies or one copy or any copies of the filing . . . in a Federal Power Commission proceeding." We point out that this provision is taken directly from Section 10(b) of the Council's Guidelines.

The second requested that entities filing comments with the Commission at the same time provide the applicant

9/ Section 7.

with a copy. The applicant prior to hearing will be provided a copy of the final statement, to which will be attached copies of all comments made on the draft statement. Furthermore, all comments will be available in the public files as soon as they are received by the Commission.

In accordance with the discussion above, Sections 2.81/2.82(b) are adopted to read:

(b) The staff shall make an initial review of the applicant's report and, if necessary, require applicant to correct deficiencies in the report. If the proposed action is determined to be a major federal action significantly affecting the quality of the human environment, the staff shall conduct a detailed independent analysis of the action and prepare a draft environmental impact statement which shall be made available to the Council on Environmental Quality, the Environmental Protection Agency, other appropriate governmental bodies, and to the public, for comment. The statement shall also be served on all parties to the proceeding. The Secretary of the Federal Power Commission shall cause prompt publication in the Federal Register of notice of the availability of the staff's draft environmental statement. Written comments shall be made within 45 days of the date the notice of availability appears in the Federal Register. If any governmental entity, federal, state, or local, or any member of the public, fails to comment within the time provided, it shall be assumed, absent a request for a specific extension of time, that such entity or person has no comment to make. Extensions of time shall be granted only for good cause shown. All entities filing comments with the Commission shall submit ten copies of such comments to the Council on Environmental Quality. Upon expiration of the time for comment the staff shall consider all comments received and revise as necessary and finalize its environmental impact statement which, together with the comments received, shall accompany the proposal through the agency review and decision-making process and shall be made available to the parties to the



proceeding, the Council on Environmental Quality, and the public. In the event the proposal is the subject of a hearing the staff's environmental statement will be placed in evidence at that hearing.

(8) Sections 2.81/2.82(c):

The proposal read:

(c) All interveners taking a position on environmental matters shall file comments on the environmental impact statement with the Commission including an analysis of their environmental position, specifying any difference with the statement upon which intervener wishes to be heard and including therein a discussion of that position in the context of the factors enumerated in §2.80, at a time specified by the Commission or the Presiding Administrative Law Judge. All interveners shall be responsible for filing ten copies of their filing with the Council on Environmental Quality, and at least one copy with the Environmental Protection Agency at the time they file with the Commission and shall also supply a copy of such filing to all participants to the proceeding. Nothing herein shall preclude an intervener from filing a detailed environmental statement. The comments of the Council on Environmental Quality, and the Environmental Protection Agency, if any, should be made in a written statement served upon the Commission Secretary and all parties of record.

Several comments pointed out that this section was confusing in some respects. The Commission has substantially amended this section to make it clear that intervention is permitted on the basis of the staff draft environmental statement. This intervention is governed by existing Commission procedures and will be limited to issues raised by the staff draft statement. In addition to its petition to intervene, each environmental intervener is required to file, pursuant to Section 2.81/2.82(b), comments on the staff draft environmental impact statement. These comments must, among other things, both analyze intervener's environmental position

in the context of the factors enumerated in Section 2.80, and specify any differences with the staff's position upon which the intervener wishes to be heard.

This is done so that Staff, in revising and finalizing its draft statement, will have the benefit of all possible comments. Certainly the comments of interveners will be most helpful.

Accordingly, Sections 2.81/2.82(c) are adopted to read:

(c) Any person may file a petition to intervene on the basis of the staff draft environmental statement. All interveners taking a position on environmental matters shall file timely comments, in accordance with paragraph (b) of this section, on the draft statement with the Commission including, but not limited to, an analysis of their environmental position in the context of the factors enumerated in §2.80, and specifying any differences with staff's position upon which intervener wishes to be heard. Nothing herein shall preclude an intervener from filing a detailed environmental impact statement.

The proposal read:

(d) The applicant, staff, and all interveners taking a position on environmental matters should offer evidence for the record in support of their environmental position, filed in compliance with the provisions of this section.

This section has been amended to require staff, applicant and intervener to offer evidence for the record in support of their environmental position; to require applicant and intervener to identify any differences which they might have with the staff's environmental position, and to discuss their environmental position in the context of the factors in Section 2.80. These requirements are in addition to any statement or comment that may have been made pursuant to Sections 2.81/2.82(a-c).

Sections 2.81/2.82(d) are adopted to read:

(d) In the case of each contested application, the applicant, staff, and all interveners taking a position on environmental matters shall offer evidence for the record in support of their environmental position. The applicant and all such interveners shall specify any differences with the staff's position, and shall include, among other relevant factors, a discussion of their position in the context of the factors enumerated in §2.80.

(10) Sections 2.81/2.82(e):

The proposal read:

(e) In the case of each contested application, the initial and reply briefs filed by the applicant, the staff and all interveners taking a position on environmental matters must specifically analyze and evaluate the evidence in the light of the environmental criteria enumerated in §2.80. Furthermore, the Initial Decision of the Presiding Administrative Law Judge in such cases and the final order of the Commission, if it approves the application, in all cases shall include an evaluation of the environmental factors enumerated in §2.80 and the views and comments expressed in conjunction therewith by the applicant and all those making formal comment pursuant to the provisions of this section.



One point raised was that the Commission should evaluate the environmental evidence in its final order on the merits whether or not it approves the application. This point is well-taken. Sections 2.81/2.82(e) are adopted to read:

(e) In the case of each contested application, the initial and reply briefs filed by the applicant, the staff and all interveners taking a position on environmental matters must specifically analyze and evaluate the evidence in the light of the environmental criteria enumerated in §2.80. Furthermore, the Initial Decision of the Presiding Administrative Law Judge in such cases, and the final order of the Commission dealing with the application on the merits in all cases, shall include an evaluation of the environmental factors enumerated in §2.80 and the views and comments expressed in conjunction therewith by the applicant and all those making formal comment pursuant to the provisions of this section.

The Commission finds:

(1) The revisions to the statement of policy herein adopted result primarily from the final mandate of the Second Circuit in the case of Greene County Planning Board v. F.P.C., 455 F.2d 412 (CA2, 1972), from review and consideration of the comments submitted in response to the notice of proposed rulemaking published October 30, 1972, and from experience derived by the Commission in its implementation of NEPA. These revisions differ in some respects from those proposed in that notice. However, to the extent that these revisions differ from those in the notice, they are in response to the comments received or as a result of Commission experience and are for the purpose of clarifying and strengthening the Commission's procedures in regard to the submission of applications and the preparation and circulation of environmental impact statements.

(2) Since the modifications to the amendments prescribed herein which were not included in the notice of this proceeding are of a minor nature, and are consistent with the prime purpose of the proposed rulemaking herein, further notice thereof is unnecessary.

(3) In view of the judicial mandate issued the Commission, and in view of the great importance and urgency of environmental problems, it is essential that the Commission promulgate these procedures respecting environmental statements at this time.

(4) The amendments to the Commission's General Rules and Regulations under the Federal Power Act adopted herein are necessary and appropriate for carrying out the provisions of the Federal Power Act, the Natural Gas Act, and the National Environmental Policy Act.

(5) Good cause exists that the amendments herein adopted become effective upon the issuance of this order.

The Commission acting pursuant to the provisions of the Federal Power Act, particularly Sections 4, 10, 15, 307, 309, 311 and 312 (41 Stat. 1065, 1066, 1068, 1070; 46 Stat. 798, 49 Stat. 839, 840, 841, 842, 843, 844, 856, 857, 858, 859, 860, Stat. 501, 82 Stat. 617; 16 U.S.C. 797, 803, 808, 825f, 825h, 825j, 825k), and the Natural Gas Act, particularly Sections 7 and 16 (52 Stat. 824, 825, 830, 56 Stat. 83, 84; 61 Stat. 459; 15 U.S.C. 717f, 7170), and the National Environmental Policy Act of 1969, P. L. 91-190, approved January 1, 1970, particularly Sections 102 and 103 (83 Stat. 853, 854) orders:

(A) The Statement of General Policy to implement procedures for compliance with the National Environmental Policy Act of 1969 in Part 2 - General Policy and Interpretations is revised to read as follows:

STATEMENT OF GENERAL POLICY TO IMPLEMENT
PROCEDURES FOR COMPLIANCE WITH THE
NATIONAL ENVIRONMENTAL POLICY ACT
OF 1969

§2.80 Detailed Environmental Statement.

(a) It shall be the general policy of the Federal Power Commission to adopt and to adhere to the objectives and aims of the National Environmental Policy Act of 1969 (NEPA) in its regulations under the Federal Power Act and the Natural Gas Act. The National Environmental Policy Act of 1969 requires, among other things, all federal agencies to include a detailed environmental statement in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment.

(b) Therefore, in compliance with the National Environmental Policy Act of 1969 the Commission staff shall make a detailed environmental statement when the regulatory action taken by us under the Federal Power Act and Natural Gas Act will have a significant environmental impact. A "detailed statement" prepared in compliance with the requirements of §§2.81 through 2.82 of this Part shall fully develop the five factors listed hereinafter in the context of such considerations as the proposed activity's direct and indirect effect on the air and water environment of the project or natural gas pipeline facility; on the land, air, and water biota; on established park and recreational areas; and on sites of natural, historic, and scenic values and resources of the area. The statement shall discuss the extent of the conformity of the proposed activity with all applicable environmental standards. The statement shall also fully deal with alternative courses of action to the proposal and, to the maximum extent practicable, the environmental effects of each alternative. Further, it shall specifically discuss plans for future development related to the application under consideration.

The above factors are listed to merely illustrate the kinds of values that must be considered in that statement. In no respect is this listing to be construed as covering all relevant factors.

The five factors which must be specifically discussed in the detailed statement are:

- (1) the environmental impact of the proposed action,
- (2) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (3) alternatives to the proposed action,
- (4) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (5) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

(c)(i) To the maximum extent practicable no final administrative action is to be taken sooner than ninety days after a draft environmental statement has been circulated for comment or thirty days after the final text of an environmental statement has been made available to the Council on Environmental Quality and the public.

(c)(ii) Upon a finding that it is necessary and appropriate in the public interest, the Commission may dispense with any time period specified in §§2.80-2.82.

§2.81 Compliance with the National Environmental Policy Act of 1969 under Part I of the Federal Power Act

(a) All applications for major projects (those in excess of 2,000 horsepower) or for reservoirs only providing regulatory flows to downstream (major) hydroelectric projects under Part I of the Federal Power Act for license or relicense, shall be accompanied by Exhibit W, the applicant's detailed report of the environmental factors specified in §2.80 and §4.41. All applications for surrender or amendment of

a license proposing construction, or operating change of a project shall be accompanied by the applicant's detailed report of the environmental factors specified in §2.80. Notice of all such applications shall continue to be made as prescribed by law.

(b) The staff shall make an initial review of the applicant's report and, if necessary, require applicant to correct deficiencies in the report. If the proposed action is determined to be a major federal action significantly affecting the quality of the human environment, the staff shall conduct a detailed independent analysis of the action and prepare a draft environmental impact statement which shall be made available to the Council on Environmental Quality, the Environmental Protection Agency, other appropriate governmental bodies, and to the public, for comment. The statement shall also be served on all parties to the proceeding. The Secretary of the Federal Power Commission shall cause prompt publication in the Federal Register of notice of the availability of the staff's draft environmental statement. Written comments shall be made within 45 days of the date the notice of availability appears in the Federal Register. If any governmental entity, federal, state, or local, or any member of the public, fails to comment within the time provided, it shall be assumed, absent a request for a specific extension of time, that such entity or person has no comment to make. Extensions of time shall be granted only for good cause shown. All entities filing comments with the Commission will submit ten copies of such comments to the Council on Environmental Quality. Upon expiration of the time for comment the staff shall consider all comments received and revise as necessary and finalize its environmental impact statement which, together with the comments received, shall accompany the proposal through the agency review and decision-making process and shall be made available to the parties to the proceeding, the Council on Environmental Quality, and the public. In the event the proposal is the subject of a hearing the staff's environmental statement will be placed in evidence at that hearing.

(c) Any person may file a petition to intervene on the basis of the staff draft environmental statement. All interveners taking a position on environmental matters shall file timely comments, in accordance with paragraph (b) of this section, on the draft statement with the Commission including, but not limited to, an analysis of their environmental position in the context of the factors enumerated in §2.80, and specifying any differences with staff's position upon which intervener wishes to be heard. Nothing herein shall preclude an intervener from filing a detailed environmental impact statement.

(d) In the case of each contested application, the applicant, staff, and all interveners taking a position on environmental matters shall offer evidence for the record in support of their environmental position. The applicant and all such interveners shall specify any differences with the staff's position, and shall include, among other relevant factors, a discussion of their position in the context of the factors enumerated in §2.80.

(e) In the case of each contested application, the initial and reply briefs filed by the applicant, the staff and all interveners taking a position on environmental matters must specifically analyze and evaluate the evidence in the light of the environmental criteria enumerated in §2.80. Furthermore, the Initial Decision of the Presiding Administrative Law Judge in such cases, and the final order of the Commission dealing with the application on the merits in all cases, shall include an evaluation of the environmental factors enumerated in §2.80 and the views and comments expressed in conjunction therewith by the applicant and all those making formal comment pursuant to the provisions of this section.

§2.82 Compliance with the National Environmental Policy Act of 1969 under the Natural Gas Act.

(a) All certificate applications filed under Section 7(c) of the Natural Gas Act (15 U.S.C. 717f(c)) for the construction of pipeline facilities, except abbreviated applications filed pursuant to Sections 157.7(b), (c) and (d) of Commission Regulations and producer applications for the sale of gas filed pursuant to Sections 157.23-29 of Commission Regulations, shall be accompanied by the applicant's detailed report of the environmental factors specified in §2.80. Notice of all such applications shall continue to be made as prescribed by law.

(b) The staff shall make an initial review of the applicant's report and, if necessary, require applicant to correct deficiencies in the report. If the proposed action is determined to be a major federal action significantly affecting the quality of the human environment, the staff shall conduct a detailed independent analysis of the action and prepare a draft environmental impact statement which shall be made available to the Council on Environmental Quality, the Environmental Protection Agency, other appropriate governmental bodies, and to the public, for comment. The statement shall also be served on all parties to the proceeding. The Secretary of the Federal Power Commission shall cause prompt publication in the Federal Register of notice of the availability of the staff's draft environmental statement. Written comments shall be made within 45 days of the date the notice of availability appears in the Federal Register. If any governmental entity, federal, state, or local, or any member of the public, fails to comment within the time provided, it shall be assumed, absent a request for a specific extension of time, that such entity or person has no comment to make. Extensions of time shall be granted only for good cause shown. All entities filing comments with the Commission shall submit ten copies of such comments to the Council on Environmental Quality. Upon expiration of the time for comment the staff shall consider all comments received and revise as necessary and finalize its environmental impact statement which, together with the comments received, shall accompany the proposal through the agency

review and decision-making process and shall be made available to the parties to the proceeding, the Council on Environmental Quality, and the public. In the event the proposal is the subject of a hearing, the staff's environmental statement will be placed in evidence at that hearing.

(c) Any person may file a petition to intervene on the basis of the staff draft environmental statement. All interveners taking a position on environmental matters shall file timely comments, in accordance with paragraph (b) of this section, on the draft statement with the Commission including, but not limited to, an analysis of their environmental position in the context of the factors enumerated in §2.80, and specifying any differences with staff's position upon which intervener wishes to be heard. Nothing herein shall preclude an intervener from filing a detailed environmental impact statement.

(d) In the case of each contested application, the applicant, staff, and all interveners taking a position on environmental matters shall offer evidence for the record in support of their environmental position. The applicant and all such interveners shall specify any differences with the staff's position, and shall include, among other relevant factors, a discussion of their position in the context of the factors enumerated in §2.80.

(e) In the case of each contested application, the initial and reply briefs filed by the applicant, the staff, and all interveners taking a position on environmental matters must specifically analyze and evaluate the evidence in the light of the environmental criteria enumerated in §2.80. Furthermore, the Initial Decision of the Presiding Administrative Law Judge in such cases, and the final order of the Commission dealing with the application on the merits in all cases, shall include an evaluation of the environmental factors enumerated in

§2.80 and the views and comments expressed in conjunction therewith by the applicant and all those making formal comment pursuant to the provisions of this section.

(B) The Commission amends Section 4.41, Required Exhibits in Part 4, Subchapter B, Regulations under the Federal Power Act, Chapter 1, Title 18 of the Code of Federal Regulations as follows:

Exhibit W. Applications covered by 18 CFR 2.81(a) shall be accompanied by an applicant's environmental report. Such report shall comply with the detailed requirements set down in 18 CFR 2.80-2.81, and shall include a one-page summary of the report. Furthermore, such report with its supporting papers shall be self-contained.

(C) The Commission amends Sections 157.7 and 157.14(a) (6-d), Part 157, Subchapter E, Regulations under the Natural Gas Act, Chapter I, Title 18 of the Code of Federal Regulations as follows:

Section 157.7, Abbreviated Applications, is amended by adding a new subsection (f) to read:

(f) All applications filed in accordance with subsections (b), (c) and (d) of this section shall include an Exhibit F-IV as prescribed in §157.14(a)(6-d).

Section 157.14(a)(6-d) is amended to read:

(6-d) Exhibit F-IV--Statement by the Applicant concerning the Requirements of the National Environmental Policy Act of 1969, Public Law 91-190, 83 Stat. 852, Title I, Section 102. All applications governed by §§157.7(b), (c) and (d) shall include a brief statement concerning the following factors:

* * * * *

(D) The amendments adopted herein shall be effective upon issuance of this order.

(E) The Secretary shall cause prompt publication of this notice to be made in the Federal Register.

By the Commission.

(S E A L)

Mary B. Kidd,
Acting Secretary.