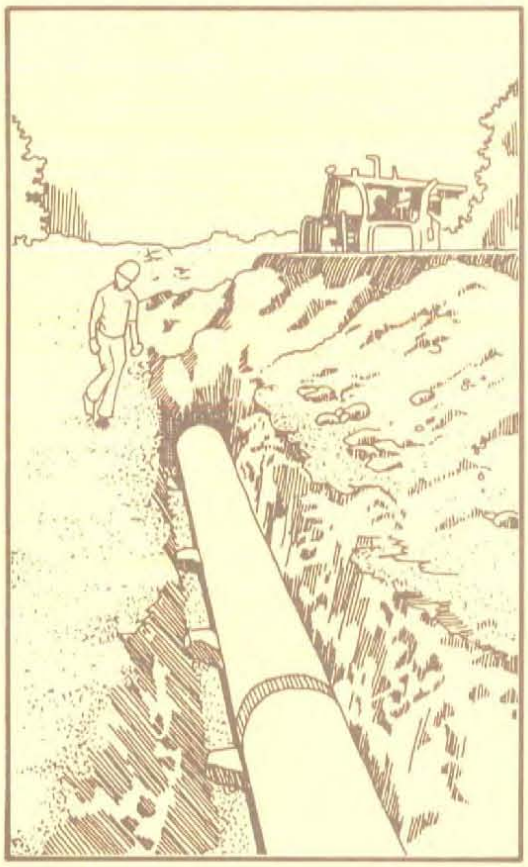
Federal Energy Regulatory Commission

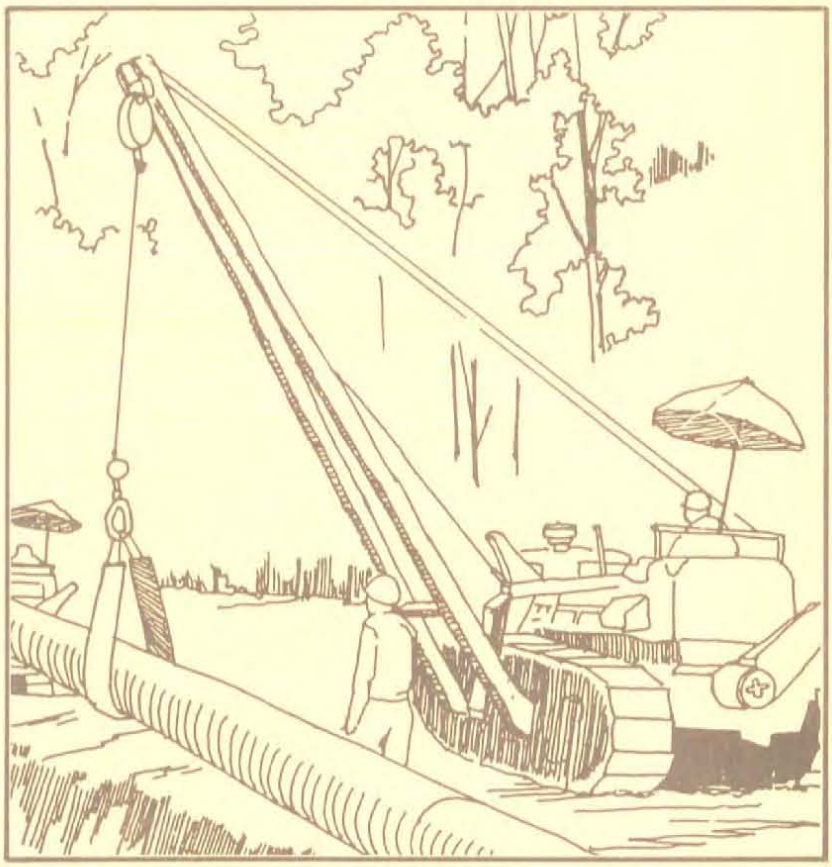
Office of Pipeline and Producer Regulation

June 1990

FERC/EIS 0057

Tennessee Gas Pipeline Company	Docket Nos.	CP88-171-001
Great Lakes Gas Transmission Company		CP89-892-000
Algonquin Gas Transmission Company		CP88-187-002
CNG Transmission Corporation and Texas Eastern Transmission Corporation		CP88-195-002
CNG Transmission Corporation		CP89-712-000
Transcontinental Gas Pipe Line Corporation		CP89-7-001
		CP89-710-000
		CP89-2205-000
Texas Eastern Transmission Corporation		CP89-711-000
National Fuel Gas Supply Corporation and Penn-York Energy Corporation		CP88-194-001





NIAGARA IMPORT POINT PROJECT

Final Environmental Impact Statement

Volume II
Comments and Responses

WASHINGTON, DC 20426

NIAGARA IMPORT POINT PROJECT

Final Environmental Impact Statement

Volume II
Comments and Responses

LEAD AGENCY

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF PIPELINE AND PRODUCER REGULATION

COOPERATING AGENCIES

U.S. DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
U.S. DEPARTMENT OF AGRICULTURE
U.S. FOREST SERVICE
U.S. DEPARTMENT OF ENERGY

CONTACT

Lonnie Lister, Deputy Project Manager Phone: (202) 208-2191

NIAGARA IMPORT PROJECT
FINAL ENVIRONMENTAL IMPACT STATEMENT

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FINAL ENVIRONMENTAL IMPACT STATEMENT

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3.0 COMMENT RESPONSES

1.0 INTRODUCTION

The FERC received 44 letters of commentary during the public review period. A list of organizations and persons who provided comment letters is presented in section 2.0. The public comments are contained in section 3.0. In most cases the appendices to these letters have not been reprinted in the FEIS because of their volume. A complete set of these letters is available for public review at the FERC Public Reference and File Management Branch, Room 3300D, 941 North Capitol Street, Washington, DC, 20426.

2.0 COMMENTOR INDEX

Comments have been grouped in one of four categories: F-Federal; S-State; L-Local; and G-Private citizens and organization and industry representatives. In each case the document number identifies a discrete letter.

Document Number	Commentor
F1	U.S. Department of Health and Human Services, Public Health Service, Atlanta, Georgia, Kenneth W. Holt
F2	U.S. Department of the Army, Buffalo District, Corps of Engineers, Hugh F. Boyd III
F3	U.S. Department of Agriculture, Soil Conservation Service, East Lansing, Michigan, Homer R. Hilner
F4	U.S. Department of the Army, Philadelphia District, Corps of Engineers, Robert L. Callegari
F5	U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Washington, D.C., David Cottingham
F6	U.S. Department of the Interior, Office of the Solicitor, Newton Corner, Massachusetts, Anthony R. Conte
F7	U.S. Department of the Interior, Fish and Wildlife Service, Newton Corner, Massachusetts, Ronald E. Lambertson

Document Number	Commentor
F8	U.S. Department of Agriculture, Forest Service, Hiawatha National Forest, Dr. R. Kenneth Holtje
F9	U.S. Department of Agriculture, Forest Service, Ottawa National Forest, Charles G. Bartlett
F10	U.S. Department of Agriculture, Forest Service, Chequamegon National Forest, Jack A. Blackwell
F11	U.S. Department of Agriculture, Forest Service, Chippewa National Forest, Mary B. LaPlant
F12	U.S. Department of Agriculture, Forest Service, Chequamegon National Forest, Paul Pedersen
F13	U.S. Department of Agriculture, Soil Conservation Service, Ashland, Wisconsin, Thomas L. Cogger
F14	U.S. Environmental Protection Agency, Region 5, Chicago, Illinois, Valdas V. Adamkus
S1	State of Wisconsin Department of Agriculture, Trade, and Consumer Protection, Nina M. Berkani
S2	New York State Office of Parks, Recreation and Historic Preservation, Julia S. Stokes
S3	Commonwealth of Pennsylvania, Department of Environmental Resources, Keith R. Gentzler
S4	Massachusetts Historical Commission, Brona Simon
S5	Rhode Island Department of Environmental Management, Victor A. Bell
S6	State of Massachusetts, Energy Facilities Siting Council, Stephen Klionsky

Document Number	Commentor
S7	Rhode Island Historical Preservation Commission, Edward F. Sanderson
S8	State of Wisconsin Department of Natural Resources, Northwest District Headquarters, William H. Clark
S9	State of Connecticut, Joan Maloney
S10	New York State Department of Public Service, New York State Pipeline Task Force, Richard A. Solomon and David D'Alessandro
S11	State of Minnesota, Department of Natural Resources, Thomas W. Balcom
S12	State of Minnesota, Department of Natural Resources, Division of Fish and Wildlife, Paul Stolen
L1	Town of DeWitt, New York, Burton Lowitz
L2	County of Marquette, Resource Management and Development Department, Michigan, Gwen Timmons
L3	Town of Holliston, Massachusetts, Office of the Engineer, Ivan R. Lopez
L4	Town of Medway, Medway Planning Board, Allan B. Fraser
L5	City of Norwich, Connecticut, Ernest Zmyslinski
L6	Town of Hopkinton, Massachusetts, Office of the Selectmen, Theodore D. Kozak
L7	Town of Longmeadow, Massachusetts, Conservation Commission, Anne C. Rogers

Document Number	Commentor
L8	Town of Longmeadow, Massachusetts, Board of Selectmen, Edward T. Heaphy, Jr.
G1	Medway, Massachusetts, Jay Newton
G2	Williamsville, New York, James S. Cumming
G3	Framingham, Massachusetts, Michael Greenburg
G4	Great Lakes Gas Transmission Company, Detroit, Michigan
G5	CNG Transmission Corporation, Clarksbury, West Virginia
G6	Algonquin Gas Transmission Company, Boston, Massachusetts
G7	Texas Eastern Gas Pipeline Company
G8	Niagara Mohawk Power Corporation, Syracuse, New York
G9	Marquette, Michigan, M. Jean Ferrill
G10	Tennessee Gas Pipeline Company, Houston, Texas

SECTION 3.0

COMMENT RESPONSES

F1

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

FILED
OFFICE OF THE SECRETARY
90 MAR 30 PM 4: 32
FEDERAL ENERGY
REGULATORY COMMISSION

Centers for Disease Control
Atlanta GA 30333
March 23, 1990

Secretary
Federal Energy Regulatory Commission
825 North Capitol Street N.E.
Washington, DC 20426

Dear Sir:

We have completed our review of the Draft Environmental Impact Statement (DEIS) for the Niagra Import Point Project (Docket No. CP88-171-001). We are responding on behalf of the U.S. Public Health Service.

Our major concerns with the proposed project pertain to human safety, protection of water resources, and potential exposure to hazardous substances. We believe, however, that the mitigation measures recommended by the Federal Energy Regulatory Commission are appropriate and necessary to avoid or reduce adverse impacts. We stress that the successful implementation of these measures will determine the ultimate benefit. Therefore, we agree with the recommendation that a qualified "environmental inspector per construction spread" be present at all times during construction to carefully monitor the construction process. The onsite inspector should pay particular attention to worker and public safety, potential contamination of aquifers and surface waters, and emergency response preparedness for potential spills of hazardous substances, in addition to routine construction requirements. 1

We note that all applicable Federal and State regulations will be adhered to, and an assessment of the impact of any new air emissions is required to ensure compliance with the National Ambient Air Quality Standards. We were pleased to note that modern technology designs for automatic shut downs at compressor stations will be used in this project for mechanical failures, presence of unsafe gas mixtures, and excessive heat or flame.

Thank you for the opportunity to review and comment on this DEIS. Please insure that we are included on your mailing list for the Final EIS and future DEIS's which may indicate potential public health impact and are developed under the National Environmental Policy Act (NEPA).

Sincerely yours,

Kenneth W. Holt

Kenneth W. Holt, M.S.E.H.
Environmental Health Scientist
Center for Environmental Health
and Injury Control

cc:
Mr. Kurt Flynn, Project Manager

F1-1 Comment acknowledged. The applicant will comply with Occupational Safety and Health Administration regulations, which protect the health and safety of workers and the public. Potential contamination of surface waters and aquifers is discussed in sections 5.1.3.1.1 and 7.3.

recd 4/2/90

F2

DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

REPLY TO ATTENTION OF

March 26, 1990

Regulatory Branch

SUBJECT: Review of Draft Environmental Impact Statement for the Proposed Niagara Import Point Project, Docket No. CP88-171-001, Department of the Army Processing No. 90-976-58

Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Dear Sir:

This is in response to your request for comments on the Draft Environmental Impact Statement (DEIS) for the proposed Niagara Import Point Project.

The DEIS has been reviewed for the activities being proposed within the Buffalo District's jurisdiction in Erie, Livingston, Niagara, Ontario, Onondaga and Wyoming Counties in the State of New York.

During the review of the DEIS it was determined that several federally listed Threatened and Endangered Species of plants and wildlife that may occur in New York State were not discussed in the document.

The following is a complete list of federally listed Threatened and Endangered Species that could occur in the proximity of the proposed activities:

1

F2-1 The scope of the discussion of endangered and threatened species in the DEIS was limited to species that could potentially be affected by the proposed projects. Species that could potentially be affected in New York were identified based on consultation with the FWS, NMFS, NYDEC, and NYNHP. None of the species on this list were identified as a potential concern during consultations with these agencies.

Regulatory Branch
SUBJECT: Review of Draft Environmental Impact Statement for the Proposed Niagara Import Point Project, Docket No. CP88-171-001, Department of the Army Processing No. 90-976-58

Common Name	Scientific Name	Status	Distribution
Bald Eagle	Haliaeetus leucocephalus	E	Entire state
American Peregrine Falcon	Falco peregrinus tundrius	E	Entire state
Piping plover	Charadrius melodus	E	Great Lakes watershed
Indiana bat	Myotis sodalis	E	Entire state
Eastern cougar	Felis concolor cougar	E	Entire state
Grey wolf	Canis Lupus	E	Entire state
Small whorled pogonia	Botria medeoloides	E	Entire state
American Hart's tongue fern	Phyllitis scolopendrium	T	Madison and Onondaga Counties
Eastern prairie fringed orchid	Platanthera leucophaea	T	Entire state
American burying beetle	Nicrophorus americanus	E	Entire state

1

Regulatory Branch
SUBJECT: Review of Draft Environmental Impact Statement for the Proposed Niagara Import Point Project, Docket No. CP88-171-001, Department of the Army Processing No. 90-976-58

The proposed compressor and metering stations, and the proposed pipeline segments should, to the greatest extent practicable, be located/routed to avoid encroachment into wetlands subject to jurisdiction under Section 404 of the Clean Water Act. In areas where it will be necessary to encroach or transverse wetlands, infringement should be minimized. Notwithstanding, during our final evaluation of the proposed project, practicable alternatives to locating facilities and routing the pipeline in and through wetlands will be considered as required by the U.S. Environmental Protection Agency Guidelines for Specification of Disposal Sites for Dredged or Fill Material at Title 40 of the Code of Federal Regulations Part 230. In addition, it is recommended that the applicant's delineate all wetlands in the vicinity of the compressor and metering station sites, as well as all the wetlands that the pipeline will transverse. The wetland delineations should be conducted using the procedures set forth in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands. 2 3

The pipeline crossing of the Niagara River will require authorization under Section 10 of the Rivers and Harbors Act of 1899, and possibly under Section 404 of the Clean Water Act, for which an individual permit will be required. In addition, crossings of waterways and wetlands that will require the discharge of fill to construct access roads, lay down pads or other temporary structures to facilitate the work will also require individual Department of the Army permits. 4 5

Questions pertaining to this matter should be directed to Mr. Gary McDannell, who may be contacted by calling 716-879-4322, or by writing to the above address.

Sincerely,

Arthur B. Marks

for Hugh F. Boyd III
Colonel, U.S. Army
Commanding

F2-2 We believe that the pipeline route as recommended in the DEIS minimizes encroachment into wetlands to the maximum extent practicable. However, this is balanced against the goal of utilizing existing rights-of-way wherever possible. As noted in the Stream and Wetland Construction and Mitigation Procedures (appendix D), aboveground facilities (compressor and meter stations) may not be placed in federally delineated wetlands. None of the four new compressor or meter stations that are proposed as part of the NIP Project would be located within NWI-mapped wetlands.

F2-3 Thank you for your comment. Since publication of the DEIS, we have added a condition to the Stream and Wetland Construction and Mitigation Procedures that requires each applicant to delineate wetlands using the procedures set forth in the Federal manual for identifying and delineating jurisdictional wetlands. All wetlands must be field-delineated prior to construction.

F2-4 Tennessee indicated to FERC, as presented in section 5.1.3.2.2, that the proposed Niagara River crossing would be constructed utilizing directional drilling methods. A Section 404/10 authorization from the COE would not be needed if this method is utilized.

F2-5 Thank you for your comment.

F3

United States Department of Agriculture

Soil Conservation Service

1405 South Harrison Road, Room 101
East Lansing, Michigan
48823

March 21, 1990

File Code: 190-15-3

Secretary, Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Docket No. CP88-171-001

This will acknowledge receipt of your correspondence of March, 1990 concerning the Niagara Import Point Project.

We are glad to see that in Michigan, after construction, agricultural lands will be converted back to agricultural use. We recommand that Great Lakes segregate the top soil from the trench material for replacement during final clean-up for all cultivated lands. 1

It is the policy of the United States Department of Agriculture and the Soil Conservation Service to discourage the conversion of prime and/or unique agricultural lands. 2

It is our recommendation that Appendix C be followed to control soil erosion and sedimentation on disturbed areas. 3

In Michigan, approximately 59 miles of wetlands will be crossed. Landowners who participated in USDA programs could jeopardize their eligibility for many USDA programs if they plant an annually planted crop on these altered wetlands. 4

If we can be of further assistance to you, our area conservationists serving Michigan are as follows:

Gogebic, Iron, Dickinson, Marquette, Delta, Schoolcraft and Mackinac Counties:

Bernard F. Huetter
Area Conservationist
Soil Conservation Service
201 Rublein Street
Marquette, Michigan 49855-4094
Phone: 906-226-8871

Emmet, Charlevoix, Kalkaska and Missaukee counties:

Alan G. Herceg
Area Conservationist
Soil Conservation Service
3191 Logan Valley Road
Traverse City, Michigan 49684-4772
Phone: 616-946-6811

The Soil Conservation Service is an agency of the Department of Agriculture

F3-1 Per our Erosion Control, Revegetation, and Maintance Plan (appendix C), all applicants are required to segregate the topsoil in all actively cultivated agricultural lands, which includes permanent or rotated cropland and hayfields. The topsoil is to be stripped and stored separately from the trench material and replaced in the final steps of the cleanup phase of construction.

F3-2 Pipeline construction will not convert any prime and/or unique agricultural lands.

F3-3 This is our recommendation as well (see section 7.3). Thank you for your comment

F3-4 Per our Stream and Wetland Construction and Mitigation Procedures (appendix D), the applicants are not permitted to convert wetlands. All wetlands with the exception of forested wetlands, must be restored to their preconstruction conditions.

Landowners would be contacted by the applicants before revegetation measures are taken to insure that site-specific requests are fulfilled as is discussed in section 5.1.2.2 and in the Erosion Control, Revegetation, and Maintenance Plan (appendix C).

United States Department of Agriculture
Soil Conservation Service
1405 South Harrison Road, Room 101
East Lansing, Michigan
48823

Cheboygan, Otsego, Crawford, Clare, Isabella, Midland, Gratiot and Saginaw Counties:

Keith R. Martell
Area Conservationist
Soil Conservation Service
501 Norway Street
Crayling, Michigan 49738-1719
Phone: 517-348-9523

Genesee, Lapeer, Macomb and St. Clair Counties:

Percy Magee, Jr.
Area Conservationist
Soil Conservation Service
225 East Fifth Street, Rm. 302
Flint, Michigan 48502-1641
Phone: 313-766-5192

We appreciate the opportunity to review and comment on this proposed project.

Sincerely,

Homer R. Hilner
State Conservationist

cc: Mr. Kurt Flynn, Project Manager, Office of Pipeline and Production Regulation, Room 7312, 825 North Capitol St. N.E., Washington, D.C. 20426
Bernard F. Huetter, Area Conservationist, SCS, Marquette, Michigan
Alan G. Herceg, Area Conservationist, SCS, Traverse City, Michigan
Keith R. Martell, Area Conservationist, SCS, Grayling, Michigan
Percy Magee, Jr., Area Conservationist, SCS, Flint, Michigan
James B. Newman, Director, Ecological Sciences Division, SCS, Washington, D.C.

HRH:lcs:kp 9417D

F4

DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
CUSTOM HOUSE—2 D & CHESTNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106-2991

REPLY TO ATTENTION OF

APR 13 1990

FILED
OFFICE OF THE SECRETARY
90 APR 17 PM 3:17

Environmental Resources Branch

Ms. Lois D. Cashell
Secretary, Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Dear Ms. Cashell:

Thank you for giving us the opportunity to review and comment on the Niagara Import Project Draft Environmental Impact Statement, Docket No. CP88-171-001. Please note that the April 2, 1990 deadline for comments cited in your Notice of Availability dated March 16, 1990 is not in compliance with the required 45 day comment period under the National Environmental Policy Act. Our comments are being provided in advance of the actual due date of April 30, 1990.

Those actions proposed in the Draft Environmental Impact Statement within our jurisdiction consist of the Transcontinental Gas Pipe Line Corporation's (Transco) proposed Leidy Loop pipeline and compressor stations in Luzerne County, Pennsylvania and Mercer County, New Jersey. The environmental factors that may be impacted by the proposed project appear to be sufficiently addressed in the report. However under current Federal regulations, specifically Section 10 of the River and Harbor Act of 1899, a Department of the Army permit is required for any work involving the obstruction or alteration of any navigable water of the United States. This would apply to Transco's proposed pipeline crossing of the Delaware River referenced on page 5-33. In addition, the work related to the disruption of wetlands by the proposed pipeline must be in compliance with Department of the Army Nationwide Permit No. 12, for utility line crossings which requires the return of the ground surface to the original elevation following construction activities. The requirement for both of these permit actions should be included in the Final Environmental Impact Statement.

1

2

If you have any questions regarding this matter, please contact Roy E. Denmark, Jr., Chief, Environmental Resources Branch at (215) 597-4833 or Barbara M. Heirendt at (215) 597-6800.

Sincerely,

for John A Burner

Robert L. Callegari
Chief, Planning Division

Copy Furnished:

FERC, Mr. Kurt Flynn

F4-1 Comment noted. Information has been incorporated into section 5.1.3.2.2.

F4-2 Section 5.1.7.2 and section II(C)(2) of the Stream and Wetland Construction and Mitigation Procedures (appendix D) contain the condition that the applicant shall "comply with nationwide Section 404 permit conditions (33 CFR § 330) at a minimum." This includes all conditions for all nationwide permits that may apply to the proposed projects. However, section 5.1.7 has been modified to include the specific conditions that apply to Nationwide Permit No. 12.

F5

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of the Chief Scientist
Washington, D.C. 20230

March 30, 1990

Honorable Lois D. Cashell
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Dear Ms. Secretary:

Enclosed are comments to your Draft Environmental Impact Statement for the Niagara Import Point Project, Project No. CP88-171-001. We hope our comments will assist you. Thank you for giving us an opportunity to review the document.

Sincerely,

David Cottingham
Director
Ecology and Environmental
Conservation Office

Enclosure

cc: Mr. Kurt Flynn (with geodetic controls)
Project Manager
Environmental Policy and Project Analysis Branch
Office of Pipeline and Producer Regulation

F5

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

MAR 28 1990

MEMORANDUM FOR: David Cottingham
Ecology and Environmental Conservation Office
Office of the Chief Scientist

FROM: Rear Admiral Wesley V. Hull, NOAA
Director, Charting and Geodetic Services

SUBJECT: DEIS 9003.04 - Niagara Import Point Project-
(New York, New Jersey, Pensylvania, Connecticut, Rhode Island, Massachusetts, Michigan, Wisconsin, and Minnesota)

The subject statement has been reviewed within the areas of Charting and Geodetic Services' (C&GS) responsibility and expertise and in terms of the impact of the proposed actions on C&GS activities and projects.

A preliminary review of C&GS records has indicated the presence of both horizontal (H) and vertical (V) geodetic control survey monuments in the proposed project area. Attached is a listing of published and unpublished geodetic control data for each of the above mentioned states which are impacted by the proposed project. Also accompanying this memorandum are the geodetic control quadrangles, project descriptions, and other information pertaining to the geodetic control survey monuments which may be affected by the project.

This information should be reviewed for identifying the location and designation of any geodetic control monuments that may be affected by the proposed project. If there are any planned activities which will disturb or destroy these monuments, C&GS requires not less than 90 days' notification in advance of such activities in order to plan for their relocation. C&GS recommends that funding for this project includes the cost of any relocation required for C&GS monuments. For further information about these monuments, please contact the National Geodetic Information Branch, N/CG17, Rockwall Bldg., room 20, National Geodetic Survey, NOAA, Rockville, Maryland 20852, telephone 301-443-8631.

Attachments

cc:
N/CG1x15 - Robinson
N/CG1x17 - Putziger
N/CG1x18 - Ramsey
N/CG1x23 - Moyer
N/CG1x24 - Baugh
N/CG1x26 - Hoyle
N/CG1x32 - Cohen
N/CG17 - Spencer

MAR 28 1990
RECEIVED

F5-1 Normal construction practices include contingencies for avoiding or replacing survey monuments.

1

NIAGARA IMPORT POINT PROJECT

Listing of Geodetic Control Survey Monuments by State

PUBLISHED GEODETIC CONTROL DATA			UNPUBLISHED FIELD PROJECTS	
Quadrangle	Horizontal	Vertical	Horizontal	Vertical
Minnesota				
480962	X	X		L25142, pt 3
470951	X	X		
470942	X	X		
470933	X	X		
470932	X	X		
Wisconsin				
460914	X	X		
460911	X	X		
460902	X	X (Also covers Michigan)		
460901	X	X (Also covers Michigan)		
460893	X	X (Also covers Michigan)		
460892	X	X (Also covers Michigan)		
460883		X (Also covers Michigan)		
Michigan				
460873		X	G15915	L24372
460872		X	G16003	L24465, pt 3
460853		X	G16097	
460852	X	X	G16111	
450871		X	G16456	
450864		X		
450861		X		
450844	X	X		
450843	X	X		
440844	X	X		
430832		X		
430823		X		
420831		X		
420824		X		
New York, Pennsylvania, and New Jersey				
430783 (NY)	X		G16598 (NY)	L24235 (NY)
420784 (NY)	X		G16943 (NY)	
400774 (PA)	X	X		
400751 (PA/NJ)	X	X		
Connecticut, Massachusetts, and Rhode Island				
410721 (CT)		X		
410711 (MA/RI)		X		

F6

United States Department of the Interior
OFFICE OF THE SOLICITOR
One Gateway Center — Suite 612
Newton Corner, MA 02158-2868

90 APR 30 AM 9:25

(617) 965-5100, ext. 258
FTS: 829-9258

IN REPLY REFER TO:

April 27, 1990

VIA FAX AND AIRBORNE EXPRESS

Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

RE: Draft Environmental Impact Statements (FERC/EIS 0057D) - Niagara Import Point Project:
Docket Nos. CP88-171-001, CP88-892-000, CP88-187-001, CP88-195-002, CP88-712-000, CP89-7-001, CP89-710-000, CP89-711-000, CP88-194-001.

NOTICE RE DEPARTMENT OF INTERIOR INTERVENTION

Dear Ms. Cashell:

It will not be possible for the Department of the Interior to complete its review process and therefore prepare an Intervention within the comment date indicated in the Federal Energy Regulatory Commission's Notices in the above-referenced matters, April 30, 1990.

The Department has statutory responsibility as to matters which would be addressed in its Intervention.

Notice is hereby given that there is a considerable likelihood that an Intervention will be filed by the Department, subject to the Department's proceeding with an intervention being approved at the Departmental's Washington level. This process will entail a period of time. 1

The Department will require at least a 60-day period beyond April 30, 1990 in order that it have an opportunity to exercise its authority and hereby requests that the comment date be so extended.

FOR THE DEPARTMENT OF THE INTERIOR

ANTHONY R. CONTE
Regional Solicitor

Original and 14 Copies to FERC Secretary
Copy to Project Manager at FERC

F6-1 The official deadline for the comment period was not extended. However, on May 1, 1990, in response to this letter, we contacted the FWS to ask that they provide us with their issues and concerns as soon as possible. These comments were not received as of May 14, 1990.

F7

United States Department of the Interior

FISH AND WILDLIFE SERVICE
ONE GATEWAY CENTER, SUITE 700
NEWTON CORNER, MASSACHUSETTS 02158

90 APR 30 AM 9:26

APR 27 1990

Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

RE: Niagara Import Point Project:
Docket Nos. CP88-171-001, CP88-892-000, CP88-187-001, CP88-195-002, CP88-712-000, CP89-7-001, CP89-710-000, CP89-711-000, CP88-194-001.

Dear Ms. Cashell:

The U.S. Fish and Wildlife Service (Service) anticipates filing comments on the proposed project. However, it will not be possible for the Service to complete its review process and therefore file comments within the comment date indicated in the Federal Energy Regulatory Commission's Notices in the above-referenced matters, April 30, 1990.

The U.S. Fish and Wildlife Service has statutory responsibility as to matters which would be addressed in its comments. The proposed project includes miles of pipeline across multiple states and 10 new power plants. Construction would involve wetland and river crossings as well as vegetation clearing and wildlife habitat alteration and perhaps endangered species. The necessary coordination between the Service's offices in the various Regions has just been completed. 1

The Service will require at least a 10-day period beyond April 30, 1990 in order that it have an opportunity to exercise its authority and hereby requests that the comment date be so extended.

Sincerely yours,

Ronald E. Lambertson

Regional Director

Original and 14 Copies to FERC Secretary
Copy to Project Manager at FERC

F7-1 The official deadline for the comment period was not extended. However, on May 1, 1990, in response to this letter, we contacted the FWS to ask that they provide us with their issues and concerns as soon as possible. These comments were not received as of May 14, 1990.

United States
Department of
Agriculture

Forest
Service

Hiawatha National Forest
P.O. Box 316
Escanaba, Michigan 49829

Date: April 27, 1990

Reply to: 1950/2370

Subject: Niagara Import Point (NIP) Project (Docket #CP88-171-001)

To: Secretary, Federal Energy Commission

My staff completed a review of the DEIS for this project. We provided the enclosed comments (Attachment A) to make the Final Environmental Impact Statement stronger for the portions of the project (Great Lakes Gas Transmission Company Loops 11 and 12) crossing the Hiawatha National Forest.

I commend your staff for producing such a thorough DEIS for a large, complex project. I'm confident that you will accept our comments and those of the other 3 National Forests (Michigan, Wisconsin, and Minnesota) to improve an already good document. Page references are given whenever possible for clarity. The majority of our comments regard easily resolved details of mitigation measures and wording of specific passages of text in the DEIS. We identified two, more difficult, aspects of this project and desire continued dialogue with your staff to resolve.

The first is the Sturgeon River crossing of a candidate Wild, Scenic, or Recreation River and part of pending legislative action. The Sturgeon River corridor is also a candidate for designation by the Chief of the Forest Service as a Research Natural Area. This is a very controversial subject for the Hiawatha National Forest. The construction method proposed for this crossing (drilling and blasting in the river bed) is of great concern to us. The second potential problem area is where Loop 12 passes through another candidate Research Natural Area, the Pointe aux Chenes area in Mackinac County.

We enclosed a copy of the letter that went out to all the interested parties along with a mailing list. As requested, we included copies of all the responses received to date.

Again, thank you for the opportunity to examine and comment on the DEIS for the NIP project. We look forward to seeing the FEIS.

for DR. R. KENNETH HOLTJE
Forest Supervisor

Enclosure

Hiawatha National Forest Review Comments

Niagara Import Project DEIS
Federal Energy Regulatory Commission

April 25, 1990

General Comments:

1. The Lake States National Forests recently decided to suspend our own herbicide use. Use of herbicides to maintain the pipeline will require permittees to assume the cost and responsibility for pesticide risk assessment and EIS preparation for Forest Service review and consideration. 1

2. Bald eagle territory locations are adequately covered unless a subsequent survey turns up a new nesting site. Likewise, the piping plover is adequately covered unless a subsequent survey turns up a new nesting site. 2

3. The grey wolf is being monitored in the western part of Michigan's U.P. but not for the central and eastern parts. Our Forest Plan obligates us to protect potential habitat. 3

4. The DEIS appears to have both recommendations and requirements included; it is not clear which is which. 4

5. Point aux Chenes River and Moran Creek are not included in the Michigan list of streams. 5

6. The Forest Service's E.A. process will surface the areas in which ATV use is a problem and traffic control will be required. The Hiawatha Forest Plan currently lists Level 2 roads as commonly found within the pipeline R-O-W as open to ATV use unless posted closed. We are currently looking closely at changing that policy to list rights-of-way as closed unless posted as open. 6

7. The wood turtle was not mentioned for the Sturgeon River corridor. The area should be surveyed for wood turtle habitat and presence. 7

8. Seed mixes used for revegetation should allow for local variation. Consideration should be given to using the locally occurring species. Dunes should be seeded with native grasses or plugs as appropriate. Reference 1920 Memo, dated April 26, 1990. 8

9. T&E plant protection will be a "must". Surveys must be performed at the appropriate times to assure location of communities, and the subsequent protection thereof. 9

10. The protection of the visual resource through vegetative screenings at major traffic crossings must be undertaken. We are interested in working with the applicant's representatives to designate specimen/feature reserve trees to enhance the wildlife and visual resources. 10

11. Brook and brown trout, and salmon are fall spawners. Fish eggs are in the spawning gravels from October to June, including spring steelhead activity. 11

F8-1 Comment noted.

F8-2 Comment noted.

F8-3 Comment noted.

F8-4 Throughout the EIS we have recommended specific requirements/mitigating measures for the applicants to implement. These specific requirements/mitigating measures are discussed in section 7. We will recommend to the Commission that all of the specific requirements/mitigating measures contained in section 7 be made part of any certificate issued in the proceeding. However, the Commission will make the decision on what conditions (recommendations) are included in the certificate.

F8-5 Comment noted. The Point aux Chenes River has been added to table 4.1.3-6. The Moran River is crossed by the proposed route on Loop 12 at MP 677.5.

F8-6 Comment noted. Our recommendation for implementation of appendix C specifies that ATV controls are to be installed and maintained at the request of each owner or manager of forestlands.

F8-7 Thank you for your comment. Great Lakes has indicated that several areas of wood turtle habitat have been identified, and that these areas will be surveyed to determine if wood turtles are present (see comment G4-20). This includes potential habitat along the Sturgeon River. Sections 4.1.5 and 5.1.5 have been modified to include the potential presence of the wood turtle along proposed Great Lakes loops.

F8-8 The Erosion Control, Revegetation, and Maintenance Plan in appendix C, section V, includes the option of alternative seed mixtures at the request of land-managing agencies. Site-specific concerns within national forests can be addressed as conditions to special-use permits issued to the applicant by the Forest Service. We have reviewed Hiawatha's recommendations for technical content and for consistency with our plan. Special site-specific seedings and construction methods would result from these recommendations.

F8-9 Thank you for your comment. Please see Great Lakes comment (G4-68) regarding plant surveys scheduled to be conducted within National Forest lands.

F8-10 Comment noted.

F8-11 Comment noted, although by June most salmonid eggs from fall spawners have hatched and are in the water column. Spring spawning steelhead are an exception and we have made specific recommendations to avoid construction during June in noted steelhead habitat. Our stream crossing procedures are consistent with protection of salmonid habitat.

12. In-stream sediment basins may be used to collect sediment produced by construction activities. Dredge and fill permits must be obtained from the MDNR for all such sediment basins prior to construction, and all spoil removed will need to be disposed of outside of the riparian zone (on an upland site). 12

13. The dune area north of Brevoort Lake is a sensitive area that will require protection. 13

14. Topography should be restored to natural contour. 14

15. Winter construction should be considered as an alternative in areas that are especially sensitive, but this will have to be weighed against the need to also protect trout and salmon reproduction (eggs) discussed in #11 above. 15

16. Construction activities will have to consider local government restrictions on road used by heavy equipment during break-up (spring) and freeze-up (fall) times. 16

17. Borrow pits, pipe storage areas, fuel dumps, and equipment storage areas must be agreed upon in advance and approved by the responsible Forest Service Officer under the provisions of any Special Use Permits we would issue for this project. 17

18. The Forest Service will be responsible for EA preparation as part of the process leading to permit issuance. This process includes site specific public involvement. The potential consequences are site specific modifications to mitigation measures explained in the EIS and possible route modifications. 18

F8-12 FERC does not agree that instream sediment basins should be used to collect sediment during construction. Because the time needed to construct most stream crossings is less than 3 days, a sediment basin would not provide any great reduction in impact; in fact, its construction would produce nearly as much turbidity and sedimentation as caused by excavation of the pipeline trench itself. This procedure may be appropriate for other construction projects that are longer in duration, however, we do not recommend its use for pipeline crossings.

F8-13 This area has been addressed in sections 4.1.6, 4.1.7, 5.1.6, and 5.1.7 of the DEIS as a sensitive dune and swale complex. In addition, we have evaluated a route variation to avoid this area (please see section 6.1.11). Also please see section 7.3 for our recommendation regarding construction in this area.

F8-14 If our recommended requirements in appendices C and D are followed, we feel the topography after construction would be restored, as much as possible, to its original contour.

F8-15 We do not feel that winter construction would minimize impact related to water quality in sensitive streams. In most cases, even in winter, the water would still be flowing under the ice. In addition, due to snow, ice, and subfreezing temperatures, instream construction could very likely take longer, while installation of a flumed crossing would be considerably more difficult. Since excavated earth would quickly freeze, bank restoration would be extremely time consuming and may be impossible to complete until thawing conditions. As noted in this comment, this would increase the chances for adverse impact to overwintering salmonid eggs due to increased downstream siltation. Please refer to Ottawa National Forest referenced letter (memo from R. Jutten) for a detailed discussion of practical problems associated with winter crossing of streams.

F8-16 We assume that, all construction would be in accordance with state and local regulations.

F8-17 We have included a recommendation that Great Lakes comply with all conditions set forth in the special-use permit. If the special-use permit conditions differ from our recommendations, plans, or procedures, the Forest Service conditions would take precedence.

F8-18 Comment noted. We have included a recommendation in section 7.3 that in FS lands Great Lakes must comply with all the conditions set forth in the FS special-use permit. Where the FS special-use permit conditions differ from our recommendations, the FS conditions would take precedence.

F8

Detailed Comments:

Page Ref.

ES-2
4-39
4-42
5-44

Six federally listed or proposed endangered and threatened species seems a bit low. Hiawatha had bald eagle, piping plover, and dwarf lake iris known from the general vicinity of Loop 12 as indicated in DEIS. But also endemic to Lake Michigan shorelines are Cirsium pitcheri (Pitcher's Thistle), and Solidago houghtonii (Houghton's Goldenrod). Have these species been considered in the analysis/survey work and adverse effects ruled out, or simply overlooked. The Michigan monkey-flower Mimulus glabratus michigenensis was proposed for Federal Endangered listing (see Federal Register 54(189):40454-40458) as well. Little is known about the current distribution of the species on and around the Forest because virtually no survey work has been done for it. The many small streams and spring seeps in cedar swamps traversed by both Loops 11 and 12, but especially Loop 12 may be ideal habitats for the species. Has it been considered in the DEIS process and ruled out as well? The Michigan list of T/E species is also a sizeable one. Have all State listed species really been considered in the analysis/surveys? Does FERC intend to issue a Decision and FEIS before all survey results are in from the applicant's consultant? 19

ES-3
5-29
5-32
5-92

Feel it would be best to abandon any construction plans within 1/4 mile on either side of the Sturgeon River (beginning of Loop 11). This river corridor is a candidate Wild or Scenic River and a candidate Research Natural Area. The Hiawatha Forest Plan and subsequent Statement of Agreement with Plan Appellants indicates that the Forest Service will not permit or undertake any activity that may negate the eligibility of any candidate river reach for designation under the Act pending the study. Similar language is used for candidate Research Natural Areas in the Forest Plan. If construction must cross the Sturgeon, suggest we require boring construction method as for major highway crossings (see page 2-31) rather than trenching and drilling/blasting. 20

2-32

Reference is made to being able to work on top of existing pipe to install additional lines or loops. The FEIS should consider doing this throughout the Hiawatha, to reduce impact significance and eliminate most, if not all, additional ROW clearing. 21

3-8

Suggest FEIS include the alternative of TransCanada delivering gas through modifications to its existing system in Canada rather than eliminating it from detailed analysis. Transportation costs are only one of several decision-making criteria needed to really rule this alternative out. 22

3-9

Increased looping to 42" diameter pipe could reduce impacts and entries to upgrade facilities in future years. Reducing successive entries should reduce environmental impacts over time. The FEIS should consider using the larger diameter pipe. 23

F8-19 The federally listed or proposed endangered and threatened species that may be affected by the proposed project were determined through consultation with the FWS and state DNRs and Natural Heritage Programs. The FWS has jurisdiction over federally listed or proposed species, and the Natural Heritage Programs generally maintain the most comprehensive data bases regarding the known locations of rare species and communities. The three species listed in this comment were not identified by these agencies as possible concerns and, therefore, were not included in the DEIS. As indicated in the FS's comment, potential habitat for these plants may occur in the vicinity of the project, therefore sections 4.1.5. and 5.1.5 have been modified to include these three plants as possibly occurring in the vicinity of the proposed project. DEIS recommendation 30 has also been modified by adding the requirement that Great Lakes conduct field surveys for these three plants.

The MIDNR has indicated that one plant, the federally threatened dwarf lake iris, may occur in the immediate vicinity of the proposed loops (MIDNR 1989c). No state-listed plants were reported as occurring in the vicinity of the proposed route. Great Lakes has scheduled to complete all of its rare plant surveys by October 1990 (see comment G4-68). The FEIS will be published prior to that time. The staff cannot determine at what date the Commission will reach a decision on the certification of this project.

F8-20 Installation and maintenance of a pipeline adjacent to an existing pipe across the Sturgeon River cannot adversely affect its eligibility as a wild and scenic river. Construction of the proposed Great Lakes portion of the NIP Project would almost complete the looping of the Great Lakes mainline. This parallel pipeline increases the reliability of natural gas transportation along the entire Great Lakes pipeline system. The crossing of the Sturgeon River would, therefore, be required at some later time even if it were presently deferred.

F8-21 Working on top of an existing pipeline is feasible only for very short distances because the existing pipeline must be padded or bridged to prevent pipeline damage from heavy construction equipment and possible service outages. It is a recommended construction technique in congested residential areas where there are no other practicable alternatives and its use would be limited to several hundred feet.

F8-22 We consider this alternative to be outside the scope of the EIS.

F8-23 Increasing the diameter would reduce the length of looping required at this time. However, it would not reduce the need to upgrade facilities in the future because each proposal to upgrade is based on a specific increase in proposed service. The only way there could be a reduction or, more accurately, a postponement of entries for additional expansion is if the entire length proposed to be looped were constructed of 42-inch instead of 36-inch-diameter pipe.

F8

3-9
4-15 It seems DEIS prematurely rules out possible need for Supplemental DEIS or Revised DEIS before FEIS is issued given the incomplete status of several resource surveys/evaluations (T&E wildlife/plants, and cultural resources specifically), and apparent disputes remaining between Great Lakes and FERC over mitigation measures. 24

4-16 "In Michigan ... approximately 48% ... support coldwater fisheries". Those streams that do not support coldwater fisheries are still important resources. 25

4-31 Table 4.1.4-1 - Anadromous fish species - lake sturgeon, is a Threatened species on the State (Michigan) list. Smelt are on the decline - how will they be impacted? 26

4-33 "Almost half (49%)... support coldwater fisheries." See above comment re: p 4-16 figure of 48% used. Trout rearing values are equal in importance to values for trout reproduction 27

4.15-1
4-37
4-38 How about lake sturgeon in Sturgeon River? 28

4-41 Suggest substituting term "remote" for "wilderness" when describing gray wolf habitat utilization. Research shows that wolves do not do as well in Wilderness areas due to low prey densities compared with remote woodlands with active vegetative management. 29

4-42 The Osprey is Threatened on Michigan's State list also. 30

4-45 No mention made of southern vegetative species located along Sturgeon River. This site is unusual in that it is the northernmost occurrence of the Silver Maple floodplain ecosystem that is still relatively in tact. This is the basis for the RNA candidate status. 31

4-47 No discussion of wetlands crossed in U.P. Michigan's Hiawatha National Forest is included here, and should be, especially for the Pointe aux Chenes coastal wetland community in Mackinac County (Loop 12). 32

4-83 The necessary field work for Phase 1 and 2 cultural resource surveys do not begin until the spring of 1990. Can results have any influence on the final decision by FERC and provisions of the certificate? Suggest timeframe for FERC decision and construction be delayed until these studies are finished. We have similar concerns over timeframes for threatened and endangered species surveys and other wildlife surveys that are yet to be completed by the applicants. We will not issue any Special Use Permits for this project on the Hiawatha until all such studies are complete, and acceptable mitigation measures agreed to by the applicants even if FERC issues a Certificate for the entire NIP. 33

5-9 Topsoil segregation should be done on Hiawatha National Forest lands. Our experience indicates few instances where this is not "feasible". 34

To minimize the area disturbed at this time, we examined decreasing the length of Great Lakes proposed loops by increasing the diameter of pipeline from 36 inches to 42 inches. We determined that Great Lakes should construct the 36-inch-diameter loop as proposed for two main reasons. The additional 459.6 miles of pipeline would result in the completion of 93% of Great Lakes loop on its existing system which is comprised of 36-inch-diameter pipe. In addition, altering the diameter from the existing loop sections would cause operational problems because it would require different pigging facilities to inspect each separate segment of the line. The use of larger diameter pipeline was therefore not considered to be a reasonable alternative.

F8-24 The EIS does not rule out the possibility of a supplemental EIS. However, at this time we do not anticipate the need to supplement the analysis for any reason including those listed here. Implementation of our recommendations and minor routing modifications resulting from required agency consultation will keep all impact to acceptable levels.

F8-25 Comment noted. We believe our Procedures for stream crossing protect all streams, while our construction windows are directed toward protecting the more silt-sensitive species.

F8-26 Since smelt migrate and spawn very early in the season, prior to the recommended window for construction across streams and rivers, their migration or spawning should not be affected by the proposed project. The lake sturgeon has not been reported to occur in any of the waters proposed to be crossed in Michigan.

F8-27 Comment noted.

F8-28 During discussions with MIDNR (Peterson, 1989), Lake sturgeon were not discussed as a species of concern in the area of the proposed pipeline crossing.

F8-29 Comment noted and text revised.

F8-30 Thank you for your comment. We have noted the osprey's status for Michigan.

F8-31 Comment noted. Please refer to the revised text incorporating this important vegetation community.

F8-32 The Pointe aux Chenes coastal wetland community was discussed in the DEIS on the referenced page, but was referred to as a wooded dune and swale complex. This section of the FEIS has been revised to refer to this complex as the Pointe aux Chenes coastal wetland community.

F8-33 Several applicants have not provided surveys that are necessary for the Commission to satisfy its responsibilities under the Endangered Species Act and the National Historic Preservation Act. Construction of facilities in areas that require surveys for cultural resources or endangered species will not be allowed to proceed until we have reviewed the surveys and determined the need for further mitigation. Consequently, the final decision on specific routing and mitigation for these resources can be modified based on study results.

F8

5-12
5-13 Sod should be used at stream crossings to assure stabilization. As a guideline, suggest sod be placed on each side of the stream in a "belt" equal to or greater than the width of the stream being crossed or wider as needed. We're in severe drought conditions at this time. Suggest all areas reseeded be mulched (and limed/fertilized where needed) to prevent erosion until grasses become established. 35

5-12
5-38
5-57
7-3
7-15 The Hiawatha has the same concerns and favors the same mitigation measures for construction within peatlands expressed by the Chippewa NF and Minnesota DNR. Please include us in this section in the FEIS as well. A potential conflict in mitigation measures for peatland construction and construction through Deer Wintering Areas (DWA's) may exist since many DWA's lie on peat soils in the Lakes States. 36

5-19 Excellent information on time windows and crossing procedures. 37

5-30 "Given the relatively short life spans of some species (3 to 5 years for brook trout)..." Consider stocking fish as a mitigating measure. 38

5-35 How will the apparent difference of opinion between the US Fish & Wildlife Service and FERC indicated in the DEIS over the Migratory Bird Treaty Act "provisions" be resolved? 39

5-39 "Cathodic protection" - please define. 40

5-42 Narrative in 5.1.5.1 ignores disturbance impacts during construction and operation/use post-construction to these typically "disturbance sensitive species. 41

5-44 Bird survey this spring may identify crane nesting territories across the Forest. Cranes often use the pipeline ROW for feeding. 42

5-49 If it is possible to work with equipment on top of the existing pipe as indicated on page 2-32, why clear additional ROW? Was cost the only criteria considered? 43

5-55 Last time pipeline construction work took place on the Forest, some wetland crossings raised the water levels "uphill" from the pipeline causing timber die-off. We request the FEIS provide us with the flexibility to require the applicants to restore some of those areas to natural drainage during this reentry. 44

5-92
5-93 Regarding wild and scenic river candidates. The language of the Wild & Scenic Rivers Act precludes construction activities in the river and the 1/4 mile corridor alongside since it might preclude designation as a wild and scenic river. Horizontal drilling to put the loop underground and under the Sturgeon River should be carefully considered in the FEIS. 45

5-96
5.1.-
10.2 Since crossing HNF of 23.7 miles is planned, with wetland work occurring in winter and stream crossings limited to June 1 - September 1, how many construction season will be required? Or will use of 6 "construction spreads" allow the work to be done in one season? 46

F8-34 Appendix C, section III(A), outlines our recommendations concerning topsoil stripping and segregation measures. Within this section, it is stated that the applicants shall perform ditch and spoil method topsoil segregation in areas at landowners' requests. We believe that segregating topsoil is important to preserve the soil amendments that have been applied in agricultural cropland. However, it is not necessary to require topsoil segregation in upland areas where no investment has been made in soil amendments, and where successful revegetation of the right-of-way is achieved through conformance with applicant E&SC plans and our appendix C.

F8-35 FERC notes Hiawatha's recommendations and concerns. Pipeline construction on national forestland requires that a special-use permit be issued to the applicant by Hiawatha. This permit can include the recommendations that have been reviewed as conditions for the permit.

F8-36 Comments noted and corresponding text revised accordingly.

F8-37 Thank you for your comment.

F8-38 Comment noted. See comment response F14-13.

F8-39 As previously stated, we believe that the provisions of the Migratory Bird Treaty do not apply to the proposed project since any impact on individual migratory birds would be incidental and nonintentional. The comment by the Chequamegon National Forest supports this interpretation. No resolution is required.

F8-40 Cathodic protection refers to the incorporation of a low level induced electric current in the pipeline to prevent oxidation (corrosion) of the pipeline by offsetting its electrical potential. This is a very common form of corrosion protection used in buried pipelines.

F8-41 Comment noted. See text in section 5.1.5.1.

F8-42 Comment noted; additional nesting information obtained by the FS may be applicable to the special-use permit required to cross the Hiawatha National Forest.

F8-43 See response to comment F8-21.

F8-44 In the past, surface water drainage across pipeline rights-of-way (cross drainage) has been interrupted as a result of the contractors "crowning" the soils during refilling of the trench, assuming the soils would settle to their original elevations. Since wetland trench soils generally remain hydric with no incorporation of air, very little additional settling of trench soils takes place. Consequently, we have recommended no crowning of trench lines take place in wetlands. This should alleviate the raised water levels on the "uphill" side of the pipeline. Restoration of areas disturbed as a result of previous pipeline construction should be addressed through the special use permit.

F8

5-99 Cultural resource inventory and evaluation is incomplete, as acknowledged. Once this work is complete, the project's effect on cultural resources can be determined and appropriate mitigating measures can be taken if necessary. The proposed schedule for construction may not allow adequate time for this. There appears to be a typo in middle of page, 2nd paragraph under Great Lakes; it should read, "all significant historic and prehistoric sites within the R-O-W have been located and evaluated." 47

6-3 Was a route variation for Pointe aux Chenes portion of Loop 12 considered. If so, it should be discussed more clearly in FEIS. If not, a route variation should be considered and presented in detail in the FEIS. 48

7-9 The introductory paragraphs to this section need stronger wording to indicate that applicant's failure to provide requested information in a timely fashion will delay or even preclude issuance of FEIS and certificate by FERC. The burden of proof must rest entirely on the applicant (proponents of project). 49

App. C Information looks good. 50

F8-45 The Sturgeon River has been nominated for its outstanding scenic, recreation, and geologic values. Based on correspondence with the National Park Service, Omaha, Nebraska (Castleberry, 1990), any proposed project "should be planned and implemented so as to minimize any unavoidable adverse impacts and preserve to the maximum extent possible the outstanding qualities of the river." A pipeline crossing of a nominated river would not preclude its eligibility although mitigation measures including minimizing construction damage to the river bottom and to existing vegetation along the river banks would be recommended. This is especially true where a pipeline crossing already exists.

Directional drilling of the Sturgeon River would offer no significant advantage over the proposed wet trench crossing method. Both methods would require approximately equal amounts of vegetative clearing for workspace requirements. Furthermore, directional drilling may require additional space for storage and containment of excavated or mucked materials. One advantage of the use of directional drilling is that drilling can extend under the river and under existing vegetation on the river banks. However, since the existing right-of-way is presently cleared, the advantage of this construction method is of somewhat limited value.

F8-46 Section 5.1.10.2 has been amended in response to Great Lakes comment G4-48. Great Lakes has not finalized the number of construction spreads that would be required for construction.

F8-47 Our DEIS recommendation 20 (certificate condition) assures that Section 106 compliance would be complete before construction begins. We have corrected the text of 5.1.11.2.1 in response to your suggestion.

F8-48 Comment noted. The EIS has been revised to include a potential route variation to avoid the Pointe aux Chenes Candidate Research Natural Area (see section 6.1.11).

F8-49 Thank you for your comment.

F8-50 Thank you for your comment.

United States
Department of
Agriculture

Forest
Service

Hiawatha National Forest
P.O. Box 316
Escanaba, Michigan 49829

Date: April 26, 1990

Reply to: 1920

Subject: Seeding recommendations for gas pipeline

To: B. Barnett, D. Brownlie, J. Schultz, D. Elsing, A. Easterbrook

This memo summarizes the information I've obtained from various sources regarding seeding recommendations for the gas pipeline. I've asked these experts to provide recommendations on species, seed sources, and technology for revegetating the disturbed areas with native grasses and forbs.

Mike Penskar, Botanist with the Michigan Natural Features Inventory, concurred with Don Henson's suggestion to use annual crops, such as rye or wheat, to control erosion until natural revegetation occurred. He cautioned us against using plant species from distant sources because of the possibility of contaminating native plant strains with non-native genetic material, even when the plants are of the same species as our native ones.

Kim Herman, Botanist with Michigan Dept. of Transportation, also agreed with the suggestion to use an annual cover crop, but was concerned about erosion on sloping areas. She said that DOT has had difficulty in obtaining seeds from native species for roadside plantings, and difficulty in getting contractors to plant correctly and at the right time of year. She was also concerned about avoiding the use of native species from non-native gene pools. She suggested that a contract could be awarded for collection of seed from local plants, and the seed scattered on the areas of pipeline which were deemed most critical. If non-native species are to be used, she suggested using some which are not persistent and will be replaced by native vegetation, although she could not suggest particular species. She said that DOT is moving toward using native species and wants to use more, but that seed sources and seed establishment methods have not been developed to the point at which they can routinely use these materials.

David Bergdorf at the SCS Plant Materials Center suggested the use of legumes Emerald crown vetch and Lancer perennial pea, and also some warm season grasses. He did not specify grasses by species. He said that he has a computerized list of seed suppliers, and that he can search by plant species if we ask for a particular one. He suggested

that American beach grass plants be set out on sensitive dune areas where blowouts are of concern, and felt that this seeding would not be prohibitively expensive.

In summary, the experts consulted said that it is not possible at present to seed a large area with native species from native genetic material. The SCS and DOT are both working on developing sources and technology to make it possible in the future. Because the area to be seeded on the gas pipeline is not an undisturbed area at present, they felt that it was less critical to obtain native species. All of them thought that using an annual nurse crop for native vegetation was a good idea. Other good ideas included the letting of a contract to obtain native seed for distribution on areas where natural revegetation needed some encouragement, and the planting of American beach grass on dune areas.

In light of this information, I would recommend that we use Don Henson's suggestion for annual nurse crops on upland areas. Topsoil should be reserved and replaced, and annual rye, wheat, or oats should be seeded heavily. Wet areas (soil series/associations: Alluvial land, Roscommon, Carbondale/Lupton/Rifle, Tawas, Bruce, Kinross, Dawson/Greenwood) should have surface muck layers replaced, erosion structurally controlled, and natural vegetation allowed to come in. Sensitive dune areas, occurring on parts of the Rousseau and Rubicon soils, should be planted with American beach grass.

I have been trying to contact Gary Aho, the local SCS representative, who will have information on pounds of seed per acre, and sources for obtaining seeds and plants. He has been in the field a lot recently, but I may be able to catch him early on Monday. Also, I'm trying to contact Larry Hill, the DOT Roadside Development Specialist, who may have some additional information.

Because of the lack of availability of local seed and technology for seeding, this task of making recommendations has been rather frustrating. I'm not certain that I've provided sufficient information to put into the specs, but it is all that's out there, unless we go with the usual crop mixtures. I'd like to get some feedback from all of you with suggestions on what we should do. Please get back to me with your comments. Thanks.

Eunice A. Padley

/s/Eunice A. Padley
EUNICE A. PADLEY
Forest Soil Scientist

EP/ep

cc: Don Henson

NATIVE PLANT MATERIALS SOURCE LIST

Prairie Plants and Seeds:

Prairie Restorations, Inc.
P.O. Box 327
Princeton, MN 55371
612/389-4342 or 389-5733

Prairie Moon Nursery
Rt. 3 Box 163
Winona, MN 55987
507/452-5231

Prairie Nursery
P.O. Box 365
Westfield, WI 53964
608/296-3679

Prairie Seed Source
P.O. Box 83
North Lake WI 53064

Prairie Ridge Nursery
Rt. 2 9738 Overland Road
Mt. Horeb, WI 53572
608/437-5245

Country Wetland Nursery
S. 75 West 20755 Field Drive
Muskego, WI 53150
414/679-1268

Wildlife Nurseries
P.O. Box 2724
Oshkosh, WI 54903

Kester's Wild Game Food Nurseries, Inc.
P.O. Box V
Omro, WI 54963

Iowa Prairie Seed Company
110 Middle Road
Muscatine, IA 52761
319/264-0562

Wildflowers from Nature's Way
R.R. #1 Box #62
Woodburn, IA 50275
515/342-6246

Lincoln-Oakes Nurseries
Box 1601
Bismarck, ND 58501
701/223-8575

Cenex Seed Plant
Box 964
Sioux Falls, SD 57101
605/336-0623

NPI
1697 W. 2100 N. P.O. Box 177
Lehi, UT 84043
801/768-4422

Environmental Seed Producers, Inc.
P.O. Box 5904
El Monte, CA 91734
213/442-3330

Sharp Brothers Seed Company
Healy, Kansas 67850
316/398-2231

Stock Seed Farms, Inc.
R.R. Box 112
Murdock, NE 68407
402/867-3771

NorthFlam Seed Producers
P.O. Box 9107
Moscow, Idaho 83843

Southwestern Native Seed
Box 50503
Tucson, Arizona 85703

Environmental Concerns
P.o. Box P
St. Michaels, Maryland 21663

Tree of Life Nursery
P.O. Box 736 33201 Ortega Hwy.
San Juan Capistrano, CA 92693
714/728-0685

S&S Seeds
P.O. Box 1275
Carpinteria, CA 93013
805/684-0436

Pacific Open-Space, Inc.
1642-C Russell St.
Berkeley, CA 94703
415/843-1815

Design Associates Working with Nature
1442A Walnut St. Box 101
Berkeley, CA 94709

Woodland Plants:

Busses Garden Center
635 E. 7th St.
Cokato, MN 55321
612/286-2654

Gardens of the Blue Ridge
P.O. Box 10
Pineola, NC 28662
704/733-2417

Rice Creek Gardens
1315 66th Ave. N.E.
Mpls., MN 55432
612/574-1197

Tamarack Hill Wildflower Nursery
17099 Dodd Blvd.
Farmington, MN 55024

Shady Acres Nursery
7777 Hwy. 212
Chaska, MN 55318
612/466-3391

Strand Nursery Company
Rt. 3 Box 187
Osceola, WI 54040 (farms)
715/294-3779

Little Valley Farm
RR 1 Box 287
Richland Center, WI 53581

The Planter's Palette
28 W. 521 Roosevelt Road
Winfield, IL 60190
312/293-1040

Illini Gardens
P.O. Box 125
Oakford, IL 62673
217/635-5713

Shady Oaks Nursery
700 19th Ave. N.E.
Waseca, MN 56093

Consultants:

A.F. Clewell, Inc.
1447 Tallevast Rd.
Sarasota, FL 34243
813/355-5065

Wetlands Research Assoc., Inc.
2169-G East Francisco Blvd.
San Rafael, CA 94901
415/454-8868

Western Ecological Services Co., Inc.
14 Galli Dr. Suite A
Novato, CA 94949
415/883-6425

MICHIGAN UNITED CONSERVATION CLUBS
2101 Wood St. ● P.O. Box 30235 ● Lansing, MI 48909 ● 517/371-1041

April 20, 1990

Bryan Barnett
Hiawatha National Forest
499 E. Lake Shore Drive
Manistique, MI 49854

Re: Great Lakes Gas Transmission Co. pipeline

Dear Bryan:

In regard to the proposed installation of a 20.3 mile length of pipeline across the Rapid River and St. Ignace Ranger Districts of the Hiawatha National Forest, I would like to offer the following comments:

51 1) We'd suggest that the installation, as much as possible, should take place in the existing right-of-way in order to minimize environmental impacts.

52 2) Special care should be made to avoid proposed research natural areas, critical natural areas, and sensitive wildlife habitats such as heron rookeries, wetlands etc.

53 3) Disturbed areas should be revegetated as quickly as possible to re-establish habitat and minimize erosion.

54 4) Stream crossings should be in the existing corridor and special measures should be instituted to minimize erosion and protect the scenic quality of the river corridor.

55 5) The corridor should be posted closed to vehicular access except where the company and National Forest agree that it should be open. Open roads or trails should be posted open consistent with the State of Michigan's closed unless posted open policy.

The above comments are our comments to the managers of the Hiawatha National Forest and the Federal Energy Regulatory Commission.

Sincerely,

Richard L. Jameson
Assistant Executive Director

RLJ/en

cc: Charlie Guenther
Russ Weisinger

Gerald Goodman
EXECUTIVE DIRECTOR
TREASURER
BOARD REPRESENTATIVE
REGIONAL VICE PRESIDENTS

F8-51 Comment noted.

F8-52 These areas have been identified to the best of our knowledge through interviews and correspondence with state agencies. Route variations and other forms of mitigation have been investigated wherever possible to avoid or reduce impact on these areas.

F8-53 This is FERC's recommendation as well. Please refer to the Erosion Control, Revegetation, and Maintenance Plan in appendix C for specific details.

F8-54 Comment noted. Our recommended appendix D, Stream and Wetland Construction and Mitigation Procedures for construction across streams would adequately protect water quality. In addition, our Procedures require a 10-foot riparian strip above the streambank be allowed to revegetate with native woody plant species. This requirement would screen the pipeline right-of-way from the river corridor in addition to providing stabilization of the streambank.

F8-55 Our recommended appendix C, Erosion Control, Revegetation, and Maintenance Plan, specifies that off-road vehicle control measures be installed and that signs be posted at the request of each owner or manager of forestland.

NATURAL RESOURCES COMMISSION
THOMAS J. ANDERSON
MARLENE J. FLUHARTY
KERRY KAMMER
O. STEWART MYERS
DAVID D. OLSON
RAYMOND POUPORE

STATE OF MICHIGAN

JAMES J. BLANCHARD, Governor

DEPARTMENT OF NATURAL RESOURCES

DAVID F. HALES, Director

309 W. McMillan Avenue
Newberry, Michigan 49868
April 23, 1990

Brian Barnett
U.S. Forest Service
Lake Shore Drive
Manistique, MI 49854

Dear Brian:

I have reviewed the proposed expansion of the Great Lakes pipeline within your lands in Schoolcraft and Mackinac counties. We do have an active eagle's nest in Section 30, T41N 04W of Mackinac County. I am not certain of the location in relation to the pipeline. Your staff at the St. Ignace Ranger District should ground check to see how far it is from the pipeline. There are restrictions within an active eagle's nest site that must be followed should the nest be in close proximity to the pipeline, especially during the breeding season. 56

In respect to protected plants, please contact our Natural Heritage Program staff at 517-373-1263 for assistance in identifying threatened or endangered species along the pipeline route. 57

Thank you for allowing us to review the proposal.

Sincerely,

Raymond Perez
District Wildlife Biologist
(906) 293-5131

RP:jls
c: Andersen

F8-56 The location of this bald eagle nest has been identified to us by the FWS (FWS, 1989b), and is included in the DEIS. Based on review by the FWS, we have recommended that Great Lakes conduct a field survey of this site to determine potential impact on the nesting habitat. We have also recommended that no construction activity take place within 1 mile of active bald eagle nest sites between February 1 and August 1.

F8-57 The MINHP has been contacted to review the proposed route for the known presence of protected plants (MIDNR, 1989c; Weise, 1990; Weise and Albert, 1990). See also response to comment F8-19.

NATURAL RESOURCES COMMISSION
THOMAS J. ANDERSON
MARIENE J. FLOHARTY
KERRY KAMMER
O. STEWART MYERS
DAVID D. OLSON
RAYMOND POMPORE

STATE OF MICHIGAN

JAMES J. BLANCHARD, Governor

DEPARTMENT OF NATURAL RESOURCES

DAVID F. HALES, Director

309 W. McMillan Ave.
Newberry, Michigan 49868
April 16, 1990

please [illegible]
April 17, 1990.

Bryan Barnett
Manistique Ranger Station
499 E. Lake Shore Drive
Manistique, MI 49854

Dear Bryan:

In reply to a letter of April 10, 1990 from Loren Woerpel, regarding a Great Lakes Transmission Company proposal to install a 20.3 mile length of pipeline adjacent to their existing line, I need a map of the proposed line location before I can make any comments or recommendations.

Please send a map to my attention at the address above and I will reply prior to the April 25, 1990 deadline.

Thank you.

Sincerely,

Raymond Perez
District Wildlife Biologist
906-293-5131

RP:jls

R 10.6 1
5 88

april 15- 1990

Sir:

Regarding Great Lakes Gas Transmission additional Right of Way acquisition of The Hiawatha National Forest.

Doctors Brambler and Burns in their studies of wildlife use of Utility R/W across forested areas established the concentrated use by wildlife of these openings and the nature of the edge effect provided. (University of Pennsylvania)

additional studies have recognized the practicality of utilizing existing corridors for necessary utilities as a public benefit in order to minimize impact.

For these reasons I believe a construction permit should be issued.

Sincerely
Jerome E Knight

J.E. KNIGHT
H.C. 47 BOX 6560
ST. MARTINS PT. RD.
HESSEL, MI 49745-9306

J.E. KNIGHT
H.C. 47 BOX 6560
ST. MARTINS PT. RD.
HESSEL, MI 49745-9306

MANASOTA, FL 342
PM
16 APR
1990

Mr. Bryan Barnett
Manistique Ranger Station
499 E. Lake Shore Dr.
Manistique Mi. 49854

58

F8-58 · Comment noted.

United States
Department of
Agriculture

Forest
Service

Hiawatha National Forest
P.O. Box 316
Escanaba, Michigan 49829
906-786-4062

Reply to: 1920

Date: April 10, 1990

Dear Reader:

Great Lakes Gas Transmission Company is proposing to install a 20.3 mile length of pipeline adjacent to a portion of their existing line on the Rapid River, Manistique, and St. Ignace Ranger Districts of the Hiawatha National Forest. They wish to use an additional 25 feet of right-of-way adjacent to their existing right-of-way, which has been in existence for about 20 years. This is a small part of 450-mile addition to their existing pipeline that runs from Minnesota to Michigan.

Several years ago, we prepared a Forest Plan for the Hiawatha National Forest. Activities of this nature are required to be analyzed on a case-by-case basis. The National Environmental Policy Act requires that we contact interested citizens to find out their concerns and identify any new issues. All pipeline projects are analyzed by the Federal Energy Regulatory Commission (FERC). FERC can issue a certificate for construction after the final environmental impact statement is issued if they approve the project.

FERC has issued a Draft Environmental Impact Statement. Copies are available for viewing at the public libraries in Escanaba, Manistique, Marquette, and St. Ignace at the Rapid River, Manistique, and St. Ignace Ranger Stations and the Supervisor's Office in Escanaba. Or you can write to Mr. Kurt Flynn, Project Manager, Environmental Policy and Project Analysis Branch, Office of Pipeline and Producer Regulation, Room 7312, 825 North Capitol Street, N.E., Washington, DC 20426.

The Forest Service is preparing an environmental analysis and would like to have your comments by April 25, 1990. Please be specific wherever possible as that will help us in our analysis. You can also send your comments directly to the Secretary of the Federal Energy Regulatory Commission, 825 North Capitol Street, N.E. Washington, D.C. 20426. If you send your comments directly to us and they arrive by April 25, 1990, we will then mail your letter to FERC so that it will arrive before April 30, the end of the public comment period on the DEIS.

Please contact Bryan Barnett at the Manistique Ranger Station, 499 E. Lake Shore Dr., Manistique, MI 49854 (Tlf. 906-341-5666) or David Brownlie in this office.

Sincerely,

LOREN WOERPEL
Lands Staff Officer

DOCUMENTATION RECORD

PUBLIC PARTICIPATION - VERBAL

Date: 01/1/90 Location of Contact: [illegible]

Name: [illegible]

Employee Contacted: [illegible]

Identified interested or affected public: loggers

Comments made/Positions taken/Suggestions made:

Len was responding to letter sent to the public about the pipeline. His concern was about pipeline crossings & their impacts on loggers in the area. He encouraged us to have the pipe buried deep. Is concerned not only with [illegible] crossings but crossings (via [illegible]) in general. Is concerned that the road crossings be bored by the pipeline company. (Implication was at time of pipeline installation & subsequently as needed.) 59

Said that pipeline crossings done by open cut work (at F's expense) complicates the below cost sales issue.

[illegible]

H-1620-1
2/81

F8-59 Great Lakes would design and install the proposed pipeline in a manner that would ensure the safety and integrity of the pipeline.

Dear Mr. Woerpel,

I think that pipelines and oil exploration should be discouraged and when absolutely necessary that they firms should be expected to compensate the public for lost lands by replacing land for land. I would expect them to purchase for the forest service (in Michigan), wilderness lands which fill in inholdings or are contiguous with other public holdings in multiples of the acreage lost to them. The reasoning is that right of way accessible lands are worth more financially and must be compensated and that there is not an endless supply of wild or public lands. They should not be treated as an endless source from which to whittle away bits and pieces. In Michigan the oil companies have devastated lower penninsula public lands, ultimately destroying them for recreational use with networks of roads and pipelines. It is time to put a stop to this and in any event to receive compensation - in land not dollars. Dollars just disappear into the general fund and we never receive anything for the loss of lands. 60

I remain cordially yours,

Ladislav R Hanka
1005 Oakland Dr
Kalamazoo MI 49008

F8-60 Thank you for your comment. We agree that wilderness and public lands need to be protected and that impact on these areas from pipeline construction needs to be minimized. We feel that we have sufficiently addressed this issue in our analysis (see section 5.1.9.2.2). The issue of the type of compensation for land is beyond the scope of the EIS analysis and is more appropriately left to negotiation between the landowner and the applicant.

CANDIDATE RESEARCH
NATURAL AREAS
AND
BOUNDARY ALTERNATIVES

12) Pointe aux Chenes
22.) Lower Sturgeon River Floodplain

HIAWATHA NATIONAL FOREST

F8

Map No. 22

Lower Sturgeon River

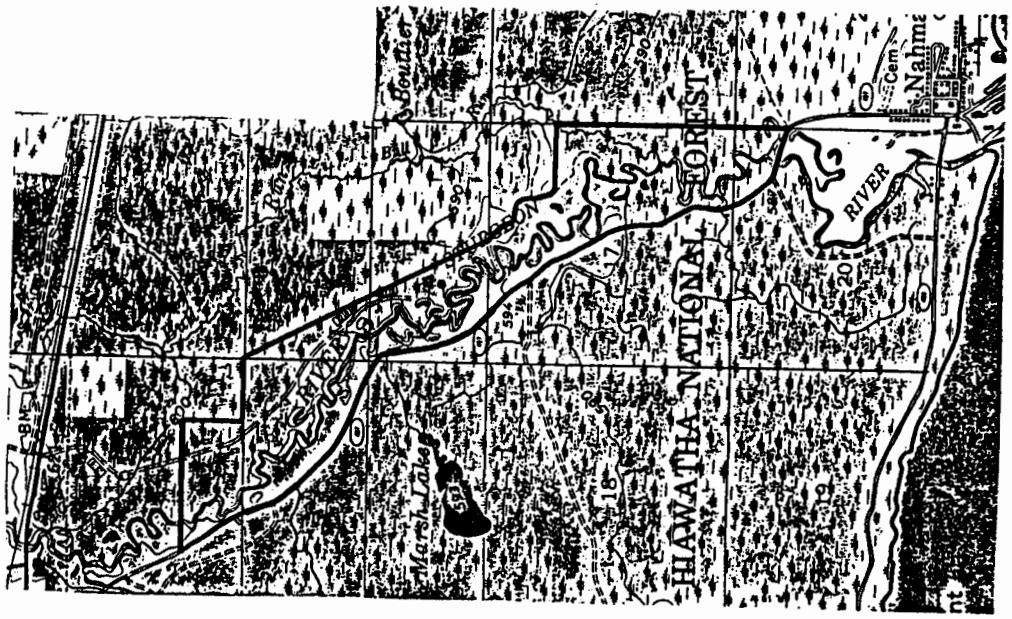
Floodplain

Hiawatha National Forest

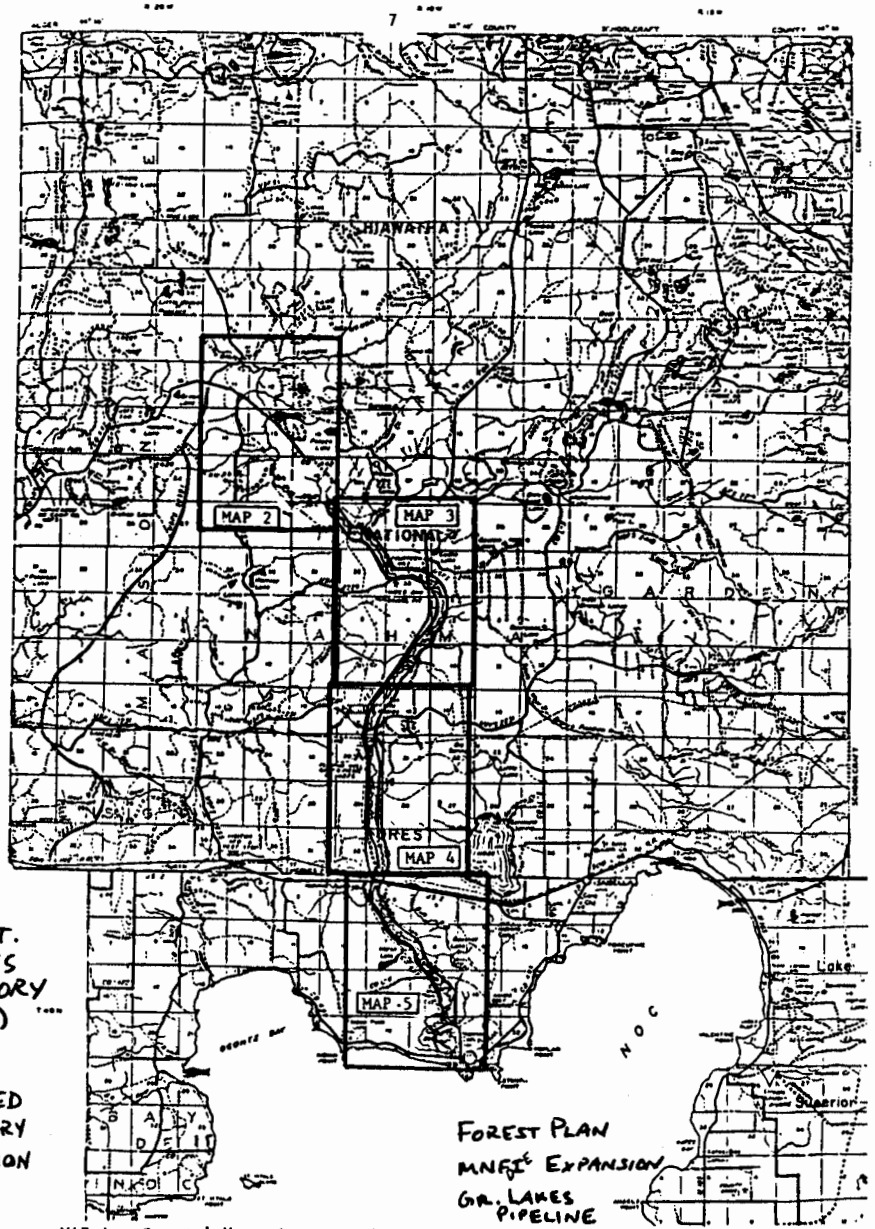
Candidate Research Natural Area

T40N, R19W

FOREST PLAN (CURRENT) BOUNDARY



HNF 10/86



MAP 1: General Map of Proposed Sturgeon River Floodplain RNA showing location of detailed Maps 2-5.

FOREST PLAN BOUNDARY (M.A. 8.1)

AR CANYON

uth canyon slope is VERY FRAGILE, and prone to damage even from light traffic.

stablish at least the 80 in the draft Establishment Record, plus look at expansion upstream in the canyon. Redraft the Establishment Record.

The group operated under the assumption that a Reg. Forester's closure order would be used applying to either an RNA if established, or to the canyon area considered here for RNA if only Wilderness designation is secured for the area.

Fred Metzger and Sue Crispin agreed to collaborate on a map to more clearly define the limits and boundaries of the proposed RNA and or Reg. Forester's closure order.

POINTE AUX CHENES

Common tern colony on island is in private ownership, and ownership around interdunal pond is fuzzy, but probably NF. land.

First swale along US 2 is degraded, but rest of interior wetlands are undegraded

Area needs further investigating for final boundary determinations. Sec. 19, 20, and 28 along proposed boundary need examination. Also another area of very distinct patterning in the east 1/2, Sec. 33. Good transition area, and possibly the most distinct patterning on the Forest occurs here.

Establish some portion(s) of the candidate area and expanded study area as RNA. Designate a larger area to assure protection of unique values such as under MA 8.1. Further study is to better define the boundary of the RNA to be established and the impacts of the pipeline construction on lateral drainage patterns not to determine suitability for RNA.

SUGARLOAF SHAP

Look at the area to the south of the candidate area boundary, especially in Sec. 10 to see if some of this should be included.

Establish at least the proposed area as an RNA. The area has a high potential/ porbability for successful establishment as an RNA.

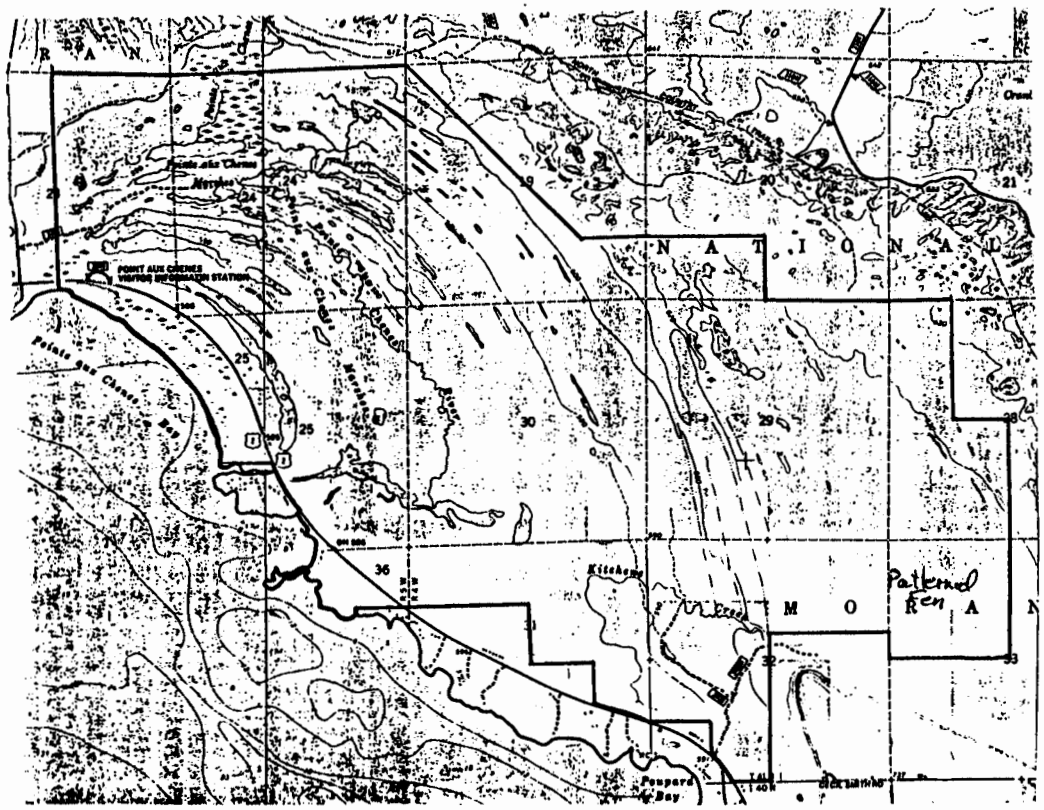
HORSESHOE BAY

If area goes Wilderness, it may bring additional notoriety and so additional public use of the beach ecosystem.

Need to also look at an area north of the Carp River mouth on the West side of St. Martin Bay when looking at this and St. Martin Pen. candidates further.

Gather more information before determining suitability. Private inholdings and existing public use of the beaches is of considerable concern if area is placed

Map No. 12



Pointe aux Chenes Bay

Hiawatha National Forest

Candidate Research Natural Area

FOREST PLAN (CURRENT) BOUNDARY

T41N, R4W

T41N, R5W

HNF 10/86

PROPOSED BOUNDARY FROM ST. IGNACE DISTRICT RANGER

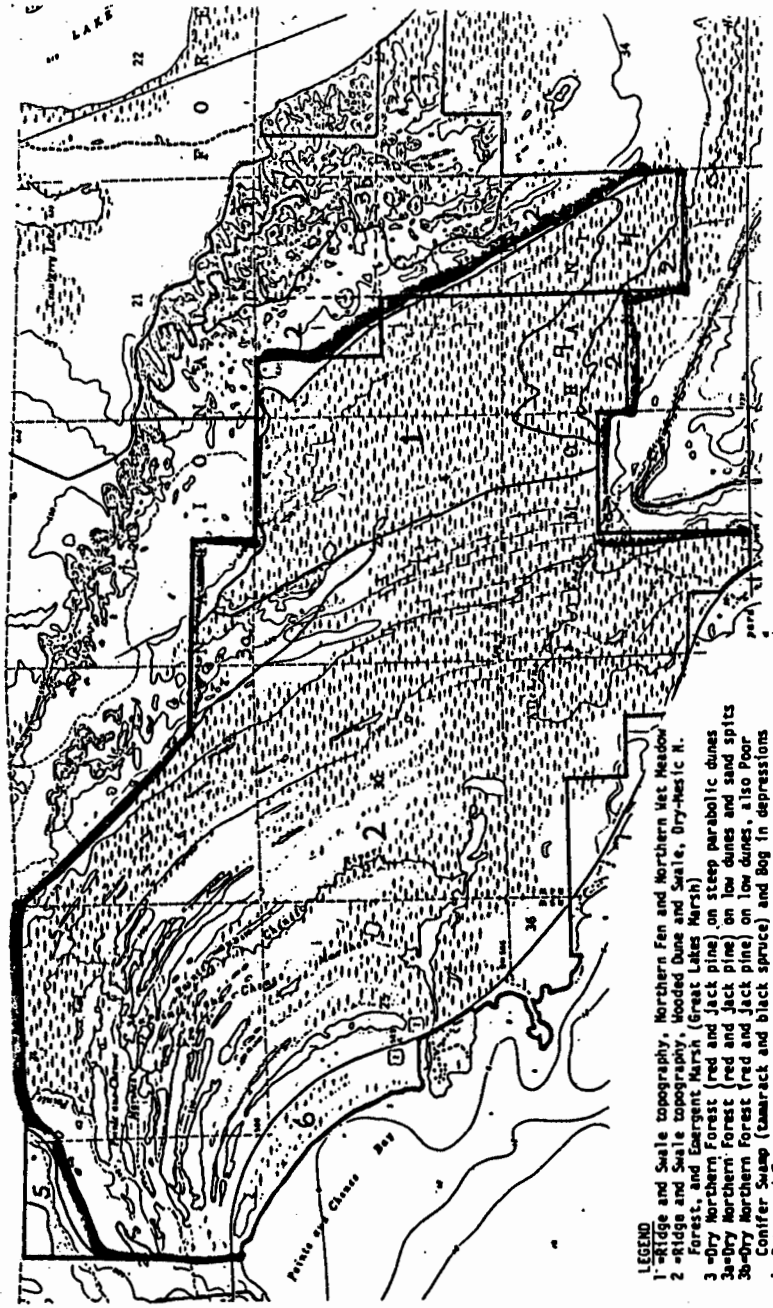


Figure 4. Proposed Pointe aux Chenes RNA map showing the plant comm

MICHIGAN NATURAL FEATURES INVENTORY (MNFI)
PROPOSED BOUNDARY

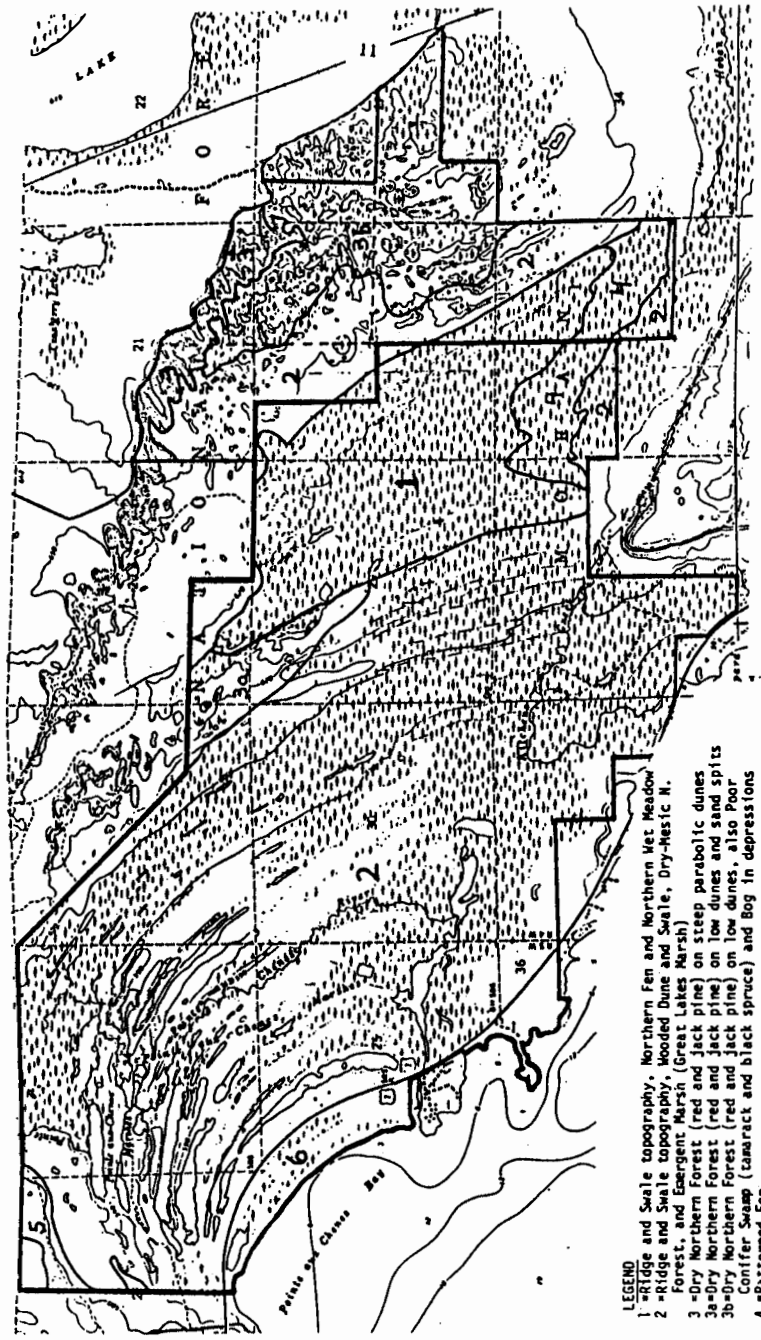


Figure 4. Proposed Pointe aux Chenes RNA map showing the plant communities.

MESSAGE STATUS

O	R.Hennes:R09F10A	CC	W.Shirley:R09A
C	G.Zimmerman	CC	D.Rittenhouse
C	L.Tyler:R10F03D03A	CC	J.Snow:W01D

rom: Deen Lundeen:W01C
ostmark: Apr 27,90 8:52 AM

ubject: Forwarded: Tongass

---

omments:
rom: Deen Lundeen:WO
ate: ## 04/27/90 08:52 ##
ob: You missed out on some of the discussion we had on this issue at illington last week. I will briefly summarize several points and hen differ to Lance or Dave for response on how the Tongass is lanning to handle it. Also Jim Snow for his legal guidance.
irst of all, the Act, Section 16(b) defines "free-flowing" very plicitly. If the river is going to be part of the W&SR System, it ust comply with this definition.
owever, there are several options:
1. Amend the Act to permit special fish enhancement structures hich effect the free-flowing nature of the river. Include this equirement when the river is recommended for designation, and write t in the legislation.
2. Leave out the segment of the river where the structure(s) will e located. This has been done elsewhere.
3. Use facilities which do not affect the free-flowing condition of he river, and are within the definition in Section 16(b). After the iver is designated, this probably requires a Section 7 determination? uring the planning process or before a recommended river is esignated, I'd say that it is up to the FS to decide whether the acilities are appropriate. (In the later case this is appealable.)

revious comments:
rom: Gene Zimmerman:WO
ate: ## 04/27/90 07:45 ##
an you help bob with this?

ecange:
rom: Robert Hennes:R09F10A
ate: ## 04/26/90 14:37 ##
ene, do you have anything on the fisheries/Tongass issue which you ould dg or fax me for reference. This would be helpful in our urrent situation.
hanks,
ob

--------=========X==========

HIAWATHA NATIONAL FOREST ATTACHMENT

A copy of the "Wild and Scenic Rivers Act" was attached to this letter, but is not reprinted here.

United States Department of Agriculture
Forest Service
Ottawa National Forest
2100 E. Cloverland Drive
Ironwood, Michigan 49938
(906) 932-1330

F9

Reply to: 2720

Date: April 26, 1990

Federal Energy Regulatory Commission
Office of Pipeline and Producer Regulation
825 North Capitol Street, NE, Room 7312
Washington, D.C. 20426

Attention: Kurt Flynn, Project Manager,
Environmental Policy and Project Analysis Branch,

Dear Mr. Flynn:

We have reviewed your Draft Environmental Project Impact Statement--"Niagara Import Point Project" March 1990, particularly those portions pertaining to Loops 8 and 9 across the Ottawa National Forest in the Upper Peninsula of Michigan. We have also initiated public involvement efforts within our area. We are enclosing the following for your review and use in finalizing your final EIS:

1. Letter requesting input and comments on the proposed project and DEIS (Niagara Import Point Project).
2. Mailing list for letter.
3. News release on the project and newspaper mailing list.
4. Responses to letter.
5. Our comments and recommendations based on a review of the DEIS and attachments.
6. An Ottawa addendum to Appendix C Erosion Control, Revegetation and Maintenance.

We hope this information aids you in the preparation of the final EIS for the project. If you have questions, contact us.

Sincerely,

CHARLES G. BARTLETT
Recreation Staff Officer

CGB:sl
Enclosures

F.S U.S.D.A. R-9
RECEIVED
APR 30 1990
LANDS, WATERSHED
AND MINERALS MGMT.

cc: F.J. Kott, Great Lakes Gas Transmission, Detroit, MI
Tim Anderson, Braun Environmental, Minneapolis, MN
Ken Berryman, Wilbros. Butler Engineers, Tulsa, OK
Tim Curtis, USDA-FS, Milwaukee, WI
Paul Pederson, Chequamegon NF
Connie Chaney, Chippewa NF
Bryan Barnett, Hiawatha NF
J. Somerville
Bessemer
Iron River
Watersmeet

4/26/90

OTTAWA DEIS COMMENTS AND RECOMMENDATIONS

2.2 Land Requirements

2.2.1 Pipeline Facilities

Page 2-17 Next to last paragraph discusses temporary work space needs for road and river crossings. If any of these needed areas are on the Ottawa we would like to see a listing, a location and estimated size for them, so they can be analyzed and needed mitigation measures planned.

The last paragraph discusses needed storage sites. It is our understanding that none of those are on National Forest Lands. If this is not the case we also would like to see a listing, location and estimated size on these.

2.3.1 Pipeline Construction Procedures

Page 2-29 Second paragraph Marketable timber on Ottawa National Forest Lands will be estimated, appraised and sold to Great Lakes or the contractor at fair market prices. We would expect this timber to be cut and removed, sold to local markets, mills or used for corduroy(rip-rap material). Timber, tops and stumps or material to be burned will require burning permits issued by the Forest Service spelling out safe burning conditions and requirements. Large material such as stumps root wads that cannot be completely burned or chipped will be moved off the right of way and placed in stump dumps located by the Forest Service.

Page 2-29 Next to last paragraph. On the Ottawa National Forest we feel topsoil should be segregated in all areas where it is feasible, and replaced during right of way rehabilitation and seeding in order to provide the best medium for the new vegetative cover to seeded.

Page 2-31 Second paragraph. Additional clearing on the existing pipeline, especially at major streams and highway crossings, U.S. #2 and U.,S. 45 and Forest Highway 16, will be held to a minimum. Any additional clearing layout at these locations will be reviewed on the ground by the Forest Service and approved prior to cutting. We would like to see Great Lakes explore the possibilities or narrowing in on the right of way at these crossings if feasible (lay loop lines closer together). Following construction, native plantings will be planted to reduce the impacts based on individual site plans for the crossings developed by Great Lakes contract specialists and the Forest Landscape Architect.

Page 2-31 Third paragraph. We recommend a minimum distance of at least 50 feet from the stream edge for spoil storage.

2.4 Operation and Maintenance

Page 2-34 second paragraph. The Ottawa would prefer to have a mix of grass and legume cover and fruiting shrubs on the right-of-way for improved wildlife habitat. We would also like to see blocks of shrubs, conifer cover planted and maintained to break up the long, open shooting lane effect and provide wildlife travel lanes or

F9

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F9-1 Additional temporary work space for boring equipment would be required at all interstate, U.S. Route, and state roadway crossings, and at all railroad crossings. This additional work space would range from 50 feet for two-lane road and single railroad crossings to 75 feet for four-lane or multiple road/railroad crossings. Stream/river crossings and the start/end point of each loop would also require additional temporary work space for mobilization and demobilization of equipment. Temporary workspace requirements would range from an additional 25 feet at stream crossings less than 50 feet wide to 125 feet at stream/river crossings greater than 100 feet wide.

F9-2 Construction procedures, as discussed in section 2.3, identify requirements and procedures proposed to be used by the NIP Project applicants. These procedures include a discussion of right-of-way access, trenching and blasting, as well as backfilling and restoration. The Erosion Control, Revegetation, and Maintenance Plan (appendix C) and the Stream and Wetland Construction and Mitigation Procedures (appendix D), provide detailed measures we propose to minimize impact from construction. We understand that the NFS has more site-specific information and that they would issue a special-use permit to Great Lakes. Accordingly, we have revised section 5.1.9.2.1 and included a recommendation in section 7.3 to note that, in NFS lands, Great Lakes must comply with all the conditions set forth in the NFS special-use permit. We suggest that the Ottawa National Forest include timber and stump removal/disposal in their special-use permit.

F9-3 See our response to comment F9-2. In addition, we also note that appendix C states that topsoil stripping is to be done on all active agricultural lands or in other areas at the landowners' request. Therefore, if the Ottawa National Forest wishes topsoil segregation along the entire right-of-way, they should include it in their special-use permit to Great Lakes.

F9-4 See response to F9-2. In the DEIS, section 5.1.9.2.2 and section 7.3 referenced Ottawa National Forest's concerns for maintaining visual screening at the U.S. Route 2 crossing. We note NFS' additional comments and have revised section 5.1.9.2.2 and our recommendation in section 7.3, accordingly.

F9-5 FERC recommends a minimum distance of 10 feet from streambanks for spoil storage from trench excavation. A minimum distance of 50 feet would require construction vehicles to move about the right-of-way in the riparian area more frequently, potentially causing unnecessary additional disturbance of the streambank area. In addition, it is possible that this suggestion would require the construction contractor to perform multiple handling of the spoils, a method that could require additional equipment on the right-of-way.

F9-7 See response to F9-2. We understand the Ottawa National Forest's concerns on revegetation of the right-of-way and have recommended planting of vegetation strips at stream and road crossings, nonetheless, to allow maintenance access we do not support the planting of shrubs or blocks of shrubs along the whole right-of-way. The applicants need to perform periodic aerial inspections and walkovers of the line, have access for vehicles to perform cathodic protection, and, as necessary, pipeline repair. Total revegetation of the right-of-way, except for where it is explicitly required by our recommendations and procedures, could inhibit the routine maintenance practices of the applicant and, thereby, the safety of the line.

The restriction of herbicides along the right-of-way could be included as a condition to the Forest Service's special-use permit.

2.

crossings of the line. Use of herbicide for right-of-way maintenance will probably not be permitted.

A wildlife habitat development and maintenance plan for specific sections of Loops 8 and 9 across the Ottawa will be developed and made a part of the new special use permit to be developed and issued to Great Lakes covering the existing line and the new loops.

3.0 Alternatives
Page 3-9 Next to last paragraph. On the Ottawa we agree with this; and the Ottawa National Forest Land Management Plan (1986) recognizes in its standards and guidelines the value of using existing rights-of-way as utility corridors to lessen impacts on all resource values and maximize right-of-way vegetation for wildlife habitat and visual enhancement.

4.0 Affected Environment
Page 4-38 Table 4.1.4-3 Significant Wildlife Habitat Crossings.

Add Loop 9/MI	434.3	DWA Black Spur	49,100
	454.4	DWA Imp-Taylor	21,490
	464.9	DWA Golden Lake	15,040

Page 4-40 Table 4.1.5-1
Loop 4, 9, 11 bald eagle add Iron County, MI.
Page 4-41 First Paragraph add Iron to the list of counties in the last sentence of this paragraph.

Gray Wolf, Second Paragraph at the end add There also have been sightings in the vicinity of the pipeline Loop 9 in Gogebic County, Michigan.

4.1.7 Wetlands
Page 4-46 As indicated in the MDNR response of 1 February 1990 to Great Lakes addressing their concerns prior to the granting of permits, we agree and also feel a listing of wetland limits by beginning milepost and length for the individual loops should be added. (Table E1 and E2 do this).

4.1.9 Land Use, Recreation, and Public Interest Areas
Page 4-72 Third paragraph from the bottom add in the second sentence after Present uses include: Sightseeing, driving for pleasure, logging; off road vehicles (ORV), all terrain vehicle (ATV) snowmobile, cross-country skiing, and hiking trails, hunting, camping, picnicking; fishing, trapping, boating and canoeing.
Page 4-76 Top correct acreage figure is 953,630 change last sentence in first paragraph to read and add:

> U.S. Route 2 which is considered a scenic highway with strong concerns for the visual resource values in this area will be crossed four times within the Forest Boundary. There are also similar concerns for the crossings on U.S. Route 45 south of Watersmeet and Forest Highway 16 at Golden Lake.

F9

8 F9-8 Comment noted. See response to comment F9-2.

9 F9-9 Thank you for your comment

10 F9-10 Thank you for your comment. Please refer to the revised text for incorporated changes.

11 F9-11 Thank you for your comment.

12 F9-12 Comment noted. Section 4.1.9.1.1 has been revised.

3.

4.1.11.1 Historic and Archaeological Resources
Page 4-83 Second paragraph. The Ottawa would appreciate receiving copies of the report and its results once the phased plan and necessary fieldwork for the spring of 1990 has been completed.

Page 4-76 Recreation, Wild and Scenic Rivers
4-77 Loop crossings on the Cisco Branch and Middle Branch of the Ontonagon and South Branch of the Paint River are on the Ottawa National Forest. Legislation is pending to designate these Michigan streams as wild, scenic or recreational rivers as components of the National Wild and Scenic Rivers System by the Michigan Scenic Rivers Act of 1990 (HR 4019).

5.0 Environmental Consequences
5.1 Proposed Action
5.1.2 Soils
This whole section looks good to us, but we do have some comments and recommendations we would like to have considered.

5.1.2.2 Erosion Control, Revegetation, and Maintenance Requirements
Page 5-8 First paragraph top of the page--more stringent measures
We would like to see exposed soils revegetated as soon as possible and mulched if necessary as soon as possible on a temporary basis or permanent basis dependant upon season (timing) and degree of work completion. We agree with the MDNR on their time of construction spelled out in their 1 February 1990 letter to Great Lakes. We do feel dependant upon weather the summer - fall period they spell out July 1 to September 15 could be widened to June through October 15th. We have other specific recommendations that we propose to add as suggested Ottawa addendum to Appendix C.
Page 5-8 Slope Breakers. On the Ottawa we feel permanent runoff diversions on all slopes greater than 5 percent should be constructed to the following specification:
- installed at 30° angle to contour
- extend well beyond disturbed area to suitable disposable area

Slope (%)	Spacing between waterbars (ft.)
5	140
10	75
15	60
20	45
25	35
30+	25

Page 5-8 & 9 We are in agreement with and would go along with any or all of the techniques described to reduce erosion in sensitive areas. (Terraces, hay bales, etc.). We would also clarify Vegetation Strip Req'd (ft.) by making it Width of Vegetation Strip Req'd (ft.).

Page 5-9 Next to last paragraph - As mentioned earlier (Pg. 2-29 comments) we would like to see topsoil segregated on all the uplands across the Ottawa. We also would like to see an increase in the width of vegetation strips. We recommend strips of 50 feet wide at 5% slope and increasing it in 25 ft. increments as slope increases.

F9

13 **F9-13** Your request for a copy of the cultural resources survey report is noted. We have added such a requirement to the certificate conditions for Great Lakes.

14 **F9-14** Comment noted.

15 **F9-15** Please refer to response F9-50.

16 **F9-16** Please refer to response F9-50.

17 **F9-17** Thank you for your comment.

18 **F9-18** We believe that segregating topsoil is important to preserve the soil amendments that have been applied in agricultural cropland. However, we do not believe it is necessary to require topsoil segregation in upland areas where no investment has been made in soil amendments, and where successful revegetation of the right-of-way is achieved through conformance with the E&SC Plans. With regard to increased width of vegetation strips, please refer to responses F9-3 and F9-50.

4.

On slopes over 15% we would suggest the vegetation filter strips in combination with silt fences.

Construction Timing to Minimize Soil Compaction and Structural Damage
Page 5-11 Second paragraph last sentence. We recommend no construction between March 1 and May 15, with all required erosion control measures and devices in place for disturbed area prior to March 1st.

Temporary Erosion Control

Page 5-13 First paragraph. We agree with the mulch requirements as shown for areas disturbed between October 15 and March 1. Our recommended seed mixtures for the Ottawa are shown in our addendum to Appendix C. Lime and fertilizer proposals are also to be listed.

Cleanup

Next to last paragraph. We like the 10-day requirement but would like to see the "weather and soil conditions permitting" changed to unless waived by the environmental or chief inspector.

Temporary Erosion Control

5.1.2.4 Enviornmental Inspectors
Page 5-14. We feel the environmental inspectors should have stop work authority. We feel that dependant on access to and time frames in locating and informing the chief inspector a lot of damage could occur.

5.1.3.1.1 General Construction and Operational Impact
Page 5-14 Next to last paragraph. We recommend that refueling and fuel storage operations be required to be conducted at a minimum distance of 500 feet from wetlands, streams or other sensitive areas. See also Page 5-15 Contamination of Aquifers--spill prevention and containment plans--we agree that these are needed.

5.1.3.2 Surface Water
Pages 5-16-17-18-19-20-21 We agree with and support the comments made by the MDNR in their letter to Great Lakes on 1 February 1990 on operations pertaining to wetlands, stream crossings and other.

Stream Construction and Mitigation Procedures
Page 5-17 Third paragraph. We feel there should be some restrictions as to volume of water to be directed from a single water source for hydro-static testing, but feel MDNR permit requirements should cover this. We also have concerns about discharge location and possible erosion due to discharge of water after the testing.

5.1.4. Fish and Wildlife
Page 5-31 Last paragraph. Time frame indicated agrees with MDNR letter and attachment Ray Juetten 13 April 1990 also top of page 5-32 fluming is in agreement. We agree and support this on the Ottawa's cold water or significant warm water fishery streams.

F9

19 F9-19 Please refer to response F9-50.

20 F9-20 Please refer to response F9-50.

21 F9-21 Please refer to response F9-50.

22 F9-22 We disagree. We believe this concern is adequately addressed by the text discussion, by our recommendations that require environmental inspectors, and by our appendix C, which describes the duties for inspectors.

23 F9-23 Our recommended spill prevention and containment plan would address emergency control cleanup of any spills of hazardous materials and we maintain that our current restrictions for refueling and storage of hazardous materials are adequate to protect streams, wetlands, groundwater, and other sensitive areas, where specified.

24 F9-24 Comment noted.

25 F9-25 Comment noted. FERC has specified a set of guidelines that the applicants must follow for hydrostatic testing of the pipeline (see appendix D). We feel we have adequately addressed concerns for impact that may occur during withdrawal and discharge of test waters.

26 F9-26 Thank you for your comment.

5.

Page 5-35 Last paragraph. We agree and like the maintenance not before August 1 and only once every 3 years. Page 5-38 Next to last paragraph. Last two sentences we agree with restriction of construction within DWA's during the December to March time frame.

5.1.5 Endangered and Threatened Species
Page 5-42 Next to last paragraph. We would appreciate receiving the results of the survey reports mentioned in this paragraph; Fall T&E plant survey, spring plant survey, winter spring animal survey, January 1990.

Page 5-43 First paragraph. We agree in line with the recommendation of FWS and MDNR that field surveys of nesting areas be done including the two on Loop 9 in Gogebic and Iron County, Michigan. These surveys should be joint FWS/MDNR and include needed mitigation measures. We would appreciate copies of this report prior to pipeline construction. Bald eagle nest sites occur at 5 locations within 1 mile of the proposed Great Lakes facilities.
Pages 5-43 Second paragraph Bald eagle nest sites occur at 5 locations within 1 mile of the proposed Great Lakes facilities. Loop 9 in Gogebic County and Iron County, Michigan. Work free period of February 1 through August 1 is good. Both Gogebic and Iron County nests are active. We also recommend closure control on all access roads used for construction purposes to prevent access and nest disturbance.

Page 5-59 Last paragraph Add Table E1 in front of Table E2 this makes it more site specific.

5.1.9 Land Use, Recreation, Public Interest Areas and Visual Resources.
Page 5-79 We agree that a 75-foot permanent cleared right-of-way should be adequate if that is the industry standard for two 36 inch pipes. We do have concerns and would like to see that narrowed in at key highway and major stream crossings, and mitigated with screen plantings to maintain or enhance the visual resource values.
Page 5-91 ORV/ATV use on the pipeline through the Ottawa will be covered in a plan to be developed and made a part of the new special use permit for the pipeline. This will specify those portions of the pipeline right-of-way to be open to use and those portions where closure control measures will be taken.
Page 5-92 Second paragraph from the top first sentence. Change to read- Due to specific concerns raised by the Ottawa National Forest, we recommend that existing screen plantings at the four U.S. Route 2 crossings, the U. S. Route 45 crossing south of Watersmeet and the Forest Highway 16 crossing at Golden Lake all be maintained or replaced following construction to protect and enhance visual resource values. Additionally tree removal should be minimized to the extent possible, crossings narrowed in as much as possible and the temporary construction right-of-way replanted in the areas where U. S. Route 2 is just to the south of the proposed pipeline right-of-way (MPs 446.5-4485 and 454.6-455.1).

F9

27 F9-27 Comment noted. Thank you for your response.

28 F9-28 Comment noted. Our recommended condition requires Great Lakes to provide us with your comments, therefore, you will receive the reports.

29 F9-29 Thank you for your comment. See response to comment F9-28. The Iron County nest site has been added to Section 5.1.5. Additional recommendations within FS lands should be addressed in the FS special-use permit.

30 F9-30 Comment noted and text revised.

31 F9-31 Comment noted.

32 F9-32 Comment noted. Please refer also to response F9-50.

33 F9-33 Comment noted. Section 5.1.9.2.2 and our DEIS recommendation 44 have been modified.

6.

There is also concern as to the construction timing on the pipeline across the Ottawa as it will cut throught several County and Forest Service System roads that access campgrounds during the summer useseason. Means to maintain access throught rerouting scheduling around the use season June 15-September 15, or speedy pipe installation will need to be discussed and planned out prior to the construction phase. These crossings are: Forest Service Roads 7100, 3960, and 3980, and County Roads 527 and 531.

There is also a cross-country ski trail maintained by Sylvania Outfitters that bisects the pipeline about 1/4 mile south of U. S. Route 2 in Section 29. Pipeline construction in this section needs to be completed prior to December to prevent conflict.

There are also 39 proposed or existing forest road pipeline crossings that are a part of the planned Forest transportation system. As a part of construction on Loops 8 and 9, lifts and required pipe cover (fill) should be put in to meet safety standards required to support heavy loads. (Loaded logging trucks).

Exact locations will be determined and engineered by Forest Service personnel during the construction phase of the pipeline project. These crossings are necessary to provide across pipeline access for Forest Service administration and resource management needs.

Forest Service System roads used to access the pipeline for construction, equipment and materials will be maintained by Great Lakes during use and restored to their original condition upon completion of the project.

Page 5-99 Second paragraph under Great Lakes. The Ottawa National Forest needs the results and reports on the proposed Phase 1 and 2 investigationas soon as they are completed. Michigan SHPO's response, comments and approval on those portions of the Loop 8 and 9 segments is also needed. We would also appreciate a listing of all proposed staging areas and access road locations as soon as it is developed. This listing as a part of the final EIS would be good.

6.1 Great Lakes

Page 6-1 Next to last paragraph. We are in agreement with this paragraph and, as mentioned earlier comments on Pg 3-9, this is in keeping with the standards and guidelines of the Ottawa National Forest Land Management Plan (1986).

7.1 Summary of the Staff's Environmental Analysis of the Proposed Action.
Page 7-3 We agree with paragraphs 1 through 4 on this page and feel that following this direction and adherence to the MDNR recommendations spelled out in their 1 February 1990 letter to Great Lakes and the MDNR letter of 13 April 1990 (Ray Juetten on Fisheries) should provide adequate resource value protection and mitigate any adverse consequences of the proposed action.

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34 F9-34 Comment noted. Section 5.1.9.2.2 has been revised. See also section 7.3.

35 F9-35 Comment noted. Section 5.1.9.2.2 has been revised. See also section 7.3.

36 F9-36 Great Lakes would design and install the proposed pipeline in a manner that would ensure the safety and integrity of the pipeline in accordance with 49 CFR Part 192 and any FS special use permit.

37 F9-37 Your request for Phase 1 and 2 reports and SHPO comments is noted and addressed in the mitigative measures for Great Lakes. Great Lakes has provided an up-to-date listing of its proposed staging areas and access road locations in its commentary on the DEIS. As noted, these locations may change as the project proceeds. See response F9-13.

38 F9-38 Thank you for your comment.

39 F9-39 Thank you for your comment.

7.

Page 7-6 As mentioned earlier-comments Page 5-91; the location of needed barriers to control vehicular use and access to the right-of-way will be developed and made a part of the special use permit.

7.3 FERC Staff Recommended Measures.

All applicants page 7-9 We agree with paregraphs 1 and 2.
Page 7-10 We agree with paragraphs 5, 6, 7 and 9. Paragraph 8 We will submit a proposed Ottawa addendum augmenting Appendix C as a part of our response.
Page 7-11 We agree with paragraphs 10, 12, 16. We feel 500 feet should be used in paragraph 11 and recommend adding the word forested after agricultural in paragraph 13 and using a "No construction" time frame of March 1 through May 15 for no construction.

The remaining paragraphs are not applicable to the Ottawa.
Page 7-12 We agree with paragraphs 18, 19 and 20.

Page 7-13 Great Lakes We agree with paragraphs 25 and 26. Paragraph 29 is not applicable to the Ottawa.
Paragraph 27 Add two additional field surveys of bald eagle nests on Loop 9 in Gogebic County.
Page 7-14 We agree with paragraph 33. Paragraphs 30, 31, 32, 34 are not applicable to the Ottawa.
We feel paragraphs 35, 36 and 46 could be rewritten and consolidated. Follow MDNR recommendations 1 February 1990 letter to Great Lakes and 13 April MDNR letter (Ray Juetten).

Page 7-15 Paragraphs 37, 38, 39, 40, 41 are not applicable to the Ottawa. We like and agree with paragraphs 42 and 43. Paragraph 44 we would insert U. S. Route 45 and Forest Highway 16 between Route 2 and crossing in this second sentence. We also feel tree removal should be minimized to the maximum extent possible on all National Forest Lands, and major highway and stream crossings narrowed in as much as possible and screened with cover plantings of native shrubs and trees to protect and enhance visual resource values. We would propose Great Lakes through their contracted specialists in this area--work with the Forest Service to plan and design these crossings prior to construction.
Page 7-16 We like and agree with paragraph 45. Paragraph 46 consolidate and rewrite with paragraphs 35 and 36.
Paragraph 47 is not applicable to the Ottawa National Forest.

Comments on Appendix C
Erosion Control, Revegetation, and Maintenance Plan
Page C-5 We may want to try a new clover designed to benefit wildlife we will incorporate this into our addendum seed mixture.

Page C-6 VI Off-Road Vehicle Control
B. We are proposing conifer plantings on at least seven deer travel ways across the pipeline and conifer and shrub plantings at all major stream and highway crossings. These will be laid out on the ground and planned prior to construction.

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40 F9-40 Thank you for your comments.

41 F9-41 This issue was previously discussed in our response to comment F9-23.

42 F9-42 Please refer to Exhibit C.

43 F9-43 A survey along Loop 9 in Iron County, Michigan, has been added to this recommendation to be consistent with information supplied in comment F9-29.

44 F9-44 Thank you for your comment. However, we feel these recommendations should remain separate for purposes of FERC environmental compliance tracking. Although in a few instances we do not agree with MNDNR recommendations (i.e., time of construction for stream crossings should not be allowed between December 1 to March 1 for the exact reasons specified in the 13 April MNDNR letter (R. Jutten)), we have indicated in section 5.1.3.2.1 (Stream Construction and Mitigation Procedures) that state and local agencies could require the applicants to follow more stringent procedures. Consequently, each state may change some of our site-specific recommended procedures or construction windows to be more consistent with state water quality policy. By requiring Great Lakes to submit site-specific plans for the sensitive water resources indicated in DEIS recommendations 35, 36, and 46, we would be better able to track and monitor compliance at these sites. Please note that time restrictions for instream construction in DEIS recommendation 35 have been revised.

45 F9-45 Comment noted. DEIS recommendation 44 has been revised.

46 F9-46 Refer to comment and response F9-44. Comment regarding DEIS recommendation 47 is noted.

47 F9-47 Please refer to Exhibit C, section D.

8.

Page C-7 VII Maintenance
B. Maintenance clearing will be by mechanical means only and will reserve all black, pin and choke cherries; blackberries and raspberrries, Ironwood, hazel; sumac; and dogwood; except for the central 1/2 chain (approx. 33 ft.) which will be maintained in grass and legumes by mowing during the period July 1-October 1.

Appendix D
Stream and Wetland Construction and Mitigation Procedures
Page D-1
C. Time Window for Construction
1. We would prefer crossing of the following streams will be done by the flume method only and work within 100 feet of these streams will take place only during the period June 15-August 15:

Jackson Creek	Tenderfoot Creek
Middle Branch Ontonagon	Duck Creek
Imp Creek	Cooks Run
South Branch Paint River	

This should be in line with MDNR recommendations (1 February 1990 letter to Great Lakes and the 13 April letter Ray Juetten)

Sediment basins needed and their location for the above streams will be determined by the MDNR and Forest Service and designed prior to construction.

F. Trench Dewatering
Page D-6 1. Add the following :

Trench dewatering will pump water a minimu of 50 feet away from stream and only where water will drain back to stream through established grass or sedge waterways. Pumped water will be discharged to prevent gulleys and rilling.

Appendix G EIS Distribution and Mailing List
Page G-16
Add
USDA-Forest Service, Ottawa National Forest, Bessemer, MI
USDA-Forest Service, Ottawa National Forest, Ironwood, MI.

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F9-48 As discussed in comment and response F9-44, individual states, during the state review and permitting process, may recommend time windows for construction across surface waters that are more consistent with state water quality policy. Comment on sediment basins has been noted and this issue is expected to be resolved during state permitting process, or in the FS special-use permit. Comment on trench dewatering has been noted. However, through our experience with pipeline construction, we have determined there are various ways to ensure silt-laden water is filtered properly before re-entering a stream. To maintain flexibility, we have not incorporated this comment.

F9-49 Comment noted. These addresses have been added to the mailing list.

EXHIBIT C

F9

MITIGATION AND REHABILITATION

STANDARDS AND GUIDELINES - OTTAWA NATIONAL FOREST
Addition to Appendix C

Erosion Control and Rehabilitation

On the Ottawa, these standards and guidelines will augment those in Appendix C.

Pending site-specific information (soil survey, fertility analysis) and/or other situations add or change, the following will serve as a guide for evaluating or implementing the rehab plan.

A. During construction

1. All trees, brush, stumps, rock, and other objectionable material would be disposed of, so that it is not interfering with the construction of erosion control facilities.

2. Top soil should be preserved in a manner so as to be available for rehabilitation.

3. Earth removed should not interfere with drainage during construction.

4. Temporary diversions should be provided to reduce erosion during construction.

5. All erosion control facilities should be installed immediately after that section of disturbed area is completed.

6. Temporary cover (e.g., mulch) is provided immediately after that section of disturbed area is completed. This material will be anchored on critical areas (e.g., steep slopes).

   a. Small grain straw, 2 tons/ac., anchored by disk packer, asphalt, or melting tie-down. Wood chips at 7 tons/acre.

   b. Where equipment cannot operate; straw or grass hay tied down, paper or jute erosion control nettings, etc.

7. Adequate drainage provided where there is seep or soil slippage.

Point: Because of the time of construction, this is most critical on how the soil resource is protected until vegetative cover can be established.

8. Controlling Diversion of Water

Revegetation efforts may be lost if erosive waters are not controlled. Furthermore, effective diversion of water should not create a new erosion problem. This is of a prime concern.

F9-50 The Ottawa National Forest has provided us with "Mitigation and Rehabilitation Standards and Guidelines," which they requested be appended to our appendix C, Erosion Control, Revegetation, and Maintenance Plan. We recognize that the U.S. Forest Service (FS) has more site-specific information and that they would issue a special-use permit to Great Lakes. Accordingly, we have revised our recommendation in section 7.3 to note that on FS lands, Great Lakes must comply with all the conditions set forth in the FS special-use permit. Since our procedures apply to all applicants' facilities in diverse geographic areas of the country and are minimum requirements, we do not feel modifying our appendix C to incorporate all the detailed FS specifications is practical or appropriate.

We have reviewed and compared FS Standards and Guidelines to our appendix C and appendix D, Stream and Wetland Construction and Mitigation Procedures, and for the most part feel they are essentially the same. There are issues though, where we feel, based on our extensive experience in pipeline construction, that our recommended procedures are environmentally preferable to those suggested by the FS. In the following situations, we suggest the FS consider implementing the procedures discussed below.

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Ottawa's erosion control and rehabilitation recommendations are compatible with the existing FERC requirements in appendix C. The proposed additions to appendix C would require only slightly varied applications of our erosion control, revegetation, and maintenance requirements.

For stream crossings, we do not recommend construction across one-half of the stream at a time as described in Exhibit C. Through FERC's experience in pipeline construction, we have found that one of the best ways to minimize adverse water quality impact is to construct the stream crossing as quickly as possible. We feel that separating pipe installation across streams into two construction phases would lengthen the period of time needed for the crossing and would cause additional unnecessary disturbance of the stream in order to connect the two segments of pipe.

Our wetland procedures do not allow permanent corduroy roads to be constructed through wetlands. The reason for this is because often, many layers of logs are required to provide the necessary stability needed for construction equipment. These layers of logs may extend greater than 10 logs deep. We feel that it would be impossible to remove these logs without significant permanent damage to the wetland, including serious disruption of subsurface and surface water movement. For these reasons, we recommend removable timber pads be constructed by cabling logs together to facilitate removal and to distribute the load more efficiently. These pads could then be used repeatedly.

Waterbars

- installed at 30° angle to contour
- extend well beyond disturbed area to suitable disposable area
- spacing

Grade (%)	Distance between waterbars (ft.)
5	140
10	75
15	60
20	45
25	35
30+	25

- temporarily protected until vegetative cover is established.

Diversion ditches

- prevents water from returning to disturbed area
- where water concentrations and/or velocities warrant, cobble, rip-rap, fabric, etc., should be installed to capture sediment and reduce hazard of initiating new erosion problems.

B. After construction

1. Revegetation

- on critical areas, lime and fertilizer recommendation based on soil fertility analysis.
- otherwise, for grass seed mix, apply 50 lbs/1000 ft^2 dolomotic lime. Apply 25 lbs/1000 ft^2 of 10-24-24 or its equivalent. Work into seedbed during seedbed preparation.
- Well drained soils

	lbs./1000 ft^2
Creeping Red Fescue	.4
Domestic ryegrass	.15
Kentucky bluegrass	.25
Alsike ladino clover	.2

- Moderately well drained soils

Creeping Red Fescue	.25
Kentucky bluegrass	.5
Timothy	.5
Empire Birdsfoot trefoil	.15
Alsike ladino clover	.2

- Somewhat poorly drained-poorly drained soils

Reed Canary grass	.15
Red Top grass	.03
Creeping Red Fescue	.04

- Time of seeding -- May 1 to September 10

- Lightly mulch all slopes <15%, with 1-2 bales/1000 ft^2

C. Maintenance

1. Upgrade existing maintenance plan.

   - Permittee will be responsible to repair and maintain erosion control facilities and vegetative cover.

   - Vegetative cover will be maintained at 100% stocking on critical areas and 85-90% on all other areas using seed mixture approved by Forest Service.

   - Soil fertility levels will be maintained on secondary eroded areas by the permittee.

Stream and Wetland Mitigations - Follow MDNR Recommendations (1 February 1990 attached)

A. Stream Crossings

During Construction

1) All construction activities will be carried out so as to minimize sedimentation of streams.

2) Construction equipment and vehicles will not be permitted to operate in or ford streams. Temporary culverts or bridges will be properly sized and installed at all stream crossings where it is necessary fo equipment to cross the stream.

3) At no time may construction debris be placed in any stream channel, including soil, excavated or dredged materials, or vegetation. This does not apply to trench backfilling with dredged materials.

4) Excavation of trench within a specified filter strip (sediment trap zone) and through the stream will not be permitted in advance of pipeline assembly by more than (1) day. Filter strip zones of undisturbed soil and vegetation for trapping sediment from the construction sites will extend a minimum of 50 feet along the ROW c either side of all stream crossings.

5) Construction in streams will be done one-half of the stream at a time while the stream is flumed through the other side. The construction area will be dewatered using sump pumps, and the sump water pumped away from the stream into a zone of filtration away from the streambank.

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6) Following pipe installation through one side of the stream, the construction area will be backfilled and restored before the other side of the stream and streambank are trenched. The stream is flumed through the completed side of the work area. Similar use of sump pump is made.

After Construction

1) Streambank restoration will include the installation of rock rip-rap on both banks through the work area, sized according to appropriate flow volumes and velocities of the streams disturbed by construction.

2) The upper banks and filter strips are to be mulched immediately after trench backfilling and shaping, and seeded with appropriate cover vegetation during the specified seeding time period.

3) All temporary culverts and bridges will be removed as soon as construction and site restoration are completed. All fill deposited in the channel for the crossing is to be completely removed and deposited outside the filter strip area.

B. Wetland Construction

1) Construction in wetlands will be done to minimize adverse impacts from sedimentation and disruption of natural drainage patterns.

2) No permanent filling of wetlands will be permitted.

3) Corduroy "roads" of native tree materials will be developed as an operating base for construction equipment in all wetlands. Where corduroy roads are not appropriate, pads will be placed in the right-of-way for equipment operation.

4) Following construction and backfilling of the trench, the work area will be returned to its pre-construction contour.

5) After contouring, special cross-drainage provisions will be employed to maintain wetland drainage features. Cross-drainage ditches will be installed every 200 feet along the right-of-way in all wetlands. These ditches will follow the specifications outlined in the attached "Wetland Cross-Drainage" and will extend across the width of the trench and corduroy road.

C. Hydrostatic Test

1) Point of intake to be on Middle Branch - Ontonagon River , South Branch - Paint River. Point of discharge to be mutually agreed upon by Forest Service, MDNR, and the Company.

2) Intake and discharge of water will be conducted such that streambank or bottom erosion will not take place.

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3) Intake of water will not exceed that rate necessary to maintain stream-flow sufficient to preserve fish habitat during the period of testing. An intake rate to fill the pipe will be figured so as to not adversely affect stream flow. Rate of discharge should be roughly equivalent to the rate of intake.

4) Fish will be protected during water intake by screening the intake.

5) Water quality of the discharge water will be roughly equivalent to that of the intake water, and will conform to State of Michigan Water Quality Standards. It will be free of introduced toxic substances, as defined by the State Standards.

6) The temperature of the discharge water will not, when mixed with the receiving waterbody, cause a lethal shock effect on aquatic organisms.

D. Restoration of Right-of-Way

In addition to the previously itemized restoration requirements, the following requirements shall apply.

1) Topsoil and subsoil shall be stockpiled separately, in the ROW, not outside the cleared ROW. Topsoil must be returned to its original surface position for site restoration.

2) Trench backfilling, grading, and installation of erosion control measures will be done as soon after completion of pipe assembly and testing as possible, not to be more than one half (0.5) mile behind the finished pipe.

3) Where necessary to prevent sedimentation of streams, fabric or hay bale check dams will be installed in eroding areas adjacent to streams.

Wildlife Mitigation Measures

A. Brushpiles along the ROW edge can provide escape cover for many mammals, birds and amphibians. Consider several (4-10/mile) in appropriate locations.

B. Develop a selective mowing schedule to help maintain the grass-herbaceous opening (to be completed after permit is issued) as part of a wildlife habitat plan for the R-O-W.

C. Develop shrub and conifer plantings along steep slopes, stream and road crossings and wet areas to provide for visual rehabilitation and escape cover for wildlife species utilizing the ROW. Hawthorne, red maple, basswood, oak, sprout hazel, cherry, juneberry, white cedar and hemlock.

D. Maintain a brush edge along the ROW with existing vegetation.

Visual Resources

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All additional clearing along the existing ROW should be held to an absolute minimum. At the four US-2 crossings and the crossings on US-45, FH16 and the Cisco, Middle Branch of the Ontonagon Duck Creek, Cooks River and S Branch of the Paint crossings, no additional clearing will be allowed unless absolutely necessary. Forest Landscape Architect will review clearing layout prior to cutting at the locations specified above. Following construction native plantings will be planted to reduce the impact of the additional clearing if necessary.

Pipeline Crossings - (Forest Service System Roads)

At 39 specified locations, a minimum of 6 feet of cover will be required over the top of the loop pipe (see maps).

The Great Lakes Gas Transmission Company will be requested to apply suitable fill over the adjacent existing gas line at the above 39 specified locations to allow future road construction over the line.

Exact locations of these 39 pipeline crossings will be flagged on the ground by Forest Service engineering personnel. In addition, engineering personnel will be present during crossing construction to ensure proper depth of fill, compaction, etc. Existing roads crossed shall be restored to the original grade and conform to the typical section for the road. At all locations, logging trucks and heavy equipment will be in operation.

Other Mitigations

A. A Forest Service representative will be on the project site (at company expense) both during construction and subsequent rehabilitation to ensure that stipulations of this EA and the special use permit are adhered to.

B. A new right-of-way mowing plan will be developed by the Forest Wildlife Biologist for insertion into the special use permit (to be done in the next 6 months).

C. All merchantable timber to be cleared will be counted and the cutting boundary marked. This timber will be sold to Great Lakes Gas Transmission Company in accordance with timber sale contract requirements. Ranger District personnel will administer sale contract.

D. A new special use permit will be issued to Great Lakes Gas Transmission Company covering the old and new permit area work, plus any temporary access points, if needed, or other work areas. Standard permit requirements will be used.

E. No construction will be permitted between March 1 and May 15. All required erosion control devices will be in place for all disturbed areas prior to a March 1st work shutdown.

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OTTAWA NATIONAL FOREST REFERENCED LETTERS

Attached are the February 1, 1990, and April 13, 1990, letters from MIDNR referenced numerous times in the Ottawa National Forest letter. Though they were not submitted with the Ottawa National Forest comments, we have obtained and reviewed a copy of each letter and have included them as an attachment to the Ottawa National Forest letter.

J.M.E. FEB 05 1990
Engineering FEB 5 1990

STATE OF MICHIGAN

NATURAL RESOURCES COMMISSION
THOMAS J. ANDERSON
MARLENE J. FELLHAUER
HENRY FAWCETT
D. BRUCE WILKINS
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Regional Headquarters
1990 US-41 South
Marquette, MI 49855

- MISSOUND ROGER HACK LETTER

February 1, 1990

Mr. Jerry Kott, PE
Manager, Design Services
Great Lakes Gas Transmission Company
2100 Buhl Building
Detroit, MI 48226

Re: Gas Line Utility Construction Crossings of Streams and Wetlands

Dear Mr. Kott:

The purpose of this letter is to alert you to concerns the Department of Natural Resources (DNR) wishes to address prior to granting permits for the next phase of Great Lakes Gas Transmission Company's (GLGTC) pipeline construction. It is the Department's belief that consideration of these concerns will help to ensure that permit conditions can be met, and will serve to assist the Department and GLGTC in meeting goals for the project.

Items that must be addressed in future applications are as follows:

1. Wetlands

   a. Wetland limits must be identified by stationing on the original application.

   b. Must thoroughly describe methods of construction through wetlands that will prevent soil compaction. Suggest utilizing interlocking mats.

   c. No equipment roads will be allowed through wetlands.

   d. Type of equipment to be used in wetlands should be specified.

   e. Must provide soil identification within 500 feet of a stream, lake, and across identified wetlands, i.e., soil type, depth of organics, etc.

   f. Time of construction shall be limited to July 1 to September 15 and December 1 to March 1 of any given year.

   g. No excess soil (spoil) can be placed in wetlands and all excess spoil disposal locations must be identified.

R 1026-1
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   h. Identify wetland drainage pattern to determine if trench will lower water levels or drain the wetland and specify method of preventing such drainage.

   i. Silt screens will be required along both sides of construction trench placed through open water areas of wetlands. Filter cloth should be specific for the problem and be specified as to manufacturer with manufacturer's specifications. Plans shall show, in detail, methods for placing and anchoring silt screen to prevent loss of sediment.

2. Stream Crossings

   a. All streams must be identified by stationing and stream names should be provided where applicable.

   b. All streams shall be crossed by the flume method or by construction and utilization of a cofferdam.

   c. The flume or cofferdam must be designed by a registered professional engineer and should include the ability to handle channel full flow quantities.

   d. The flume or cofferdam length and width must be computed for each crossing considering the depth of trench and soils at the site (must be designed by a registered professional engineer).

   e. The flume size (diameter) needs to be computed based on flows for the time of year. Also, upstream and downstream headwalls for the flume should not raise upstream water levels.

   f. The flume should not be used for equipment roads unless specifically designed as part of the stream crossing.

   g. Site specific surveys of each crossing are required and should include stream flow, cross section profile, and bank profiles 100' in both directions.

   h. Construction of stream crossings must be completed including streambank restoration within seven days of start up.

   i. Time of construction shall be limited to July 1 to September 15 and December 1 to March 1 of any given year.

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3. Other

a. Equipment road crossings of streams must be bridges. The bridges must be single span type bridges. If the crossing cannot be made with the single span, the equipment road may not cross the stream. No permanent crossings will be allowed.

b. No permanent erosion control may be done after September 15 of any year.

c. A specific temporary erosion control plan is required.

d. Temporary erosion control measures must be in place prior to any trench construction and must be appropriately restored or replaced by permanent erosion controls immediately after trenching.

e. Instream sediment basins will be required where steep slopes to the stream exist and there is a high potential for failure of temporary erosion control measures.

f. Sediment basins must be designed to meet stream conditions.

g. The sediment basins must be designed by a registered professional engineer and approved by the Department of Natural Resources.

h. Trench dewatering designs must be site specific with a plan for each dewatering site.

i. Dewatering sumps must be located as far as physically possible from any stream and waterbody. The sumps shall be large enough to allow water to "pond" and sediment to settle out. If sediment flows from the sump reaches the stream, pumping must stop immediately and the engineers alternate measures shall be submitted for review and approval by the Department of Natural Resources. All work should immediately stop at that location.

j. A contingency plan for soil and sedimentation control measures, failures, oil and fluid spills, etc., shall be submitted to the Department of Natural Resources for review and approval prior to construction.

k. Critical wetland, stream crossings or other areas identified by the Department shall be video taped before, during and after construction and completion of permanent erosion control. Tapes shall be provided within 24 hours of each days operation.

l. Applicant must provide names and contact methods of inspectors that have the authority to stop construction and order necessary changes to assure compliance with all permit conditions.

m. Written progress reports, which include locations of: ongoing construction, completion of temporary erosion controls and permanent erosion controls, shall be provided once a week.

Thank you for your attention to this matter. We are looking forward to seeing these items addressed in your proposal for the next phase of construction.

Sincerely,

Roger Hack

Roger Hack, Region I Supervisor
Land & Water Management Division
Telephone: 906-228-6561

RH:djl

cc: Joan Duncan, LWMD, D-4 Rep., Newberry
Claude Schmitt, LWMD, D-3 Rep., Marquette
Ginny Nash, LWMD, D-1&2 Rep., Marquette
Noel Fielding, Wilbron Construction, Iron River
Steve Elbert, Braun Environmental, Minneapolis, MN
Charlie Whittle, GLGTC, Petoskey

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

Baraga, MI 49908
April 13, 1990

TO: Charles G. Bartlett, Recreation Staff Officer, Ottawa National Forest

FROM: Raymond Juetten, District Fisheries Biologist, District 1

SUBJECT: Great Lakes Gas Transmission Company Pipeline Construction

Subject company is required to obtain Michigan PA-346 permits for pipeline construction across streams or wetlands.

The attached memos outline our permit requirements for stream crossings. Please consider these when preparing your response to FERC's draft Environmental Impact Statement.

RJ.

RDJ.gav

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

Crystal Falls, Michigan

3-21-1990

To: Bernhard Yikanen, Regional Fisheries Biologist

From: Vern Nurenberg, Fisheries Management Biologist

Subject: Stream Crossings, Great Lakes Gas Pipeline

The recent series of stream crossings in this area have clearly demonstrated the need for stricter guidelines and different window periods to govern all stream crossings. The section of pipeline currently nearing completion has been constructed entirely during winter conditions and has encountered numerous weather related problems. Many of these problems could be avoided if stream crossings were limited to summer periods. Because of constant freezing conditions, stream crossing operations seem to take much longer to perform than they would with unfrozen earth and water. At times workers had trouble locating streams in deep snow and ice. The excavated earth froze quickly making bank restoration time consuming and extremely difficult, if not impossible. With streams ice covered it becomes difficult to detect siltation problems and devise corrective methods. Seeding is impossible in the winter months meaning that every crossing location has to go thru spring runoff with only temporary erosion measures. The recent early thaw and runoff have rendered most of the erosion control measures ineffective. The high water has made those crossings still under construction more time consuming and damaging to the downstream areas. The following are guidelines that should be adhered to in all future stream crossings.

Cold water Streams:

1. Crossings must occur during the time period of June 15 to August 15 only. This time period will have the least detrimental effect on species present as far as the overall life history of cold water fish. Crossings can be completed and stabilized efficiently during warm and dry conditions.

2. These streams must be crossed using the flume method only.

3. A pre-construction meeting for each crossing should be held with the field foreman to insure requirements are fully understood;

4. A sediment basin must be installed and maintained at all crossings as a precaution to act as a last resort, in case of an "accident".

5. Crossings must be planned and carried out properly to assure each is the most efficient possible to minimize damages.

6. The engineer designing the crossing should be held accountable to assure compliance with requirements. Performance bonds should be required.

Warm water streams:

1. These streams should only be crossed in the time period of July 1 to September 15. This period is the most compatible with important warm water gamefish.

2. For most crossings the preferred method is fluming, but open trench may be allowed in some cases.

3. Crossing must be staged properly to assure efficiency.

The above requirements should alleviate the problems we are having in this area at present due to the runoff and high water. The erosion control measures installed on frozen banks are not effective in controlling runoff or in their ability to withstand flood stage waters. The carelessness, lack of expertise, frequent accidents and non-compliance with permit provisions exhibited by the contractor on the current segment of the pipeline should not be tolerated. On the upcoming sections many fine trout streams will be crossed. They require better protection than was provided during this past winter. Adherence to the above should allow for proper erosion control and allow for the riparian vegetation to become established prior to the typical fall wet season and the ensuing winter and spring breakup.

cc: Justten, D-1
Siler, D-2
Scott, D-4
Whelan, Fisheries Div.
Ginny Nash, LSNM Specialist

D-1

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

Interoffice Communication

March 22, 1990

TO: Jay Schafer, Real Estate Division

FROM: Gary E. Whelan, FERC Coordination Unit

SUBJECT: Great Lakes Pipeline Comments

I have discussed each of the highlighted crossing areas with the our district biologists and have the following comments:

1) Jackson Creek, Gogebic County - This is an important trout fishery that we stock with brook trout. The main concern at this crossing is to minimize disturbance to the coldwater community which is best accomplished by crossing with the fluming technique in the June 16 to August 15 period. The stream bank should be restored to its original contours and stabilized, with native plant seeding and other techniques, to prevent bank erosion.

2) Hunters Creek, Marquette County - This is an important naturally reproducing trout fishery. The main concern at this crossing is to minimize disturbance to the coldwater community which is best accomplished by crossing with the fluming technique in the June 15 to August 15 period. The stream bank should be restored to its original contours and stabilized, with native plant seeding and other techniques, to prevent bank erosion.

3) Crooked River, Emmet County - The important resources at this crossing are: 1) this is an important recreational boating channel; 2) Great Lakes Muskie habitat; 3) large amount of wetlands; and 3) spring and fall walleye fisheries in the vicinity. The best way to minimize the impacts on the above resources is to cross with the fluming technique, if possible, after Labor Day. If trenching is to be used, then a sediment trap should be installed to prevent unnecessary sedimentation. The stream bank should be restored to its original contours and stabilized, with native plant seeding and other techniques, to prevent bank erosion.

4) Bush Creek, Midland County - We have no special concerns at this crossing although the crossing should be done using the fluming technique after July 15. The stream bank should be restored to its original contours and stabilized, with native plant seeding and other techniques, to prevent bank erosion.

Refer to
4102

Thanks for the opportunity to allow us to present our special concerns. If you Need any additional information let me know.

CC: Jan Fenske, District 5
Ray Juetten, District 1
Jerry Petersen, District 3
Jim Baker, District 6
Bernie Vikanen, Region 1
John Schroeder, Region 2

F10

**********DRAFT**********

April 26, 1990 1950/2720

Docket No. CP88-171-001

Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Dear Secretary:

The Chequamegon National Forest has reviewed the Draft EIS for the Niagara Import Point Project dated March, 1990. Our comments refer specifically to activities concerning the Great Lakes Gas Transmission Company portion of the project which occurs in Wisconsin. Plenty of information has been provided to us by Great Lakes Gas Transmission Company and one of their consultant firms, Braun Environmental Laboratories

This letter contains two kinds of information. First will be specific comments about the DEIS with reference to page and paragraphs. These comments have been prepared by our staff specialists. The second part relates to the Chequamegon National Forest NEPA process.

Page 2-29: 2.3.1 Pipeline Construction Procedures. The third paragraph states that MOST of the applicants on cultivated lands would save and conserve topsoil separately from the trench material for replacement during final cleanup. The top soil should be replaced on all lands within the Chequamegon National Forest, not just cultivated lands. We request that they segregate soil in all areas. 1

Page 4-10: Group 5, the sand soils, makes no mention of the pitted outwash landform. It is one of the major landforms that will be crossed on the Chequamegon National Forest. 2

Page 4-41: The list of species occurrence for wildlife is excellent.

Page 5-9: Top soil and stone removal. The first paragraph refers to this occurring in cultivated land. We would like to see this include forested land as well. 3

Page 5-13: Permanent revegetation. The second paragraph, first sentence refers to "critical areas". This is not defined. We request that all disturbed areas be mulched, fertilized and planted. This includes the flatter spots. The mulch will keep some moisture around the seeds in this part of the forest which is in very sandy, dry country. 4

Page 5-35: 5.1.4.2.1 Migratory Bird Treaty Act(MBTA). The Fish and Wildlife Service comments are interesting. Most land disturbing activities that the Chequamegon National Forest conducts, ie. timber sales, prescribed burns, impoundments, forest road construction etc., would be "unlawful activities" using Fish and Wildlife Service rational for "periodic clearing of nesting habitat". We did not think that was the intent of the MBTA. 5

F10-1 We believe that segregating topsoil is important to preserve the soil amendments that have been applied in agricultural cropland. However, it is not necessary to require topsoil segregation in other areas where no investment has been made in soil amendments, and successful revegetation of the right-of-way is achieved through conformance with applicant E&SC Plans and our appendix C. If the Chequamegon National Forest wishes topsoil segregation along the entire right-of-way, They could require it in their special-use permit requirements.

F10-2 Thank you for the clarification. Suitable revisions have been made to section 4.1.2.2.

F10-3 Chequamegon's concerns and recommendations are noted. Pipeline construction on national forestland requires that a special-use permit be issued to the applicant by Chequamegon. This permit can include the recommendations that have been reviewed as conditions of the permit. We feel that requiring topsoil segregation and removal of all stores greater than 4 inches in other than agricultural or residential areas would be without any significant environmental benefit and unduly burdensome.

F10-4 "Critical Areas" is a term used by the applicants and not a term used in our Plan. Appendix C describes our recommended revegetation requirements. Please refer to comment response F10-3.

F10-5 Thank you for your comment.

Page 5-36: Paragraph 1. This paragraph mentions that clearing of land contributes to fragmentation of forest tracts. More specific wording is needed to define fragmentation and the effects that clearing has on fragmentation.

Page 5-36: Paragraph 2. We are please to see that interior species is mentioned. The statement, "...the increased width of permanent right-of-way would not be a barrier to the movement of most forest interior species" needs more support. We recommend that additional field surveys be conducted, preferably in May or June. Planned bird surveys may be too brief for good results. Stan Temple from the University of Wisconsin in Madison is an expert in this field and perhaps he can be contacted for additional information.

Page 5-47: 5.1.6.1. The second paragraph states that after construction, up to 50 feet of right-of-way width in upland areas is proposed to be kept free of woody vegetation (maintained right-of-way). On page 5-49, third paragraph, it states that Great Lakes would utilize 50 feet of existing cleared right-of-way, and would clear an additional 25 feet of new temporary right-of-way. This difference of 25 feet is confusing. We assume that this 25 feet will not be needed after construction. If that is so, then can it be planted back to woody vegetation(trees) by Great Lakes Gas Transmission Company? We would like to see trees planted on this 25 foot strip wherever possible. The right-of-way widths must be provided to us after marking on the ground so that we can review them far in advance of any clearing activity.

Page 5-49: 5.1.6.2 The fourth paragraph states that Great Lakes Gas Transmission Company would revegetate the right-of-way with herbaceous plants. We would like this to be clarified to read the 75 foot right-of-way. We would like to also include the seeding of grasses and trees.

Page 7-11: Item 11. This item should also include being kept away from free flowing streams, lakes, rivers and ponds or other wet areas.

Page 7-11: Item 13. This should include forested areas as well.

Appendix C, page C-5: Seed Specification. The soils on the Chequamegon National Forest are very dry and sandy in the area of the project. We would add to the excessively drained seed mixture some drought tolerant species such as Birdsfoot Trefoil. We use a mixture of Tall Fescue, 151 lbs/acre; Creeping Red Fescue, 6 lbs/acre; Birdsfoot Trefoil, 5 lbs/acre; Red Top, 4 lbs/acre; and Rye, 0.5 lbs/acre or perennial Ryegrass, 10 lbs/acre.

Additionally, fertilizer should be added to all seeded areas. The added mulch will see that moisture and fertilizer are not washed down through the sandy soil before plants have time to use it.

The Forest Service is required to abide by USDA and Forest Service regulations regarding the NEPA process. We have already begun that process by sending out to our interested publics a letter which is attached. It is important that our publics have a chance to comment and identify issues. We have received five letters to date, all of which have been forwarded to you. Our next step will be to do our own Environmental Assessment(EA), which will tier to the Final EIS prepared by FERC. A decision document will be prepared when the EA is finished. This will not be done until after FERC has issued the Final EIS and

F10

6 F10-6 Comment noted, see revised section 5.1.4.2.1.

7 F10-7 As discussed in the test, any "edge effects" or fragmentation of forest habitat generally affects the breeding success of area- or edge-sensitive species. While great distances between patches of forest habitat may also affect movements associated with foraging or dispersal, relatively short separations between forest habitats (e.g., a linear right-of-way) generally do not restrict movements. This is supported by the design of studies of species diversity within isolated forest patches. In these studies, only forest patches or islands separated by at least 50 - 100 meters (160 - 330 feet) are considered functionally isolated (Robbins et al., 1989; McLellan et al., 1986).

8 We have recommended that Great Lakes conduct surveys of bald eagle nesting habitat and consult with the FWS regarding the presence of Kirtland's warbler (see section 7.3). If the Chequamegon National Forest requests additional bird surveys, these should be included in the NFS special use permit.

9 F10-8 Great Lakes would require a 75-foot-wide construction right-of-way to construct and install the proposed pipeline. In most areas along Great Lakes' proposed loops, there is at least 50 feet of existing cleared right-of-way that would be utilized; therefore, Great Lakes would only need to clear an additional 25 feet of right-of-way to be used temporarily during construction. This additional right-of-way would be allowed to revert back to its previous vegetated condition after construction. Revegetation would occur by the process of natural succession. Great Lakes would only be required to establish vegetation as necessary to stabilize erodible soils. Exact right-of-way survey lines or additional plantings may be addressed in the Forest Service's special-use permit.

10 F10-9 Comment noted and incorporated into revised section 5.1.6.2. We do not, however, recommend that Great Lakes actively revegetate any part of their right-of-way with tree species. We do not at this time know what the requirements of the NFS would be for revegetating rights-of-way through the Chequamegon National Forest. This issue should be addressed in the Forest Service's special-use permit for this area.

11 F10-10 FERC provided additional restrictions for refueling activities and storage of hazardous materials near water resources in our recommended Procedures (please see appendix D).

12 F10-11 Appendix C describes our recommended revegetation requirements. See also response F10-3.

F10-12 In accordance with our appendix C, landowners or land-managing agencies would be contacted by the applicants before revegetation measures are taken to insure that site-specific requests are fulfilled, as is discussed in section 5.1.2.2 and in the Erosion Control, Revegetation, and Maintenance Plan in appendix C. This appendix also describes our requirement that all permanent seeding be fertilized.

issued the certificate to approve construction. The final step for the Chequamegon National Forest will be to issue the special use permit for construction and maintenance of the pipeline.

Please contact Paul Pedersen at 715-762-2461 if you have any questions or comments.

Sincerely,

Jack A. Blackwell
Forest Supervisor

Enclosure

cc: Great Lakes Gas Transmission Company
Attn: Jerry Kott
2100 Buhl Building
Detroit, Michigan 48226

Braun Environmental Laboratories
Attn: Timothy L. Anderson
Post Office Box 35108
Minneapolis, Minnesota 55435

Washburn R.D.
Pedersen

F11

United States
Department of
Agriculture

Forest
Service

Chippewa National Forest
P.O. Box 308
Deer River, MN 56636
(218) 246-2123

Reply to: 2720

Date: April 24, 1990

Mr. Kurt Flynn, Project Manager
Environmental Policy and Project Analysis Branch
Office of Pipeline and Producer Regulation
Room 7312
825 North Capitol Street, N.E.
Washington, DC 20426

Dear Mr. Flynn:

The following are the Chippewa National Forest's comments and questions on the Niagara Import Point Project Draft Environmental Impact Statement. Please consider each point in the final document. These comments are in addition to those sent in a memo from Forest Supervisor William Spinner dated November 14, 1989.

GENERAL COMMENTS:

1. The new pipeline loop will cross many wetlands, streams, and abuts one lake. Chippewa Nation Forest standards and guidelines designed to prevent non-point source pollution should be followed when earth disturbing activity occurs near these water resources. The guides can be found on Forest Plan pages IV44-IV47. These guides provide for filter strips of varying widths (varying by soil type and slope) and prohibit mineral soil exposure of more than 10% of the strip area. If these standard can't be met (and it appears from a preliminary field review that this is the case) mitigation measures must be implemented such as the use of seeding, mulch, haybales, filter fabric dams etc. To prevent soil movement on access roads, seeding and installation and maintenance of waterbars are in order on slopes. A waterbar installation guide can be found on Forest Plan pages IV-93 and 94. 1

2. During the construction in wetlands it will be necessary to maintain cross drainage. All corduroy needs to be removed and in some cases cross ditches may need to be constructed and old ditches maintained. 2

3. There are some very small Type 1 (USFWS Circular 39 Classification) and wooded wetlands that are within the construction limits. Your Wetland Evaluation should identify these and all wetlands within the construction limits and determine if wetland mitigation is needed because of a loss of 3

F11-1 Appendix C, Erosion Control, Revegetation, and Maintenance Plan, and appendix D, Stream and Wetland Construction and Mitigation Procedures, detail our recommended mitigation measures for erosion control along streams and wetlands. We feel these measures are adequate, and have recommended to the Commission that adherence to these plans and procedures should be a condition to the applicant's certificate (see DEIS recommendation 8). If the Chippewa National Forest wishes to have stricter measures implemented, they should include them in their special-use permit for Great Lakes. We have included a new recommendation in section 7.3 that when crossing FS lands, Great Lakes must comply with all conditions specified in the FS special-use permit.

F11-2 Our revised Stream and Wetland Construction and Mitigation Procedures (appendix D) prohibit the use of any type of permanent fill during wetland construction, including corduroy roads. Consequently, cross drainage of water would not be affected during construction. All prefabricated equipment pads and geotextile fabric overlain with gravel must be removed from the wetland after construction is completed.

F11-3 We have required that applicants, prior to construction, field-delineate all wetlands that satisfy delineation requirements contained in the Federal manual for identifying and delineating wetlands. All delineation would be conducted utilizing the Unified Federal Methodology and results would be submitted to FERC prior to construction. These data would be available from FERC upon request.

wetland acreage or value. We would like a copy of this report before construction begins.

4. We have a concern about the discharge areas for hydrostatic testing and the draining of wetland portions of the trench. Locations of these discharge points need to be identified. During last year's hydrostatic testing considerable soil was moved and deposited in the woods near the outlet area and a group of trees were splintered and blown over by the water. Also construction debris in the form of a haybale sediment trap was left in a wetland. All construction debris needs to be removed from the area. 4

5. Refueling, fuel storage and equipment maintenance areas should be at least 100 feet away from lakes, stream, and wetlands. Spill containment kits should be available on site during construction. 5

6. Where will staging and decking areas be in relation to the roads and streams? Log landings must be out of view from roads and rivers. We would like their locations identified before construction begins. 6

The following comments (7-14) are directly in response to the Soil Erosion and Sedimentation Control Plan.

7. Since a large proportion of the affected lands are wetlands, we would prefer that this section of the Great Lakes line is constructed under frozen conditions (ie. in the winter). 7

9. I would like to be notified of any changes in field plans before they are implemented. Page 1-4 indicates that the plans can be changed in the field, and we would like to be kept informed. 8

10. The timber rip-rap mats must be removed as soon as possible and should NOT be permanent. How will the removal be done? Where will it be disposed of? 9

11. It is understood that extra right-of-way width is needed in areas with unstable soils (ie. some wetlands). This extra ROW will not be necessary in more stable wetland soils or under frozen conditions, correct? 10

12 Soils under all roadways should be thoroughly compacted after trenching. 11

13. Fertilizer and/or lime should not be applied until texture and pH of soils is known. 12

14. When will the final grading take place? 13

F11

F11-4 Discharge locations for hydrostatic test water are typically not identified prior to FERC certification; however, the Forest Service would be able to approve discharge locations on a site-specific basis in their special-use permit. Our recommended Procedures for the discharge of hydrostatic test waters (see appendix D) address the rate of discharge and prevention of erosion. NIP Project applicants would be required to follow these requirements and, in addition, may be required to comply with additional guidelines and restrictions in state-issued or NPDES permits. FERC agrees that construction debris from pipeline installation should be removed from wetlands and have indicated this in our Procedures. We have added additional reference to this requirement in section 5.1.3.2.1.

F11-5 These issues were addressed by our Procedures in appendix D and in DEIS recommendation 12 (see section 7.3).

F11-6 Pipe storage yards would be located at sites convenient to major road and rail transportation corridors and in the general vicinity of the pipeline. The additional temporary work spaces for staging areas at road and stream crossings would be located on each side of the crossing.

F11-7 Great Lakes has indicated that the section of Loop 4 that traverses the Chippewa National Forest could be constructed during winter. However, frozen conditions may or may not prevail at the time of construction.

F11-8 We cannot find this reference in the DEIS and assume the commentor is referencing Great Lakes' Soil Erosion and Sedimentation Control Plan. In this EIS, we recommend that the applicants follow our Erosion Control, Revegetation, and Maintenance Plan. According to our DEIS recommendation 8, "Any deviation from these procedures must be reported to and approved by the Commission staff at least 2 weeks prior to implementation." If the Chippewa National Forest requires also to be notified, it should be included as a condition in Great Lakes' special-use permit.

F11-9 All timber mats used during construction through wetland areas would be removed after construction is completed. A backhoe and cable arrangement would be the most probable method of removal. Since the mats are temporary, the applicant could either reuse the timber mats or dispose of them offsite in an approved disposal location.

F11-10 An extra-wide right-of-way would not be required in wetland areas containing more stable soils. At this time, it is impossible to determine whether construction through wetlands during winter conditions results more stable soils in the project area. This would depend on the local climatic conditions prior to and during the construction period.

F11-11 The proposed pipeline would be installed in a manner that would meet engineering criteria for the safety and integrity of the pipeline.

SPECIFIC COMMENTS

15. Wetland Cross-Drainage:

- MP 183 Section 33: Wetlands on National Forest land are generally isolated from large drainage areas. Maintenance of flow will not require major construction modification.

- Section 34: Wetlands on National Forest have a drainage area that will need cross drainage measures implemented allow water movement.

- Section 35: Wetlands are mostly isolated from large drainage areas except for a drainage between Stations 2809 + 74 and 2813 + 02.

- Section 36: Avoid impoundment of Six Mile Brook.

- Section 31: Wetlands are generally isolated from large drainage areas. Maintenance of flow will not require major construction modification.

- Section 32: Maintain cross drainage in these wetlands as they are part of a drainage network.

- MP 190 Section 35: Maintain cross drainage in these wetlands.

- Section 36 and section 31: Wetlands are part of a large drainage network. Maintain water flow across wetlands.

- Section 4: Wetlands on National Forest are part of a drainage network and will require maintenance of water flow.

- Mississippi River: Avoid impoundment of water in floodplain.

- In all wetland construction regardless of ownership, it is important to maintain cross drainage. Blocked drainages can affect other ownerships both up and down gradient.

16. Visual Quality at Road Crossings:

- Co. Rd. 8 south of Bena - Keep the apparent size of the opening below 10 acres. The localized curve at this location has accomplished this with the present ROW width. This condition should not change.

- FR 2102 - The view in both directions needs to be screened so that the apparent opening is less than 5 acres. The view currently extends clear to the next county. This condition is unacceptable. Screening can be accomplished as described in the November 14 letter.

- FR 2127 (west end near Six Mile Lake) - The existing view at this crossing is acceptable, but will need some screening after

F11

F11-12 FERC acknowledges Chippewa's concerns and recommendations. Pipeline construction on national forestland requires that a special-use permit be issued to the applicant by Chippewa. This permit can include as a condition of the permit that fertilizer and/or lime should be applied until texture and pH of soils is known. Our plan provides a minimum standard that soils be leveled to a pH of 6.

F11-13 Final cleanup and permanent erosion control measures, as appropriate, shall be completed within 10 days after the trench is backfilled. Please refer to the Erosion Control, Revegetation, and Maintenance Plan in appendix C for complete requirements.

14

F11-14 Our recommended wetland construction procedures require that no material be permanently added into the wetland during construction. Since the trench would be backfilled with the same material as was removed during excavation and surface contours would be restored to original elevations, we do not believe there would be any effects on cross drainage of water, either on the surface or subsurface, and there would be no new impoundment of water after construction.

15

F11-15 Comment noted. Section 5.1.9.2 and our DEIS recommendation 44 have been modified.

construction. Currently some young pine trees screen the view to the west, and raised terrain reduces the view to the east.

- FR 2127 (east end near Mississippi River) - This view is also adequately screened by pine trees on the west and terrain on the east. This screening needs to be continued for the new width of corridor.

- Mississippi River - This view needs to continue to be screened for passing canoeists.

* Basically all road an river crossings need to be screened from view to avoid long, linear, man-made corridors.

All of the above concerns are easily resolvable. It's great to have the chance to "lay them on the table" before construction begins.

Please let me know if you have any questions or if any of these points cannot be included in the EIS.

MARY B. LaPLANT
Forester

cc: BRAUN Environmental Laboratories

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F11

United States
Department of
Agrioulture

Forest
Service

Chippewa National Forest
Route 3, Box 244
Cass Lake, MN 56633
(218) 335-2226

April 20, 1990

Reply to: 2600

Subject: Great Lakes Pipeline

To: Mary LaPlant

I finally got a chance to review a number of aerial photos and the pipeline video. Frankly, I'm not very impressed with the existing stream crossings, and I hope it's not a taste of what's ahead.

Most of the streams have some water problems. Specifically, the water appears to be 'ditched' along the pipeline (perpendicular to the streamflow). Is this a result of improper trenching and refilling? It appears that the flow is somewhat restricted and therefore follows the trench. The problem is not a new one; aerial photos dating back to the early days of the pipeline show the same thing.

Also, there are a couple of oxbows of the Mississippi River that are completely filled in along the pipeline. Oxbows are perhaps one of the most important areas along the river; they are critical spawning and rearing areas for a variety of fish species.

I have also reviewed the Soil Erosion and Sediment Control Plan (SESCP). I'm curious if this is similar to the plan used to place the past sections of pipeline where we have the stream-crossing problems? Regardless, I stand firm in asking that stream crossings not be made during spring spawning periods. This would typically be April to mid-June. Fish movement in the streams is critical to spawning activity, and sedimentation caused by construction could kill eggs and fry downstream.

As I mentioned, I hope the new loop will not take on the appearance of the old. Streams and oxbows should be returned to their original condition, and I see this is the intent of the SESCP. I also still believe that all streams should have some siltation control measures in place during construction to prevent lethal turbidity and sedimentation downstream, as well as on the banks following construction. I see that this is covered in the SESCP also.

Thank you for the opportunity to comment, Mary. I don't mean to be overly critical, but I feel that the stream ecosystem plays a very important role in sustaining quality lacustrine, as well as riverine, fish populations. We should be very cautious not to adversely affect the hydrology of the stream, assuming it will take care of itself. High turbidity has very lethal effects on fish, and changes in flow result in a very dramatic change in habitat.

Give me a call if you need more. Thanks!

Chantel

F12

Forest Service
Chequamegon National Forest
1170 4th Avenue South
Park Falls, WI 54552
715-762-2461

Reply to: 2720

Date: April 24, 1990

Mr. Kurt Flynn, Project Manager
Environmental Policy and Project Analysis Branch
Office of Pipeline and Producer Regulation
Room 7312
825 North Capitol Street, N.E.
Washington, D.C. 20426

Dear Kurt:

Enclosed are five original letters that the Chequamegon National Forest has received concerning Great Lakes Gas Transmission Company project TCPL-2 in Northern Wisconsin (Docket No. CP89-892-000).

The Chequamegon National Forest is preparing a response for you, which you should receive by April 30.

Please call me if you have any questions.

Sincerely,

Paul Pedersen

PAUL PEDERSEN
Forester

Enclosures

cc: Washburn R.D.
Pedersen

F12

APR 13 1990

APR 13 1990

NSP

Northern States Power Company
301 East Front Street • P.O. Box 470
Ashland, Wisconsin 54806-0470

April 9, 1990

Mr. Duane Kick
Washburn District Ranger
Forest Service
Chequamegon National Forest
1170 - 4th Avenue South
Park Falls, WI 54552

RE: 1920

Dear Duane:

We have reviewed the proposed Great Lakes Gas proposal project and find no conflict with our electric facilities located approximately two miles to the north.

Our concerns would be fire originating at the construction area and access to our facilities via the north-south forest roads in the project area -- particularly FR241 which leads to our Ino Substation. 1

Sincerely,

P. R. Erickson
Division Manager

jp

F12-1 Standard precautions would be taken to avoid fires. Where roads would be open cut or trenched, provisions would be made for continued access.

F12

April 10, 1990

Mr. Paul Pedersen

Dear Sir,

I regards to your letter April 4 1990, (Reply to 1990) concerning the proposal of the Trans Mountain Co. I have been over and around the pipe lines in the forest both summer and winter, for the most part only the lack of trees makes their presence known.

If the work is done proper with good guide lines the disturbance is minimal and the benefits to many in great service (this job).

I hope this helps you.

Sincerly
James K. McLean

2

F12-2 Thank you for your comment.

F12

April 10, 1993

APR 17 1993

Dear Sir:

Why the additional 25 ft. along the 2.7 mile right of way? It's about time these pipeline companies stay within the limits of the right of way's established for such purposes. Nibble here, and nibble there, and finally nibbling becomes as rampant it becomes huge bites. Over the years this will have a huge impact on the natural resources & the wilderness. Everyone wants to vacation in the north & the north woods! Everyone wants to get away from it all by building in the woods! But to achieve this will not be by allowing business and industry to "take a bite out of prime forests".

I say, no! Let them destroy (shame to them) only that that has been right of way! Enough is enough!

Mr. & Mrs. John Douglas McCarthy
301 Spring St.
Box 326
Fox Lake, Wis 53933

3

F12-3 We agree that taking of additional right-of-way for either temporary work space or permanent right-of-way should be kept to a minimum. To this extent we have included a recommendation that Great Lakes be limited to maintaining a maximum of 75 feet of permanent right-of-way along the majority of their proposed route (see DEIS recommendation 25). Though we can minimize the amount of new land affected by the proposed pipeline, some new temporary and permanent right-of-way is necessary for the construction and operation of the proposed pipeline. As discussed in section 2.2.1, Great Lakes proposes to typically use a 75-foot-wide construction right-of-way, which would include 50 feet of existing cleared right-of-way and 25 feet of temporary right-of-way. This area is required for stringing and welding the pipe and the movement of construction vehicles.

F12

Duane Kick
Assistant District Ranger

Sir.

I find nothing wrong with the proposed 2.7 mile pipeline addition.

Again it seems to me we are practicing good dual purpose without significantly affecting either purpose.

To me the recreation and that fishing together is important in today world.

Continue your outstanding work!

Sincerely
Karl Walter

4

F12-4 Thank you for your comment.

F13

APR 13 1990

United States Department of Agriculture

Soil Conservation Service

P.O. Box 267
Ashland, WI
54806

12 Apr. 1990

Subject: Great Lakes Gas Transmission Company Pipeline

Duane Kick
District Ranger
Washburn Ranger Station
P.O. Box 578
Washburn, WI 54891

According to our soils data the proposed pipeline will traverse Vilas soils. This sandy soil series is very prone to drougth, making the establishment and maintenance of vegetation very difficult. Additionally, the steep slopes (12-30%) will make erosion a real problem, see attached information.

If this project proceeds, very careful attention must be given to the seed mix used as well as the method of seeding. Erosion control structures may be needed to maintain stable slope conditions. 1

My office can provide specifications for seed mixes and erosion control structures that may be required for this project.

Sincerely,

Thomas L. Cogger
District Conservationist

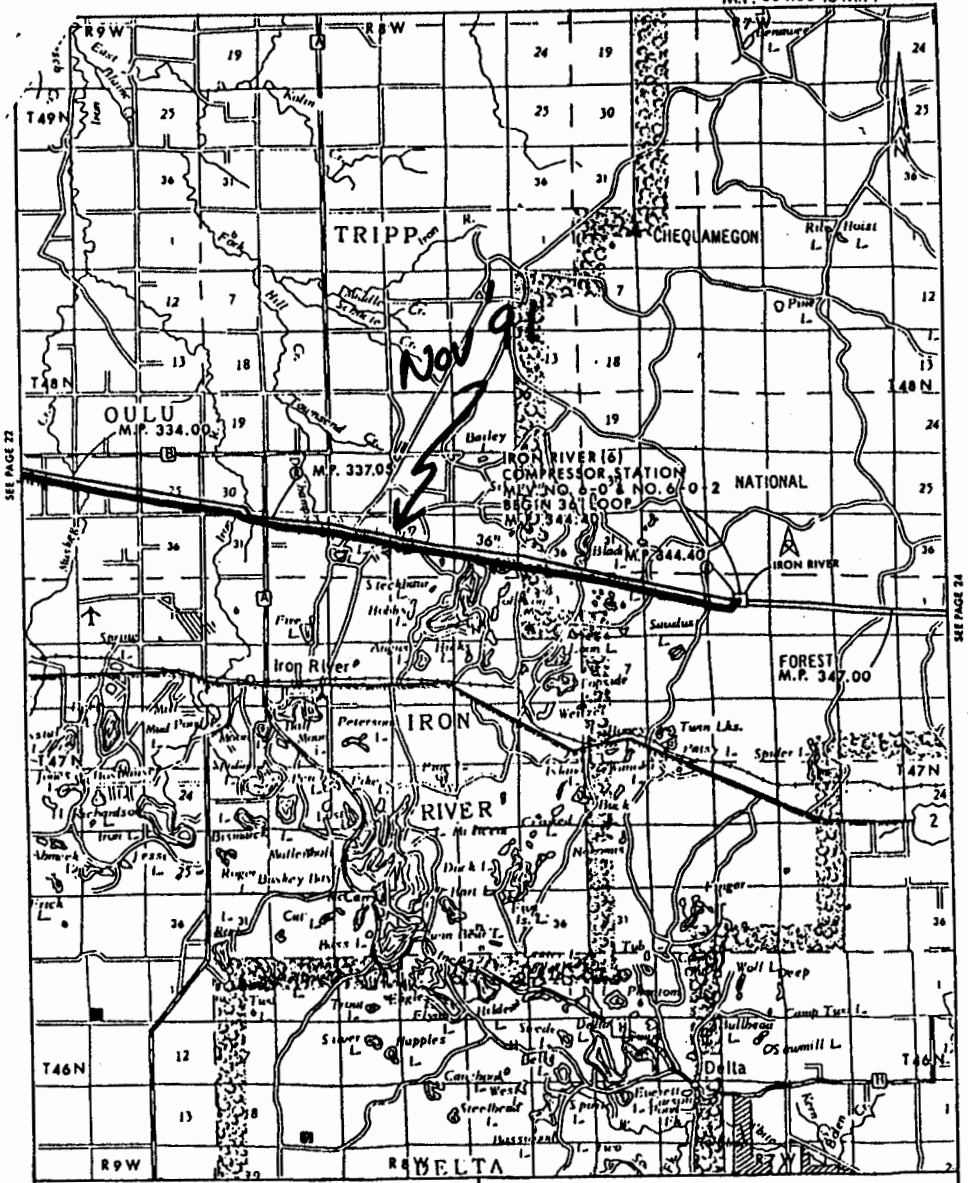
cc: Dave Vold- Area Conservationist, Spooner, WI
Kim Goerg- Soil Survey Project Leader, Ashland, WI

The Soil Conservation Service is an agency of the Department of Agriculture

F13-1 Thank you for your comments. The Erosion Control, Revegetation, and Maintenance Plan in appendix C includes requirements that local SCS offices be consulted for site-specific recommendations, similar to what has been outlined by Mr. Cogger. FERC believes that the concerns outlined in the letter are justified with regard to the proposed project.

F13

M.P. 334.00 to M.P. 347.00


R9W
T49N
T48N
T47N
T46N
TRIPP
CHEQUAMEGON
OULU
M.P. 334.00
M.P. 337.05
IRON RIVER (6)
COMPRESSOR STATION
NO. 6-0 & NO. 6-0-2
BEGIN 36" LOOP
M.P. 344.40
NATIONAL
FOREST
M.P. 347.00
IRON RIVER
IRON
RIVER
Iron River
Turn Lks.
Spider L.
Wolf L.
Deep
Camp Tuc L.
Sawmill L.
Hulbeau
Hupples
Stewart
Steelhead
Bass Stream
Bell
Bell L.
Bell Dam
Bluff
Bluff L.
Sucker L.
Stockman
Hibbing
Fire L.
Peterson
Mud Pond
Mud L.
Richardson L.
Iron L.
Brunsch
Muller Pond
Hinger
Dinkey Dam
Cut L.
Hess L.
Turn Trail L.
Fisher
Hilden
Sarah
Dallas
Plummer
Tub
Camp Tuc L.
Bluff
Deep
Wolf L.
Hulbeau
Sawmill L.
Bell
Bell L.
Bell Dam
Bass Stream
Steelhead
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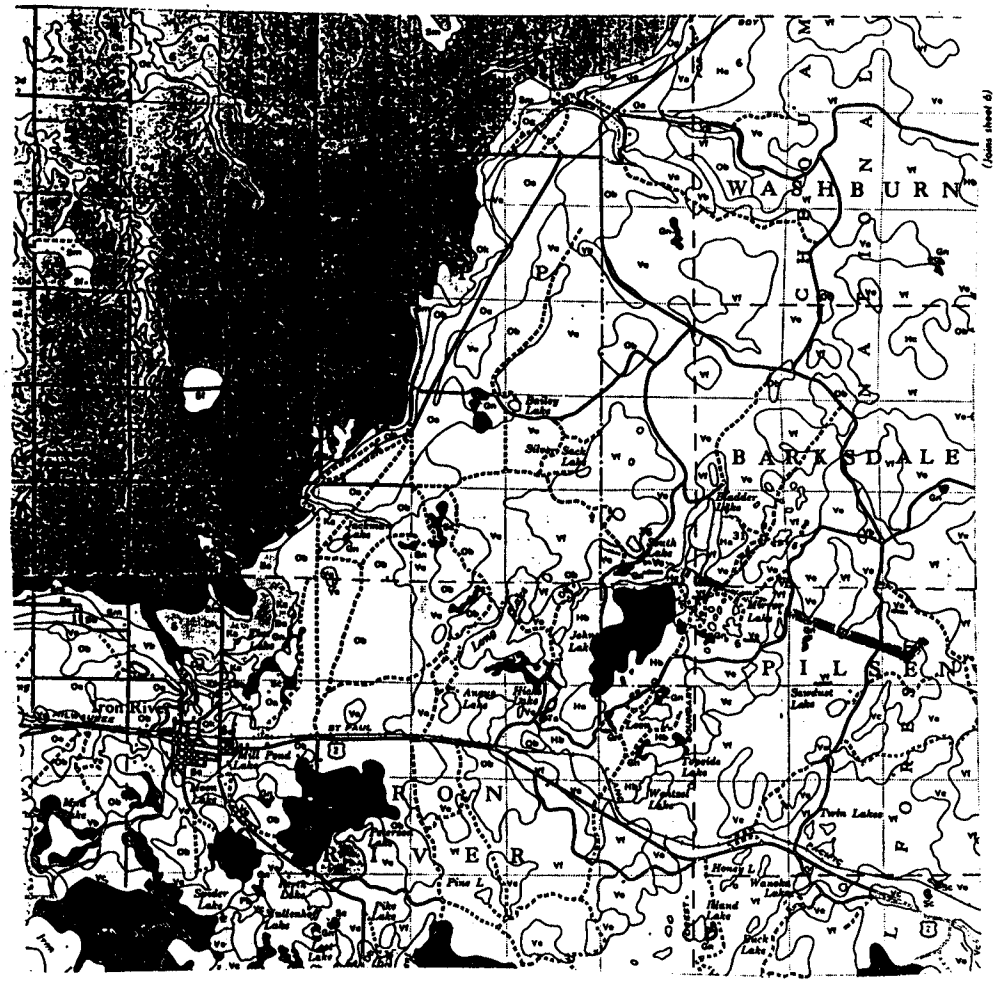
Hupples
Fisher
Hilden
Sarah
Dallas
Plummer
Tub
Camp Tuc L.
Wolf L.
Deep

F13


WASHBURN
BARKSDALE
PILSEN
RIVER
Iron River
Silver Sack Lake
Bailey Lake
Bladder Lake
Sawdust Lake
Twin Lakes
Pine L.
Island Lake
Beck's Lake
Wawaka Lake
Wolverine Lake
Hill Pond
Sinder Lake
Pike Lake
Lake Angus
Hiawatha Lake
Johns Lake
Horseshoe Lake
Hemlock Lake
Sunset Lake
Mirror Lake
Lake Lucy
Lake Ellen
Lake Ellen
Lake Ellen

F14

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

MAY 08 1990

SMS-16

Lois D. Cashell
Federal Energy Regulatory Commission
825 N. Capitol Street, N.E.
Washington, D.C. 20426

Dear Ms. Cashell:

We have reviewed the Draft Environmental Impact Statement (EIS) for the proposed Niagara Export Point Project. The project consists of 36 pipeline looping and replacement segments located in Minnesota, Wisconsin, Michigan, New York, Massachusetts, Connecticut, Rhode Island, Pennsylvania, and New Jersey. The project involves 527 miles of pipeline loops, 13 miles of replacement pipeline, 5.2 miles of new pipeline, compression facilities at various locations, and additions and modifications to metering facilities. These actions are sponsored by several pipeline companies. The purpose of the project is to transport natural gas from Canada and domestic sources to the Northeastern United States and Eastern Canada.

Based on the information presented in the draft EIS, the proposed project could result in direct adverse impacts to about 3400 acres of forests, marshes, and bogs in Minnesota, Wisconsin, and Michigan. Indirect impact could occur to those lands affected by temporary work spaces and storage sites outside the established right-of-way. The actual acreage of wetlands and uplands affected in these States is unclear.

The Draft EIS discusses construction alternatives and practices under consideration which would avoid or minimize wetland impacts. However, it is not clear whether all of the recommendations to reduce impacts will be incorporated into the project plans. A description of the recommendations to be implemented, including the use of route variations, should be included in the Final EIS. The feasibility of each alternative must be determined before selection of the preferred project. 1

Alternatives submitted in the Draft EIS include descriptions of the no action alternative, energy conservation, energy source alternatives, project system alternatives, route variations, and compressor station alternatives. The entire 460 miles of the preferred alternative that traverses Minnesota, Wisconsin, and Michigan would be constructed adjacent to the existing pipeline system, but the EIS is unclear whether this practice would be followed for the remainder of the project. Consistent with the National Environmental Policy Act (NEPA), alternatives should be selected on the criteria that environmental impacts would be first of all avoided, then minimized, and that all unavoidable impacts be compensated. 2

F14-1 Section 7.3 identifies measures, including route variations recommended by the staff, to be included as specific conditions to any certificate issued by the Commission. The mitigative measures described by the applicants, in their applications and in their responses to staff's data requests, are included by reference. The Commission will decide which measures will be certificate conditions.

F14-2 As described in section 2.1 of the DEIS, the proposed NIP Project consists of looping and pipeline replacement, except for 5.2 miles of new pipeline route. Our rationale for selection of alternative routes to avoid or minimize impact is described section 6. We consider alternatives to avoid site-specific resources that could potentially be significantly affected. NEPA does not require that all unavoidable impact be compensated.

Furthermore, the identification of impacted wetlands in the EIS was not consistent with the "Federal Manual for Identifying and Delineating Wetlands" as required by Section 404 of the Clean Water Act. All affected wetlands should be identified in detail (including total lost acreage, vegetation present, functions, and values), and mitigation plans should be attached to the Final EIS. The Draft EIS fails to identify all affected wetlands, and therefore is deficient for the purpose of evaluating wetland impacts.

Following a proper delineation of wetlands, impacts to the areas must be quantified for each alternative, including the evaluation and adoption of feasible route variations that reduce wetland crossings. Wetlands, which would be impacted by the project, should be described in terms of dominant species, diversity, overall size, and other identification indicators established in the aforementioned manual. Mapping of impacted wetland areas and qualitative evaluations of wetland impacts should be included in the Final EIS.

We are aware that the St. Paul District Office of the U.S. Army Corps of Engineers has issued a Nationwide Section 404 Permit #12 to Great Lakes Gas Transmission Company for the portion of the Niagara Import Point Project to be constructed in Wisconsin and Minnesota prior to the completion of the NEPA review process. The issuance of the Nationwide Permit is in violation of 33 CFR §330.5(b)(3),(4),(5), and (7). Due to these environmental conditions placed on the issuance of nationwide permits, we require that individual Section 404 permits apply when the environmental and other conditions listed in 33 CFR §330.5(b) are not met. Since the Nationwide Permit does meet these conditions for a given segment of pipeline, the best available technologies should be applied during construction, and all stream bottoms, streambanks, right-of-ways, staging areas, etc., should be restored to their original contour and condition upon completion of work in the area. Soil compaction analysis should be conducted to ensure a proper degree of crowning of the fill and restore original soil contour after construction. This same criteria applies to individual permits as well, in addition to our wetlands and other mitigation guidance.

The issuance of a nationwide permit raises several concerns. The impacts of the project are potentially large and significant. Permanent impacts to wetlands consists of changes in drainage patterns and vegetation due to incorrect grading over the pipeline. These effects would not have a major impact if the work is done properly, although as suggested in the Draft EIS, good results are difficult to assure.

The EIS states that a potential danger is the subsurface draining of wetlands whose hydrologic source is a perched water table. In all such areas, soil borings should be taken to indicate the location and character of underlying impervious layers. These layers may be vulnerable to excavation, and measures should be taken to maintain/restore the substratum after construction. Temporary impacts are also a serious concern. The project requires that construction equipment be used within wetland boundaries, and that will in some cases necessitate the building of a temporary road by placing fill in wetland areas. Also, staging and service areas will be maintained, which presents the potential for more wetland fill and petroleum spills.

F14-3 National Wetland Inventory (NWI) maps and state wetland maps are useful tools in delineating wetlands during the initial route selection process. These maps are ground-truthed to a limited extent to verify accuracy. NWI and state wetland maps are appropriate for initial route selection and general route refinement to avoid or minimize disturbance to wetlands. The applicants and FERC have used aerial reconnaissance and limited ground inspections to further identify and avoid or minimize effects on wetlands.

We recognize the need for more detailed delineation and assessment of wetlands and now require applicants to field-delineate and assess all wetlands prior to construction. However, it is important to note that unless an applicant receives a certificate of Public Convenience and Necessity from FERC, it has no power of eminent domain and no right of entry to private property to survey for wetlands where the landowner refuses access. In these instances, offsite delineation methods are the only available means to determine wetland occurrence during FERC's environmental review process.

Tables E-1 and E-2 in appendix E describe the type of wetland that would be crossed, with data organized by applicant, state, and milepost of the pipeline. We used the most generally accepted and widely understood method of description, the NWI Classification System of Freshwater Wetlands, developed by the FWS. These tables describe the length of crossing, the wetland area that would be disturbed during construction, and the amount of wetland area that has been proposed to be maintained as cleared right-of-way. Additionally, the text in sections 4.1.7.1 through 4.1.7.8 summarizes the number and types of wetlands found along each applicant's proposed routes. We believe this adequately describes the wetland resources that would be affected by this proposed project.

We do not describe the effect on each and every wetland that would be crossed by the proposed project. To do so would be extremely redundant. Instead, in section 5.1.7, we describe the potential impact of construction on the types of wetlands that would be crossed, both generally and specifically, by applicant, and identify the mitigation procedures that we have recommended to reduce impact on wetlands.

As discussed in section 4.1.7, wetlands have a number of functional values. Most of these are related in some degree to surface and/or groundwater movement (i.e., flood and stormwater control, erosion control, water quality improvement, recreation, and wildlife habitat). Current scientific research indicates that during pipeline construction, if no barrier to surface or groundwater movement is installed or incorporated, there would be little impact on the overall functional values of a particular wetland beyond those associated with the temporary clearing of vegetation. FERC believes that if the wetland construction procedures outline in appendix D are implemented, impact on the functional values would be reduced even further, particularly the impact associated with the initial clearing. Rapid revegetation of the wetland would allow valuable wildlife habitat to re-establish in all areas disturbed by construction. The EPA and COE are in apparent agreement with FERC, since pipeline construction through wetlands and across streams has been and continues to be allowed under the jurisdiction of the Nationwide Permit Program.

F14-4 Refer to comment and response F14-3. FERC evaluated potential route variations to avoid or minimize wetland crossings. Greater consideration was given to avoiding major wetland complexes, forested wetlands, or wetlands containing unique or significant habitat. As required by FERC, the applicants would field-delineate all wetlands along the proposed right-of-way prior to construction. The results of these field surveys would be used to further refine the pipeline route to avoid wetland habitat and/or select the most appropriate construction technique to minimize wetland impact. In many cases, particularly along the proposed Great Lakes facilities, wetland areas are so numerous and extensive that alternate routing would potentially have greater adverse impact on surrounding wetland or forest resources than the use of an expanded existing right-of-way.

F14-5 Comment noted. As EPA is aware, FERC has no jurisdiction or discretionary authority over issuance of Individual or Nationwide Permits for a particular project or the overriding of such permits. We have required each applicant to follow our recommended Procedures outlined in appendices C and D and to follow, at a minimum, all applicable conditions of the Nationwide Permit. We believe these procedures would reduce impact on wetland and surface water resources to the maximum extent possible. It should be noted that we do not recommend trench crowning in wetland areas, as discussed in section 5.1.7.3. In addition, we disagree with the tatement that the Nationwide Permit #12, issued by the COE's St. Paul District office, violates 33 CFR S330.5 (b) 3, 4, 5, and 7. None of these issues would be involved with any of the proposed crossings in Wisconsin and Minnesota.

F14-6 Comment noted. Please refer to comment response numbers F14-3, G7-5, and G7-6.

F14-7 We do not believe that perched wetlands would be significantly affected since our recommended construction procedures require the applicants to segregate topsoil in wetlands, remove and replace the same trench material, including semi-impermeable or impervious materials, and then resurface the trench area to the original soil contour. This should not result in the draining of perched wetlands. In addition, since there is no evidence that construction of the existing pipeline encountered or damaged perched wetlands, there is no significant likelihood of this happening for the proposed project.

Although our Procedures would allow the use of temporary materials in wetland areas for support of construction equipment, all such materials would be removed after construction. If any surface or subsurface flows are temporarily interrupted, it is obviously in the contractor's best interest to install cross drainage systems during construction to increase stabilization (by reducing back up of water) of construction equipment.

As discussed in section 5.1.7.2 and in appendix D, all wetland staging areas would have to be located a minimum of 50 feet from the wetland's edge and would be limited in size to the minimum area needed for prefabrication of pipe and associated activities required for the wetland crossing. Refueling of construction equipment and the storage of hazardous materials would be restricted to areas further than 100 feet from all wetland boundaries.

Furthermore, if these areas are not properly restored, the impacts will become permanent.

Valuable wetlands are projected to be impacted by the Niagara Import Point Project. As mentioned in the Draft EIS, the Hole-in-the-Bog Peatland in Minnesota, several other State-protected wetlands in Minnesota, Pere Marquette State Forest in Michigan, and other wetlands would be impacted. FERC, in cooperation with Great Lakes Gas Transmission Company and the States, should designate and map these areas that special care be taken to ensure that damage is contained to a minimum. These designated areas, along with the special plan of wetlands protection, should be discussed in the Final EIS.

It is not the intent of a nationwide permit to allow the unregulated destruction of wetland areas, which for this project includes 509 acres of impact in Minnesota, Wisconsin, and Michigan alone. As mentioned before, COE regulations at 33 CFR Part 330 specify restrict conditions under which such permits must be implemented. Sections 330.5 and 330.6 of these regulations specify these conditions and list best management practices. The Corps may revoke any general permit and require that a project (or part of a project) be public noticed as an individual permit application if the requirements of these parts are not met. These requirements have not been met for the Niagara Import Point Project, and the issued nationwide permit should be revoked. For example, under nationwide permit #12, the only material allowable for discharge in the wetland is "backfill and bedding", but the Draft EIS includes the addition of stockpiling and temporary roads and pads for staging in wetland areas.

Consistent with Section 404 of the Clean Water Act and the implementing regulations found at 40 CFR 230, wetland impacts are to be first avoided and then minimized wherever possible, and when unavoidable impacts do occur, these impacts are appropriately compensated for to replace the lost wetland functions. The goal of this guidance is to implement a No Net Loss of Wetlands scenario. When wetlands are projected to be lost after it has been determined, sequentially as noted above, that all practicable measures have been evaluated, our guidance is that mitigation, such as wetland restoration, should be on at least a 1.5:1 ratio of mitigated wetlands to those lost. This guidance shall be the minimum recommendation to the U.S. Army Corps of Engineers, your Agency, and the gas pipeline transmission companies involved in this project.

There are 160 water body crossings in Minnesota, Michigan, and Wisconsin. Fifteen of these crossings would be greater than 100 feet in width. Eighty-three of these streams are identified as coldwater fisheries, 74 are identified as warmwater fisheries, and 3 have not been classified. There will be temporary water quality impacts associated with the stream crossings as identified in the report (page 4-16 under Section 4.1.3.2 Surface Water). Chapter 5 on page 5-16 discusses surface water impacts and mitigation procedures. Impacts identified in the report include those associated with increased turbidity through the suspension of sediments and erosion of cleared streambanks and right-of-ways; impacts associated with refueling of vehicles and storage of fuel, oil, and other hazardous materials/fluids near surface waters if a spill were to occur; and impacts associated with hydrostatic

8 F14-8 Comment noted. Refer to section 5.1.7.3 for a discussion of these wetland areas.

9 F14-9 Refer to comment and response F14-5. We object to the use of the phrase "unregulated destruction" of 509 acres of wetland. This FEIS correctly points out that 509 acres of wetland would be temporarily affected during construction of the proposed Great Lakes facilities. A large percentage of these areas consist of emergent or scrub-shrub vegetation cover types whose habitat values and functions would be completely restored within a 1- to 2-year period after construction. The functional value of wetlands considered most affected by pipeline construction would be the permanent alteration of forested vegetation within wetlands, primarily as a function of habitat value. To mitigate this effect, we have required each applicant to allow the rights-of-way through forested wetlands to revegetate, within 15 feet of the pipeline, to a woody cover type up to 15 feet tall. The remaining width of the permanent right-of-way would be allowed to revegetate to preconstruction forested conditions. The use of our recommended construction and mitigation procedures for crossing wetlands would hardly constitute destruction of wetlands.

10 F14-10 As discussed in responses to comments F14-4 and F14-9, we have avoided wetlands to the maximum extent possible and have recommended construction and mitigation procedures to minimize impact. Construction through wetlands would not result in wetland loss. This would involve the excavation of wetland soil and backfilling of the trench with the same material. No fill would be imported to the area. Adoption of FERC's recommended pipeline construction procedures would prevent alteration of the hydrology or water surface level of wetlands. Ditch plugs would be used to prevent the trench from acting as a drainage channel. Ditch spoil would be backfilled and spread evenly over the disturbed area, and would not be burned or compacted. Therefore, no net wetland filling, draining, or loss would occur. Consequently, the issue of a 1.5:1 ratio of mitigation for wetlands is not an issue.

11 F14-11 Section 5.1.3.2.1 and our recommended Procedures (appendix D) indicate that the applicants would have to apply for state-issued withdrawal permits and/or a NPDES permit as required.

testing of the pipeline. It should be noted that the release of water used for hydrostatic testing of the pipeline back into a stream will require a National Pollution Discharge Elimination System (NPDES) permit.

Another concern regarding hydrostatic testing is the recent drought conditions and resulting low flows of small streams. The State of Wisconsin is considering banning trout fishing on many streams due to the already stressed fishery present because of low flows. The EIS needs to discuss this problem, including assurances that a minimum instream flow determined by Federal and State agencies will be maintained.

Page 5-17 to 5-21 describes the stream construction and mitigation procedures, which states that the applicant comply with the presented procedures in order to provide the minimum level of protection to surface waters. We believe that this implies only minimum protection will be provided, whereas the procedures should provide for maximum protection of surface water quality. Consideration should be given to having the applicant provide fish restocking to mitigate for habitat loses.

The Draft EIS proposes that streams up to 100 feet wide be crossed by a dry flume crossing. We recommend that shallow streams up to 40 feet wide be crossed by this method. Any site specific exemptions to flume crossings should be identified in the Final EIS. The Final EIS should also address the technical limitations of this method, and specify the limiting factors and cost of the method.

Page 5-18 includes a recommendation that all staging areas be located at least 50 feet from streambanks, and 100 feet for refueling and storage of hazardous materials would be located 100 feet from all surface waters. Because staging areas will likely contain the storage of fuel and other hazardous materials, and refueling will also likely take place in these areas, the staging areas should be located 100 feet from streambanks. As part of the staging area procedures, there should be a contingency plan for cleanup should a spill occur. We recommend a more detailed plan to address how materials will be stored and the need for diked areas to prevent spill from entering a water body. If for major lake and river crossings, there is a request for an exemption to the location of staging areas or a refueling locations, those requests should be presented in the EIS with alternatives and assessment of impacts.

Under soil placement on page 5-18, the procedures include locating spoils from trench excavation at least 10 feet from streambanks with silt fence and/or haybale filters. There should be requirement prohibiting side casting fee materials into the streambed at any time. In the case of major stream or lake crossings where side casting would be an alternative, these areas should be identified and include a discussion and evaluation of alternatives. Major river crossings such as the Escanaba, Niagara, Hudson, Delaware and the St. Marys may have contaminated sediments, sediment sampling must be done prior to excavation and fill to ensure that the material will not result in water borne contaminants. Construction procedures in these areas must employ methods that will avoid and minimize erosion and sedimentation. For Areas of Concern (AOCs) along the Great Lakes, the construction and sampling needs to

F14

F14-12 Our Procedures require adequate flow to be maintained during withdrawal of water to protect aquatic life and to provide for all in-steam uses and downstream withdrawals of water. In addition, the applicants would be required to comply with site-specific withdrawal rates or other conditions attached to state-issued withdrawal permits. 11

F14-13 FERC considers the minimum level of protection stated in section 5.1.3.2.1 to be a level of protection that would adequately protect water bodies from long-term impact and avoid or mitigate potential impact on water quality that may occur during pipeline construction. The Procedures also require the applicant to comply with nationwide and individual Section 404 and Section 10 permit conditions, where applicable. In addition, we have identified exceptional quality and sensitive water bodies that would require additional protective measures to adequately mitigate potential impact and preserve the quality of the water body. 12 13

Fish restocking is at best a form of short-term mitigation that we believe would serve little or no useful purpose, especially in fisheries that have existing naturally reproducing populations. We have consequently concentrated our efforts in preventing adverse effects on fisheries habitat during construction. 14

F14-14 The comment concerning dry flume crossings of 100-foot-wide streams is incorrect since this requirement applies to streams less than 10 feet wide. Please refer to section 5.1.3.2.1 and appendix D. It is our recommendation that minor streams containing coldwater and warmwater fisheries considered significant by state fish management agencies, be crossed by the dry-ditch fluming technique. We have also made specific recommendations in section 5.1.3.2.1 for dry-ditch crossings of other identified sensitive and exceptional quality streams. We have determined from our extensive experience in pipeline construction that generally, only minor streams less than 10 feet wide and 2 feet deep can be practicably flumed. 15

F14-15 Our Procedures prohibit refueling and storage of hazardous materials within 100 feet of all water bodies, regardless of where staging areas are located. Staging areas located adjacent to streams and rivers vary in size depending upon the width of the crossing and it may be possible to refuel vehicles or store hazardous materials in some staging areas and still be in compliance with FERC's 100 foot restriction. Applicants could request an exemption at major river and lake crossings in the site-specific crossing procedures they are required to submit to FERC for review and approval prior to construction. In addition, we have made recommendations that require the applicants to prepare and submit a spill prevention and containment plan to FERC for review and approval. We have incorporated additional information in section 5.1.3.1.1 on the information this plan should provide. 16

F14-16 Our Procedures (appendix D) specifically state that trench spoils are to be placed 10 feet above the streambank. Pipeline construction across water bodies greater than 100 feet wide would require submittal of site-specific crossing procedures to FERC for review and approval. Proposals for sidecasting of trench spoils would be assessed during review of the construction plans.

be coordinated with the Remedial Action Plans. A map of these AOCs is enclosed. The Hudson River has been identified as being contaminated with PCBs and heavy metals, and the Draft EIS recognizes this, but only references investigation with regard to Polychlorinated Biphenyls. To avoid adversely impacting the water resources, all priority and non-conventional pollutants in the sediments should be identified prior to trench construction. Sediments with elevated contamination levels should not be used as backfill, but rather should be disposed in accordance to appropriate Federal and State regulations. Additionally, the Final EIS and Record of Decision should stipulate what precautions will be implemented to minimize resuspension and drift of contaminated sediments during trench construction.

The EIS includes a proposal to trench across the Delaware River, and this action could adversely impact fisheries, including the important shad fishery, due to sedimentation, turbidity, and blasting. Page 4-29 of the Draft EIS says that directional drilling will be studied as an alternative. We would prefer the latter method for the Delaware crossing to avoid the aforementioned impacts. Regardless of the method employed, this construction activity must occur between November 1st and March 15th to minimize these impacts. The Final EIS should provide detailed analysis of the technical feasibility, environmental effects, and cost of directional drilling the pipeline, compared to the cost, environmental effects and feasibility of open trench installation.

The time window for construction on page 5-19 runs from June 1 to September 30 with restrictions during fish spawning periods and periods of high water flow. Also, page 5-27 notes that equipment bridges would be used on streams less than 100 feet wide, and most stream work would be completed in less than 48 hours (72 hours maximum). Both of these proposals are reasonable, but the EIS should explain how the equipment bridges will be constructed, and what water quality impacts may result.

On page 5-112, the Draft EIS states that Transcontinental Gas Pipe Line Corporation (Transco) would follow PCB contamination testing procedures similar to those stipulated by U.S. EPA for Texas Eastern Transmission Corporation. If the liquids contain PCBs in excess of 50 ppm, Transco should select one of the options listed on page 5-110 of the Draft EIS. The procedures approved for Texas Eastern should not be applied unless an alternative disposal permit is obtained, as required by the Toxic Substances Control Act, from the Chemical Regulation Branch of EPA's Exposure Evaluation Division in our Washington Headquarters. This office can be contacted at (202) 382-3965, or at TS 798, 401 M Street, S.W., Washington, D.C. 20460.

We support the recommendations of FERC's environmental staff in cases where the applicants propose alternative techniques. Specifically, we support the reduction of the National Fuels/Penn-York right-of-way from 66 feet to 50 feet, the requirement that each stream crossing be submitted to the Corps of Engineers for Section 10 and 404 review, and the requirement of a field survey for ospreys prior to work in the National Fuels/Penn-York line in Potter County, Pennsylvania.

The DEIS fails to address impacts that may occur due to pipeline construction

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16 According to MIDNR personnel, there are no known pollution concerns for the Escanaba River. The St. Mary's River would not be crossed by the proposed project. Tennessee has indicated that the Niagara River would be crossed utilizing directional drilling techniques, hence, sediments would not be disturbed by pipeline installation. We have recommended in section 5.1.3.2.2 and in section 7.3 that CNG conduct testing of sediments at the Hudson River crossing. FERC agrees with the EPA's recommendation to include sediment testing for priority pollutant parameters and to dispose of sediments containing high levels of contaminants according to appropriate Federal and state regulations. We have revised section 5.1.3.2.2. to incorporate these recommendations. The states of Wisconsin and Michigan would address any specific conditions or crossing procedures pertaining to areas of concern in their stream crossing permitting requirements.

17 F14-17 As a result of discussion with NMFS and FWS, who collectively have jurisdiction over anadromous fisheries, federally listed species, and fish and wildlife habitat, we have recommended a construction window to cross the Delaware River between December 1 and April 1. These dates were decided upon to offer the greatest protection to the fisheries of the Delaware River, especially the American shad. Since young-of-year of this species has been found to continue outmigration through the study area into November, we have delayed in-stream work until December 1. Similarly, this species does not migrate upstream into the project area prior to April, and have consequently allowed in-stream construction to continue until April 1.

18 Numerous pipeline crossings of the Delaware River utilizing open-cut trenching have been constructed, the most recent occurring in December 1989. Adverse effects were determined not to be significant to the resident fishery by FWS, NMFS and NJDEP. Consequently, we do not feel the need to do a detailed analysis of the technical feasibility, environmental effects, or cost of directional drilling the pipeline crossing.

19 F14-18 Construction of equipment bridges may involve one of several different procedures, depending on the width and depth of the water body crossing. Portable steel bridges are assembled streamside and installed from the bank, utilizing a backhoe to ensure correct and stable placement. These bridges can be installed and removed without in-stream equipment and with minimum disturbance to the substrate.

20 A clean rock fill and culvert crossing requires the placement of steel culvert(s) on the stream substrate with clean, crushed rock fill placed on top to form a temporary roadbed for construction traffic. The number of steel culverts used would depend on the existing and/or projected flow in the stream. Generally, sufficient capacity is installed to pass moderate storm flows. After completion of construction traffic, a backhoe is used to remove the rock and culverts. The stream substrate is restored to its original elevation with minimal disturbance. Some crushed rock may remain spread out in the stream, but at original streambed elevations and contours. Each of these procedures results in the minimization of in-stream construction traffic and a reduction of suspended sediment and downstream siltation. Water quality impact would be insignificant.

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that will branch off from the Niagara Import Point Project because of the projects installation. These new pipelines could have significant impacts to wetlands, water quality, historic and archaeological sites, endangered species, and other concerns, and stimulate a speculative market which could result in rapid unplanned growth and chaotic development. It is important that the Final EIS include a comprehensive cumulative and secondary impacts analyses that consider the environmental impacts of the Niagara Import Point Project individually and as it relates to other existing or proposed pipeline projects.

The alternative selected for routing the pipeline loops should not traverse within State regulated wellhead protection areas of community water supplies. In States, such as Wisconsin and Pennsylvania, that do not have applicable regulations, the State should be contacted concerning State policy or impending legislation for wellhead protection.

The Final EIS should include an analysis detailing the hazards associated with a rupture, pipe failure, or catastrophic explosion at given points along the proposed alignment. This should include an assessment of risks and impacts to public health and the surrounding environment.

The project involves several transmission companies. However, it is not clear to what extent their pipeline networks of other pipelines are required to support TransCanada's deliveries to the Niagara Import Point Project. We recommend that FERC explain the functional relationship interrelationship (if any) between the Niagara Import Point Project and any other projects.

Recommended measures by the FERC staff state that "for various reasons, the site-specific information required to make a complete environmental analysis of the proposed Niagara Import Point Project, is not available at this time." We recommend that the detailed site-specific information be made available and presented in the Final EIS to enable all interested parties, especially FERC, to make a complete analysis.

Further discussion is required to justify the project. In addition to the end uses for the increased gas consumption that are listed in Table 1.1-1 of the EIS, we suggest that the project be further justified by demonstrating in the Final EIS that the construction would cover the lifetime of the project. Following this approach, impacts due to future construction would be avoided.

Other impacts such as forest losses should receive the same sequential mitigation as mentioned in our wetlands mitigation guidance. This plan of mitigation should also be included in the Final EIS.

Based on our review and in accordance with our policy, we have rated this Draft EIS as EO-2, indicating we have environmental objections (EO) to the proposed project because of potentially adverse wetland impacts, an lack of an adequate plan for disposal of contaminated sediments, an inadequate secondary/cumulative impacts analysis, lack of a mitigation plan to address impacted wetlands and terrestrial resources, and other miscellaneous impacts. Additional information to assess the above issues and impacts is requested in the Final EIS.

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F14-19 Comment noted. We have revised section 5.1.13.4.1 to state that if liquids in the pipe are PCB-contaminated, Transco would be required to dispose of them according to TSCA requirements.

F14-20 Thank you for your comment.

F14-21 Thank you for the comment.

F14-22 The EIS evaluates the potential effects of both jurisdictional and nonjurisdictional facilities associated with the proposed NIP Project. Other pipeline projects proposed to serve the different segments of the Northeast include the ANR and Iroquois/Tennessee Projects.

These projects involve pipelines, associated aboveground facilities, and related nonjurisdictional facilities in 19 states. In no instance are pipeline facilities being constructed in the same location for more than one project. With the diverse geographic locations of these facilities, we do not believe there is any potential for significant cumulative impact on the local level. Further, these projects have no significant adverse regional impact associated with them.

The potential for the jurisdictional and nonjurisdictional facilities to induce growth leading to unplanned or chaotic development is unfounded. Experience from other pipeline projects does not support a case for substantial induced growth. To the extent that growth occurs, whether industrial, commercial, or residential, it would be subject to applicable state or local permitting processes and, therefore, could not be unplanned. Receipt of these permits would imply the associated impact is acceptable. DEIS recommendation 7 states that gas deliveries cannot begin until the applicant has filed copies of all permits and approvals required for the nonjurisdictional facilities with the Secretary of the Commission and the Director of OPPR has reviewed this information and informed the applicant that gas deliveries can commence.

We have added a discussion of our review of this cumulative impact issue into the EIS (see section 5.3).

F14-23 In section 5.1.3.1.2 and DEIS recommendation 11, we have recommended that refueling activities and storage of hazardous materials be prohibited in designated well protection areas and within 200 feet of private, municipal, or community water supply wells. We believe that this restriction, and additional mitigation measures we have proposed in section 5.1.3.1.2, would adequately protect groundwater resources for continued and future use as drinking water supplies.

F14-24 Section 5.1.12 discusses in detail pipeline safety and reliability as it relates to construction, operation, and maintenance. If there were a pipeline rupture and a resulting explosion or fire, the procedures discussed in sections 2.3 and 2.4 would be implemented. The information presented in section 5.1.12.3 contains a summary of pipeline accident data for a 14-year period, 1970 through 1984, along mainline pipeline systems. These data indicate that the risk to the general public from the approximate 300,000 miles of natural gas transmission and gathering pipelines in the United States is minimal.

We feel that the proposal fails to comply with the Clean Water Act Section 404(b)(1) Guidelines, and should not be authorized. Our position is based on the failure of the Draft EIS to adequately identify, avoid, minimize, and compensate for impacted wetlands. There is no mention in the Draft EIS of any compensatory mitigation measures. Therefore, we will recommend that the Corps of Engineers (COE) and the State of Michigan deny permits for the proposed project, and that the COE's St. Paul district revoke the nationwide permit already issued. If the COE or State of Michigan should intend to issue a permit over our Agency's objections, we request that you notify us in accordance with the procedures specified in the 404(q) Memorandum of Agreement.

Thank you for the opportunity to review the Draft Environmental Impact Statement for the Niagara Import Point Project. If you have any questions regarding our comments, please contact Mr. William D. Franz, Chief, Environmental Review Branch, at (312) 886-7500.

Sincerely yours,

/s/ original signed by
Valdas V. Adamkus

Valdas V. Adamkus
Regional Administrator
U.S. EPA, Region V

Enclosure

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As indicated in section 5.1.12, the pipeline would be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR Part 192. These regulations were adopted in August, 1970, and have been updated on a frequent basis to reflect technological changes and need for increased operating safety. These regulations are intended to ensure adequate protection for the public from natural gas pipeline failures. The pipe would be designed with sufficient wall thickness to withstand operating pressures and external load factors.

F14-25 As described in section 1.1, this EIS evaluates the specific pipeline company facilities needed to transport 346,400 Mcfd of Canadian natural gas to the Niagara Import Point and from the Niagara Import Point to the end users listed in table 1.1-1. No facilities beyond those evaluated in this EIS would be required to make these deliveries. The NIP Project is one phase of the three phase NSP described in section 1.2.1 (Phases I and II are the SS-Project and TEMCO Project, respectively). All three phases are required to transport up to 592,880 Mcfd of natural gas as part of the NSP.

F14-26 Most of the information we require to be filed by applicants requires details that would only become available as a result of detailed right-of-way surveys or engineering and design. In each case, we have recommended measures that an applicant must satisfy prior to being allowed to begin construction. We have undertaken a reasonable level of analysis to ensure, that through these recommended measures or subsequent measures we might recommend as a result of reviewing detailed plans, significant environmental effects would be avoided.

F14-27 Table 1.1-1 identifies the natural gas quantities required to meet current needs of various shippers, local distribution customers, and nonjurisdictional facilities on a long-term contract basis. The proposed facilities are designed to provide this service. This is not to say that future expansions to provide additional or other new service would not occur.

The EIS does not provide an extensive analysis for the need of this project. Determination of the need for the project is being dealt with on a track parallel to the environmental analysis. The information from that analysis, along with the environmental record, will be placed before the Commission for their review and ultimate decision on this project. The EIS does, however, include a brief description of the underlying purpose and need for the proposal.

The EIS indicates that we conducted an analysis of the environmental consequences of not building the Northeast settlement projects. A main focus of our analysis was the forecast of the environmental effects, primarily on air quality, of not proceeding with the Northeast settlement projects. The analysis presents projections of increased demand for natural gas in the Northeast and identifies the volumes of alternative fuels that would be used if gas were not used to meet these demands (see section 3.1).

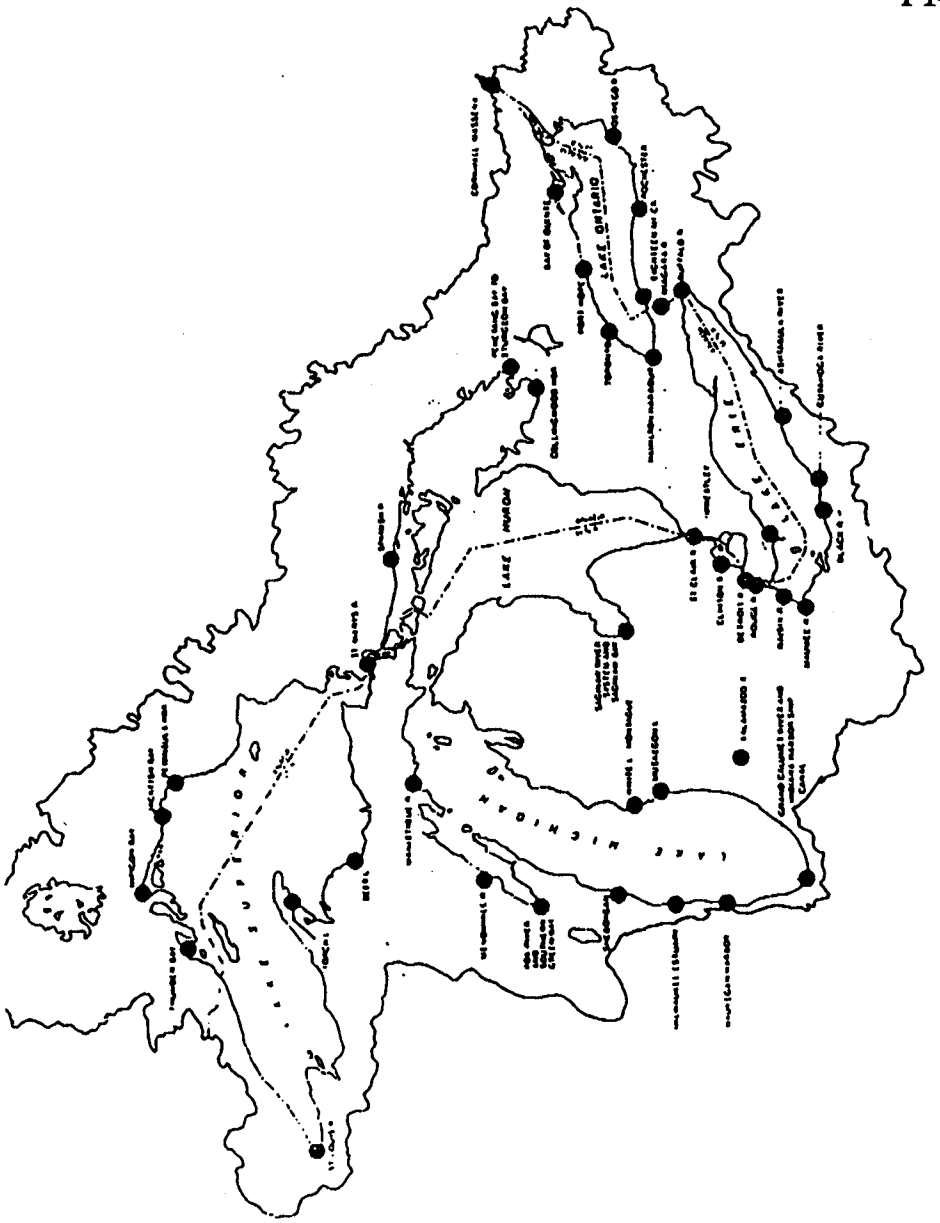

Figure 1. Areas of Concern in the Great Lakes Basin.

F14-28 We assume the reference to your sequential wetlands mitigation guidance refers to comment response F14-10 (i.e., avoidance, minimization of impact, followed by compensation). As discussed in section 5.1.9.1.2, we have limited the widths of proposed rights-of-ways where we feel excessive clearing or disturbance to existing land uses would result. In sections 6.1 through 6.4 we have identified route variations where clearing of forestland would be reduced or avoided. As described in appendix D, where forested wetlands would be cleared, we have recommended they be allowed to revegetate with woody vegetation to a height of 15 feet.

F14-29 Comment noted. Revisions and modifications, as appropriate, have, in our opinion, answered the objections.

S1

State of Wisconsin

Department of Agriculture, Trade & Consumer Protection

Howard C. Richards
Secretary

801 West Badger Road
P.O. Box 8911
Madison, WI 53708

March 15, 1990

Mr. Kurt Flynn, Project Manager
Environmental Policy and Project Analysis
Office of Pipeline and Producer Regulation, Rm. 7312
825 North Capitol Street, N.E.
Washington, DC 20426

Dear Mr. Flynn:

Re: Draft Environmental Impact Statement (DEIS)
Niagara Import Point Project

The Department of Agriculture, Trade and Consumer Protection (DATCP) has reviewed the DEIS for the Niagara Import Point Project. It appears that the DEIS adequately addresses the environmental impacts of the proposed project. However, from the information contained in the DEIS, we are unable to determine whether the project would have a significant impact on farm operations and whether the project would require the preparation of an agricultural impact statement pursuant to s.32.035, Wisconsin Statutes.

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An agricultural impact statement would be required if more than five acres would be acquired from any farm operation and if the acreage could be acquired through condemnation. Please refer to the attachment to determine what information the DATCP needs to determine whether an agricultural impact statement is required. Please feel free to contact me at the phone number listed below or at the address listed above if you have comments or questions about the Agricultural Impact Program requirements.

We appreciate the opportunity to comment on the DEIS.

Sincerely,

Nina M. Berkani, Director
Agricultural Impact Program
608/267-9787

ATTCH: Agricultural Impact Statement Fact Sheet

S1-1 We do not feel that there will be a significant impact on agriculture areas along the proposed route. There will be a temporary disruption of agriculture activities during construction. Once construction is completed, the agriculture area will be allowed to revert to preconstruction conditions along both the construction and permanent right-of-way.

PROTECTING OUR RESOURCES

AGRICULTURAL IMPACT STATEMENT

Wisconsin Department of Agriculture, Trade & Consumer Protection

The Department of Agriculture, Trade and Consumer Protection (DATCP) must be notified of any project which may involve the acquisition of an interest in land from a farm operation through the use of eminent domain procedures (condemnation). The DATCP should be notified of such a project regardless of whether the proposing agency actually intends to use these powers in the acquisition of rights to proposed project lands.

If a proposed project involves the actual or potential exercise of the powers of eminent domain in the acquisition of an interest in more than five acres of land from any one farm operation, the DATCP is required to prepare an agricultural impact statement (AIS) which describes and analyzes the potential effects of the project on farm operations and agricultural resources. If a proposed project involves five acres or less from any one farm operation, an AIS may be prepared at the DATCP's discretion.

For the purposes of s. 32.035, Wis. Stats., "farm operation" means "any activity conducted solely or primarily for the production of one or more agricultural commodities in sufficient quantity to be capable of contributing materially to the operator's support." It therefore includes timber operations, tree farms, and rental operations, as well as other agricultural operations normally associated with the term. Acquisition of easements, fee simple rights to property, and leasehold interests in property may all trigger the need for an AIS if the interests would be acquired from a farm operation by an agency, utility company, or unit of government which COULD acquire the interests through condemnation.

The DATCP has 60 days within which to prepare an AIS once it has determined that all the information necessary to complete the AIS has been received. Upon completion of the AIS, the DATCP will charge a fee to cover preparation and mailing costs as stipulated in s. 32.035(3), Wis. Stats. This fee must be paid prior to publication of the AIS. The potential condemnor may not negotiate with, or make a jurisdictional offer to a landowner until 30 days after the AIS is published. The publication date will be stamped on the AIS. Any delay in fee payment will result in a delay in the publication of the AIS.

Upon publication, a copy of the AIS is sent to the potential condemnor, affected farm operations, the governor's office, agriculture committee chairpersons in the state legislature, concerned public agencies, local media, libraries, and other interested parties. Local or regional units of government which have jurisdiction over the area affected by the project are requested to post the AIS in the place normally used for public notices.

The AIS may be incorporated into the Environmental Impact Statement (EIS) for a project so long as the DATCP consents and is reimbursed for all AIS work completed. If the AIS is incorporated into an EIS, provisions in s. 32.035, Wis. Stats., pertaining to mailing lists, 60-day completion periods, and 30-day waiting periods do not apply.

When notifying the DATCP of the need to prepare an AIS, the following information is requested:

1. A verbal description of the proposed action, accompanied by supporting maps of the project if available. Plat maps, design plans, and aerial photographs with the project outline superimposed would be most valuable. If maps are not available, the project location and a description of the boundaries of the project should be supplied.

2. The total acres sought in fee purchase and/or easement from each farm operation.

3. Information on the affected farm operations, such as:

a. the current use(s) of the proposed easement or fee purchase area

b. a description of any land severances and/or access restrictions which would be imposed

c. the number and type of farm structures, fences, trees and/or conservation practices to be removed

d. any other anticipated effects of the proposed action on each of the farm operations (harmful or beneficial), apart from a reduction in property rights

4. A statement of the need for the project and its intended purpose.

5. A description of any project alternatives considered or currently under consideration.

6. A copy of any plans or environmental documents prepared for the project (we will return them at your request), or a list of the plans and environmental documents which are, or will be, available for the project with their approximate date of completion.

7. A copy of a proposed easement contract or a description of the property right restrictions which would be imposed as a result of any proposed easements.

8. A mailing list which includes the addresses of affected landowners, the project initiator, and any individual, group, club, or committee which has demonstrated an interest and has requested receipt of an AIS.

After the notification has been received, the DATCP may request additional, project-specific information needed to complete the AIS. In order to gather information for the AIS or to determine whether an AIS is required, the DATCP may contact affected landowners and farm operators. If the project initiator has not yet contacted affected landowners and wishes to do so before DATCP questions them, the DATCP should be so informed.

Please write or call the DATCP Office of Policy and Program Analysis at (608) 267-9787 or (608) 266-1186 if further information is needed.

S2

DEMEA

New York State Office of Parks, Recreation and Historic Preservation
The Governor Nelson A. Rockefeller Empire State Plaza
Agency Building 1, Albany, New York 12238-0001

Orin Lehman
Commissioner

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FEDERAL ENERGY REGULATORY COMMISSION

February 13, 1990

Mr. Kenneth Plumb
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Dear Mr. Plumb:

Re: FERC
Niagara Settlement-Stage 1 Report
Multiple, Livingston and
Wyoming Counties
89PR0135

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed your project in accordance with Section 106 of the National Historic Preservation Act of 1966 and the relevant implementing regulations. 1

Based upon this review, it is the SHPO's opinion that your project will have No Effect upon cultural resources in or eligible for inclusion in the National Register of Historic Places.

If you have any questions, please contact our Project Review Unit at (518) 474-0479.

Sincerely,

Julia S. Stokes
Deputy Commissioner for
Historic Preservation

JSS/ED:tr
#9(10/89)

cc: Thomas J. Horst

S2-1 Thank you for your comment.

S3

PENNSYLVANIA DER

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Post Office Box 2063
Harrisburg, Pennsylvania 17120

717-783-8727

Secretary's Office of Policy

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OF THE SECRETARY
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REGULATORY COMMISSION

April 12, 1990

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
825 N. Capitol Street, N.E.
Washington, DC 20426

Dear Secretary Cashell:

The Pennsylvania Department of Environmental Resources has reviewed FERC's Draft Environmental Impact Statement (DEIS) for the Niagara Impact Point Project (Docket No. CP88-171-001). We have the following comments on the DEIS:

1) The Delaware River crossing occurs on a 1-A priority waterway in Pennsylvania's Scenic Rivers System. The Final Environmental Impact Statement (FEIS) should note this and indicate how construction areas will be revegetated and minimum clearing will be maintained along the Delaware River. Contact Roger Fickes (717-541-7803) for information about Pennsylvania's Scenic River System. 1

2) The topsoil conservation provision of Appendix C requires segregation of topsoil in annually cultivated or rotated croplands and in residential areas. It would be preferable to segregate topsoil in all areas except in those areas where the conservation of topsoil could cause unacceptable negative impacts. 2

3) It would be advisable to require the companies to provide affected landowners with a means of contacting FERC's Environmental Inspector. 3

4) The certificate which will be issued by FERC should include conditions which were previously used for the certificate issued to Texas Eastern for the APEC/CRP project 1989. The conditions of interest were 10, 11 and 12 and are set forth below as adapted for this project. 4

   a) Since the Department believes contamination may exist at Transcontinental Pipeline Company's Compressor Station 515, the Department would like to receive detailed site plot plans for this site. The plans should identify all

S3-1 Comment noted. Table 4.1.9-3 and section 4.1.9.2 have been revised to reflect the 1-A priority of the Delaware River in the state's scenic rivers system. According to our appendix D, the applicant would be required to submit a detailed construction plan for crossing this river.

S3-2 Comment noted. We believe that segregating topsoil is important to preserve the soil amendments that have been applied in agricultural cropland. However, it is not necessary to require topsoil segregation in other areas where no investment has been made in soil amendments and where successful revegetation of the right-of-way is achieved through conformance with applicant E&SC Plans and our appendix C.

S3-3 Comment noted. The environmental inspector is a company employee, not a FERC employee. The presence of the environmental inspector is required by our Erosion Control, Revegetation, and Maintenance Plan.

S3-4 In discussions with the staff of PADER, we identified that a site characterization is being conducted by Transco at Compression Station 515. Until the results of the study are presented, we are unable to determine if the suggested recommended measures are applicable. Since certification is expected before the results of the study are available, we have included the recommended measure as a recommendation for Transco, with the qualification that the recommended measure is necessary only if contamination is identified (see section 7.3).

S3

locations onsite, all downgradient locations offsite, offsite pig receivers and major valves, and streams or drainage ditches within 0.2 kilometers of any compressor station that would either be directly disturbed by excavation and soil storage, or be indirectly disturbed by construction equipment traffic, worker access and parking, construction support facilities, and staging areas.

b) Prior to construction, all locations identified above should be sampled for PCBs and other contaminants in accordance with procedures approved by the Department to ensure that an unacceptable level of contamination does not exist, and the contaminated areas shall be isolated from the construction area with 4-foot orange plastic safety fencing or the equivalent for the entire duration of construction activities. Sampling plans should be submitted to and approved by the Department prior to commencement of sampling activities. 4

c) The company should secure concurrence from the Department that the construction areas identified above are not in areas of unacceptable contamination, and file the concurrence with the Secretary of the Federal Energy Regulatory Commission for the Director of OPPR's review and written approval prior to construction.

If there are any questions regarding comments 2-4 above, please contact Kenneth Beard of DER's Bureau of Waste Management at 717-783-9475.

Thank you for the opportunity to review this DEIS. We look forward to reviewing the FEIS for this project as well.

Sincerely,

Keith R. Gentzler, Assistant Director
Secretary's Office of Policy
Department of Environmental Resources

S4

April 16, 1990

Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

RE: Niagara Import Point Project, Draft EIS. Tennessee Gas Pipeline Company (FERC Docket No. CP88-171-001) and Algonquin Gas Company (FERC Docket No. CP88-187-001).

Dear Ms. Cashell:

Staff of the Massachusetts Historical Commission have reviewed the Draft Environmental Impact Statement on the proposed projects referenced above.

To date, only preliminary cultural resource surveys have been conducted of portions of proposed projects by Tennessee Gas Pipeline Company and Algonquin Gas Company. Tennessee Gas Pipeline Company's Segment 8 in Longmeadow, East Longmeadow, and Agawam (Hampden County, MA) was the focus of a reconnaissance (Phase 1a) archaeological survey by the UMass Archaeological Services. The results of this investigation, presented in a report entitled, "Archaeological Reconnaissance Survey for the Proposed Tennessee Gas Company Pipeline, Niagara Settlement Project, Central Massachusetts," indicated that 5.1 km (3.2 miles) of the proposed route have a moderate to high potential to contain significant historical and archaeological resources. MHC has approved the research design submitted by UMass Archaeological Services for an Intensive (Locational) Archaeological (Phase 1b) Survey of Segment 8.

The Office of Public Archaeology at Boston University has received MHC approval for a research design submitted for an Intensive (Locational) Archaeological Survey (950 CMR 70) of Tennessee Gas Pipeline Company's Segment 9 in Hopkinton (Middlesex Co., MA). Tennessee Gas Pipeline Company's Segment 8 Longmeadow and Wolf Swamp Variations, where they differ from the Segment 8 primary route proposal, have not been previously reviewed by this office.

Phase 1 Archaeological Surveys for portions of Algonquin Gas Transmission Company's proposed pipeline routes and facilities have only recently commenced. The Public Archaeology Laboratory, Inc. has submitted research designs approved by the MHC to conduct Intensive (Locational) Archaeological Surveys on the Algonquin H-1 Replacement (Milford, MA), Algonquin Medfield Loop (Holliston & Millis, MA--Middlesex & Norfolk Cos.), and the Algonquin Bellingham Meter Station (Bellingham, Norfolk Co., MA). The PAL, Inc. received MHC approval to conduct a survey on a portion of the proposed Algonquin G-8 Replacement (Plymouth & Barnstable Cos., MA), (i.e., MP 2.0 to MP 5.2) and what was once identified as an "alternate" route (MP 4.1 to 5.3);

Massachusetts Historical Commission, Valerie A. Talmage, *Executive Director, State Historic Preservation Officer*
80 Boylston Street, Boston, Massachusetts 02116 (617) 727-8470
Office of the Secretary of State, Michael J. Connolly, *Secretary*

the latter is actually a small portion of the proposed G-8 Replacement route and not an alternate as proposed in the DEIS. MP 0.0 to MP 2.0 of the G-8 Replacement route has not been reviewed, nor has the Algonquin G-5 Replacement route.

Review of MHC's files indicates that MHC received notice on June 16, 1986 of the NorthEast Energy Associates' cogeneration plant (DEIS 5.2.2.1) through an Environmental Notification Form (filed with the Massachusetts Executive Office of Environmental Affairs). The project was then identified as the Continental Cogeneration Corporation's "CCC Bellingham, MA" project. No request for further review was made by the MHC at that time. Since NEA's 300-MW cogeneration facility is currently under construction, and since Algonquin's proposed Bellingham Meter Station will be located within the cogeneration plant project area, no further review of these two projects is required by the MHC.

The Final EIS should include a table indicating the status of cultural resource surveys by route, listing the firms conducting the research. In addition, the towns through which the facilities pass should be listed. 1

MHC requests that a Reconnaissance (Phase 1a) Archaeological Survey be conducted on those segments of the Tennessee and Algonquin routes that have not been previously surveyed. MHC concurs with the recommendations of FERC (DEIS 5.1.11.1) that Tennessee and Algonquin defer construction of the proposed facilities until FERC and the MHC have determined what effect the proposed project may have on significant historical and archaeological resources in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800). 2

Should you have any questions regarding these comments, please feel free to contact Edward L. Bell of my staff.

Sincerely,

Edward L. Bell

for Brona Simon
State Archaeologist
Deputy State Historic Preservation Officer
Massachusetts Historical Commission

xc: Debra Vrabel, FERC
Kurt Flynn, FERC
ACHP
UMass Archaeological Surveys
PAL, Inc.
Stone & Webster Environmental Services (for Tennessee Gas)
Algonquin Gas Transmission Company
OPA

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S4-1 Thank you for your suggestion. We are including a table indicating the status of Section 106 NHPA cultural resource surveys, organized by facility and county (see table 4.1.11-1). We believe inclusion of towns would make the table needlessly cumbersome. We also believe it is not useful to include the names of the firms conducting the surveys because the personnel often change and because FERC requires the applicants or their consultants to consult with the SHPOs. This consultation includes review of and comment on all work plans.

S4-2 Tennessee and Algonquin have agreed to conduct Phase 1 studies (identification, including background research and initial presence/absence field investigation) for those segments of right-of-way that have not been previously surveyed.

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STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
OFFICE OF ENVIRONMENTAL COORDINATION
83 Park Street
Providence, RI 02903-1037
(401) 277-3434

April 30, 1990

Ms. Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

RE: Niagara Import Point Project
Docket No. CP88-171-001

Dear Ms. Cashell:

The Department of Environmental Management (Department or DEM) has reviewed the Draft Environmental Impact Statement (DEIS) for the referenced pipeline project. Not-with-standing deficiencies in the analyses, areas of concern are noted regarding certain recommendations or procedures suggested by the various pipeline proposers.

1 The Department continues to express its concern to the Federal Energy Regulatory Commission (FERC) regarding evaluation of impact, particularly for the Tiverton Loop. The conclusion presented by FERC are seemingly premature when one considers the lack of data presented in review of this proposal. Not only are impacts to wetlands (as estimated by FERC in the Champlain DEIS) identified as insignificant without evaluating alternatives, there is no rationale presented in support of the selected alignment. Presumably, the presence of an existing pipeline right-of-way (ROW) is considered justification for impacting 2.7 acres of wetland. The Department maintains the need for review and evaluation of other alternatives, including use of roadways.

2 While impact from the Tiverton Loop segment were previously discussed in the DEIS for the Champlain project as noted by FERC, it would be of assistance to properly identify potential impact resulting to resources in this document. Documentation of impact to resources has not been identified in tables or narratives, lending further to the inaccurate presentation of impact. Additionally, since the restructuring of the Champlain project, it appears the sizing of Algonquin facilities and the customers it would serve have been altered as it relates to pipelines presently proposed in this docket. Information concerning the

S5-1 Comment noted. A route variation to avoid the Pocasset Cedar Swamp has been identified and evaluated in section 6.3.3.

S5-2 Resources affected by the Tiverton Loop were included in all the appropriate tables in the DEIS. The FEIS analyzes the environmental effects of pipeline construction and operation along this route. Reference to the Champlain DEIS has been deleted (see section 2.1.3). Information on the volumes of gas transported and the proposed customers is fully documented in sections 1.1. and 1.2.1.

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volumes of gas transported and proposed customers, must be fully documented in the final environmental impact statement (FEIS).

There is serious concern over the minimalistic, generalized nature of the DEIS, and the omission of alternative analyses for the RI portion of this impact assessment report. Without site specific details as noted in both this letter and previous correspondence concerning the Tiverton Loop, it is impossible to evaluate impact.

The DEIS document identifies the following components related to pipeline installation and appurtenant features in Rhode Island:

- Construction of meter station (M-6) in Burrillville to service unit II of the Ocean State Power facility (OSP).
- Transportation 50 MCFD of natural gas to OSP.
- Addition of 5,500 hp of compression at the existing Burrillville Compressor Station.
- Construction of 2.1 miles of 16" diameter pipeline looping in Tiverton.

Comments and concerns relative to each of these proposals are identified in the following.

Meter Station M-6 - Insufficient data is provided to determine if this proposed facility will affect streams or wetland habitat. Further documentation or appropriate mapping is needed to detail site impact and construction activities. Also identify any anticipated noise impact from these proposed alterations and transport of fuel to OSP II.

Burrillville Compressor Station - The DEIS did not contain enough information to determine whether the proposed modifications would impact Waters of the State. The Department's Division of Water Resources requests site specific information regarding any proposed alteration to wetlands and water bodies, and potential discharges which would require a Rhode Island Pollution Discharge Elimination System (RIPDES) permit.

Details must be provided to the DEM/Division of Air and Hazardous Materials concerning the addition of 5500 hp of compression. Compliance with State air quality regulations will be addressed through required permit review (Prevention of Significant Deterioration and construction and operation permits).

Tiverton Loop - The proposed construction of 2.1 miles of pipeline in Tiverton raises several environmental concerns, some discussed previously in comments (dated February 15, 1990) submitted on the Iroquois/Tennessee/Champlain Pipeline Projects (Docket Nos. CP89-634-000, CP89-815-000, CP89-629-000, and CP89-661-000). The present EIS document was inadequate for our review

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S5-3 No NWI-mapped wetlands would be affected by construction or operation of the M-7 (incorrectly identified as M-6 in the DEIS) meter station (Uxbridge, Mass-RI NWI wetland map). No perennial streams would be affected by construction or operation of the meter station (Uxbridge, Mass-RI USGS 7.5 minute topographic map and aerial photographs).

S5-4 Facilities proposed at Meter Station M-7 (incorrectly identified in the DEIS as M-6) would involve modifications to an existing station (see table 2.1-2). Work would occur on a previously disturbed site precluding any potential for significant incremental effects. A map of adequate scale is included in the FEIS (see figure A-2-10). Operational noise impact associated with the pipeline and meter station would be below the sound level that protects the public from activity interference and annoyance in residential areas.

S5-5 The proposed modifications to the Burrillville Compressor Station would not affect Rhode Island waters of the state. No alteration of wetlands or water bodies has been proposed by Algonquin. Algonquin has not proposed potential discharges to any water system.

S5-6 No additional details have been provided by Algonquin regarding the 5,500-hp addition to the Burrillville Compressor Station. As stated, these details will have to be provided to RIDEM/Division of Air and Hazardous Materials to obtain a permit to construct, install, modify, or operate any fuel burning equipment.

purposes due to its generalized approach and lack of appropriately scaled site plans.

FERC has failed to confirm coordination with the Rhode Island Natural Heritage Program in the DEM Division of Planning and Development regarding information on endangered or threatened species of concern. This information is required to determine water quality according to the Anti Degradation portion of the State's Water Quality Regulations. 7

The DEIS does not adequately identify wetland and water resources in the proposed Tiverton Loop. Since the existing right-of-way (ROW) will be expanded by up to fifty feet, it is imperative to delineate, survey, and plot wetland boundaries on project site plans. National Wetland Inventory (NWI) Maps do not accurately depict wetland locations and potential stream crossings. NWI Maps, therefore, are not suitable for addressing the Division's concerns. Alterations to wetlands or their state regulated set backs will require permit approval from the DEM Division of Groundwater and Freshwater Wetlands. The Freshwater Wetlands Permit evaluation process will serve as a prerequisite for RI Water Quality Certification. 8

The pipeline construction process should adhere to the following guidelines:

- Topsoil should always be separated from subsoil and stockpiled during the construction phase.
- Topsoil should be replaced as such during site restoration and clean up.
- Erosion controls should be developed, implemented, and maintained according to the guidelines presented in the most recent (1989/90) Rhode island Soil Erosion and Sedimentation Control Handbook. 9
- The applicant must address post construction erosion concerns such as those posed by off-road recreational use of the pipeline ROW.
- The applicant should restore the work area to pre-construction grade and elevations.

Stafford Pond is a surface water supply system. Construction activities for pipeline installation will occur within the watershed of this public drinking water supply, as well as hdyrostatic testwater withdrawal and discharge. Wetland and intermittent streams appear to be present in this area, from review of other proposed facilities (APEC Project - Docket No. CP87-5-001). The FEIS should appropriately note this public drinking water source and tributaries. 10

Withdrawal from Waters of the State for hydrostatic testing will require Water Quality Certification. The applicant must specify the water source, volume of withdrawal, time of year, and duration of withdrawal. Discharge of test waters will require a 11

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S5-7 The following references pertain to contacts made with the Rhode Island Division of Fish and Wildlife (RIDFW) and the Rhode Island Natural Heritage Program concerning the presence of endangered or threatened species of concern along the Tiverton Loop: (RIDFW, 1989 and Ensor, 1989). No species of concern were identified in the vicinity of the proposed loop. These references have been added to appendix H.

S5-8 Comment noted; refer to comment response F11-3.

S5-9 The Erosion Control, Revegetation, and Maintenance Plan in appendix C was partly derived from SCS recommendations, including those from Rhode Island. We believe the plan in appendix C provides an adequate level of environmental protection.

S5-10 The proposed Tiverton Loop does not cross any streams in the Stafford Pond watershed. Our recommended Erosion Control, Revegetation, and Maintenance Plan (appendix C) and Stream and Wetland Construction and Mitigation Procedures (appendix D), would adequately protect and mitigate potential impact on the water quality of Stafford Pond. As noted in our Procedures for hydrostatic testing (appendix D), we do not recommend that applicants use municipal water sources for testing unless approved by appropriate state and local authorities.

S5-11 Comment noted. Algonquin would be required to comply with our hydrostatic testing procedures, as specified in appendix D. As noted in our Procedures, the applicants would also be required to apply for various state or locally issued permits concerning withdrawal and discharge of test waters.

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RIPDES permit (order of approval). RIPDES applications are available from the Permits Section of the Division of Water Resources. The Division will identify all required conditions to be met by an applicant including notification processes, in such approval processes. Please identify the procedures Algonquin is presently proposing at this time, as noted on page 5-20 by other applicants. 11

Until the applicant addresses and resolves the issues noted above, the DEM Division of Water Quality will not issue either a RIPDES permit or Water Quality Certification for this project. Further review comments on proposed wetland alterations will be generated in the permit process. The applicant must obtain a State wetland permit from DEM Division of Groundwater and Freshwater Wetlands for any alteration to wetlands. 12

S5-12 Comment noted.

Miscellaneous Comments

Permit Table 2.7-1 identifies various wetland and water quality permits required by Tennessee on page 2-39. As noted in previous comment on the meter and compressor station facilities, please clarify impact to resources, and appropriate permits to be attained. This table does not correspond to information presented in the text. The permitting activities concerning the Tiverton Loop proposed by Algonquin have also been omitted from this table. 13

S5-13 Comment noted; see revised table 2.7-1.

Coordination with the Rhode Island Natural Heritage Program should be identified on page 4-39. 14

S5-14 Comment noted. This addition has been made to section 4.1.4.

Numerous references to resources present and impacts sustained should be included in Chapters 3 and 4 concerning water quality, wetland and stream crossings. Refer to Table 4.1.3-1, 4.1.3-4, 4.1.3-5, 4.1.3-6 and text on pages 4-29, 4-46, 4-48. 15

S5-15 No wetlands or streams would be affected by construction of Tennessee's proposed M-7 meter station or Algonquin's proposed modification to the Burrillville Compressor Station (see response to comments S5-3 and S5-5). As stated in section 2.1.3 of the DEIS, a discussion of the Tiverton Loop was included in the Champlain Pipeline Project DEIS, and incorporated in the NIP Project DEIS by reference. This discussion has now been incorporated into the appropriate sections of the text. In addition, text in section 5.0 makes numerous references to data presented in section 4.0.

Table 4.1.9-1 quantifies land use affected by pipeline facilities. Forested and non-forested wetlands are included in categories identified as woodland and other. The variety of land uses and cover types included in this category are: deciduous, coniferous, and mixed upland forest, large water bodies, undeveloped brush land, golf courses, municipal properties, and roads. A separate category of undeveloped, or conservation use would provide a more accurate presentation of land use characteristics affected. 16

S5-16 Table 4.1.9-1 provides a general overview and summary of land use croased by the proposed project, based on the actual use of the land as observed from aerial photography. The table is not meant to represent land ownership or the potential of the land for purposes of development or for conservation.

Woodland includes deciduous, coniferous, mixed forest, and forested wetland stands. Components of this category are discussed in greater detail in sections 4.1.6 and 5.1.6 (vegetation) and sections 4.1.7 and 5.1.7 (wetlands). Other land use includes large water bodies, nonforested wetlands, undeveloped brush land, golf courses, municipal properties, and roads. Sections 4.1.7 and 5.1.7 (wetlands) discuss nonforested wetlands; sections 4.1.9.2 and 5.1.9.2 (recreation and public interest areas) discuss other components of this category, including land ownership.

FERC identifies requirements for compliance with state-issued wetland permits, Section 404 permit conditions and water quality certification on page 5-56. The DEIS states, "The procedures include a requirement that if a wetland cannot be avoided, the route be located to minimize disturbance to the wetland. One method of minimizing disturbance to wetlands is to locate the route adjacent to existing rights-of-way, which is the case for the majority of the proposed NIP Project facilities."

Unfortunately, FERC has not attempted to demonstrate avoidance as noted in its own procedures, but has instead attempted to show minimizing disturbance as sufficient justification of acceptable impact. Review of alternatives and reason for rejection require identification.

Efforts to apply EPA permit approval system-wide regarding PCB decontamination procedures proposed by the pipeline companies, does not relieve the applicants from compliance with State regulations which may be more stringent than federal criteria.

Regarding abandonment of facilities identified on page 2-35, please describe any testing conducted to ensure the facilities are free of contamination, and the manner in which they are cleaned and purged free of gas.

Information is required on the maintenance practices proposed for the Tiverton Loop which crosses extensive wetland area, and is located in the watershed and directly adjacent to a surface water supply system.

The Department is hopeful that resolution of issues identified in this comment letter can be provided through development and analysis of additional information requested. Please do not hesitate to contact our office concerning clarification of these matters.

Sincerely,

Victor A. Bell
Chief

cc: K. Flynn, FERC
R. Bendick, RIDEM
M. Grant, RIDEM
E. Szymanski, RIDEM
S. Morin, RIDEM
D. Hartley, EFSB
J. Malachowski, EFSB
D. Varin, Dept. of Administration
V. Lang, U.S. Fish & Wildlife Service
E. Congram, USEPA

S5

17 S5-17 Comment noted. See section 6.3.3.

18 S5-18 Each state and local government has or may have permit or approval authority over portions of the proposed project. The individual applicants must determine, in conjunction with the state or local regulatory body, what additional permits are to be submitted prior to the initiation of construction. The applicant would then file as appropriate.

19 S5-19 As stated in section 2.6, at this time there are no plans to abandon facilities related to this project, since the project life of a pipeline can range from 20 to beyond 50 years. As discussed in section 5.1.13, the appropriate regulatory requirements applicable at the time of abandonment would be followed. For any replacement or removal of existing pipelines or related equipment involved with this project, each applicant must secure the appropriate permit from the EPA if the potential for contamination exists.

20 S5-20 Our recommended measures for pipeline right-of-way maintenance practices in these areas are detailed in appendix C, Erosion Control, Revegetation, and Maintenance Plan and appendix D, Stream and Wetland Construction and Mitigation Procedures.

Energy Facilities Siting Council

100 Cambridge Street, Room 2109, Boston, Massachusetts 02202 (617) 727-1136

Michael S. Dukakis
Governor

Paul W. Gromer
Commissioner of Energy Resources
Chairperson

Robert D. Shapiro
Executive Director

April 27, 1989

Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D. C. 20426

Re: Niagara Import Point Project, CP88-171-001

Dear Ms. Cashell:

Enclosed for filing in the referenced proceeding are an original and fourteen copies of the "Comments of the Massachusetts Energy Facilities Siting Council on Draft Environmental Impact Statement."

Please stamp and return the additional enclosed copy in the enclosed stamped envelope.

Please note that due to the expense involved, only two sets of Environmental Comments and Appendices 1 through 8 have been compiled. One set is enclosed, and the other set has been sent directly to Kurt Flynn in the Environmental Evaluation Branch.

If there are any questions concerning this filing, please contact the undersigned.

Respectfully submitted,

Massachusetts Energy
Facilities Siting Council

By Stephen Klionsky
Stephen Klionsky
Its Attorney

Enclosures

S6

In the Matter of Tennessee Gas Pipeline Company and Algonquin Gas Transmission Company Niagara Import Point Project	FERC Docket CP88-171-001

COMMENTS OF THE MASSACHUSETTS ENERGY FACILITIES SITING COUNCIL ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

The Massachusetts Energy Facilities Siting Council ("Massachusetts Siting Council") offers the following comments with regard to the Draft Environmental Impact Statement ("DEIS") prepared by the staff of the Federal Energy Regulatory Commission ("FERC") in the above captioned proceeding.

Both the Algonquin Gas Transmission Company ("Algonquin") and Tennessee Gas Pipeline Company ("Tennessee") proposed new natural gas pipeline facilities in Massachusetts as part of the Niagara Import Point Project. The Massachusetts Siting Council reviewed Algonquin's and Tennessee's proposals separately and submitted separate Environmental Comments to FERC in regard to each proposal.

On July 31, 1989, the Massachusetts Siting Council submitted Environmental Comments to FERC on Algonquin's proposed construction of the Transportation for Cogenerators Project, Docket No. CP88-187-001. On February 12, 1990, Algonquin submitted an amended application to FERC, Docket No. CP88-187-002, which included proposed changes to Docket No. CP88-187-001. The changes proposed in Docket No. CP88-187-002 were included in the above referenced DEIS. The Massachusetts Siting Council's comments with regard to the proposed changes are included herein.

On August 11, 1989, the Massachusetts Siting Council submitted Environmental Comments to FERC on Tennessee's proposed construction of the Niagara Settlement Project, Docket No. CP88-171-001.

In general, the Massachusetts Siting Council endorses the recommendations of the FERC staff contained in the DEIS.

A. The Tennessee Segments

The Massachusetts Siting Council offers the following comments with regard to specific segments of the proposed Tennessee project (Docket No. CP89-171-001):

1. Segment 8 (5.4 miles of 30-inch pipeline loop in Hampden County, Massachusetts)

The Massachusetts Siting Council endorses the recommendation of the FERC staff that Tennessee shall file a site-specific mitigation plan for construction and restoration within the Fannie Stebbins Wildlife Refuge and adjoining "Meadows," Town of Longmeadow conservation land. The Massachusetts Siting Council reiterates its recommendation that permanent new and temporary construction right-of-way be reduced to the absolute minimum in this area.

Additionally, the Massachusetts Siting Council endorses the route variation recommended by FERC staff for Wolf Swamp Road whereby the pipeline would be aligned within Wolf Swamp Road and Dawson Road. The Massachusetts Siting Council agrees that such alignment within the public way will further reduce impacts to residences and trees along Wolf Swamp Road.

The Massachusetts Siting Council identified one additional area of concern in Longmeadow in our August 11, 1989 comments which has not been addressed in the DEIS. There are residences in clos proximity to the proposed pipeline in the area between the Longmeadow Country Club and Wolf Swamp Road,

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S6-1 Comment noted.

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S6-2 We identified two residences to the north and one to the south of the proposed pipeline between Hazardville and Shaker Roads. Of the three residences, only one is located on the construction side of the proposed pipeline.

Other than noise and disruption, residences that would be separated from the proposed loopline by the existing pipeline would not be seriously affected, as all construction activities would occur on the other side of the existing pipeline. For this reason, the two residences on the north side of the proposed pipeline were not included in table 5.1.9-3; impact would be confined to the removal of trees at the rear of these residential lots. The residence located on the south side, or construction side of the right-of-way, has been added to table 5.1.9-3.

where the pipeline crosses a road to the west of Shaker Road and and then crosses Shaker Road (approximate Milepost 261+3.75, Photos A17, A18).[1] However, this area was not included in the FERC's Staff recommendations set forth in the DEIS regarding specialized construction techniques. Accordingly, the Massachusetts Siting Council recommends that FERC Staff review the residential area between the Longmeadow County Club and Wolf Swamp Road for inclusion in Table 5.1.9-3, "Types of Residential Mitigation Techniques."

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2. Segment 9, 3.2 miles of pipeline loop in Middlesex County

The Massachusetts Siting Council endorses the recommendations of FERC Staff regarding specialized construction tecniques in three separate residential areas and recommendations regarding construction in the vicinity of the Elmwood School. However, the Massachusetts Siting Council identified two other road crossings where the pipeline is in close proximity to residences, Wood Street, approximate Milepost 266+7.5 (Photos B-14 and B-15), and Cedar Street, approximate Milepost 266+8.5 (Photo B-6).[2] Accordingly, the Massachusetts Siting Council recommends that FERC Staff review the Wood and Cedar Street crossings for inclusion in Table 5.1.9-3, "Types of Residential Mitigation Techniques."

S6-3 We reviewed table 5.1.9-3 and have added one residence at Wood Street (MP 266+7.5). The residence at Cedar Street should not be affected because construction would take place on the opposite side of the existing right-of-way.

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B. The Algonquin Segments

The Massachusetts Siting Council offers the following comments with regard to specific segments of the proposed Algonquin project (Docket Nos. CP88-187-001, CP88-187-002):

1/ Photos A17, A18 and accompanying descriptions are attached as Appendix 1.

2/ Photos B-6, B-14, B-15, and accompanying descriptions are attached as Appendix 2.

1. G-5 Replacement, 5.5 miles of 24-inch replacement in Bristol County

The Massachusetts Siting Council originally reviewed this segment as a 24-inch pipeline loop. Because this segment is now proposed as a replacement, within the same ditch, environmental impacts will be decreased. The Massachusetts Siting Council endorses the recommendations of FERC Staff regarding construction within the Caratuck Wildlife Refuge and the Fairway Drive residential area.

2. G-8 Replacement/loop, 5.5 miles of 20-inch pipeline

The Massachusetts Siting Council originally reviewed this segment as a 5.2 mile 20-inch replacement pipeline. On February 12, 1990, Algonquin submitted an amended application to FERC, Docket No. CP88-187-002, which included a proposed change to this segment. In the amended application, Algonquin proposes to replace the first 4.0 miles and to loop the remaining 1.5 miles.

With regard to the 4.0 mile replacement pipeline, the Massachusetts Siting Council endorses the recommendations of FERC staff regarding the timing of the crossing of Glen Charlie Pond and the use of specialized construction techniques within the Glen Charlie sudivision. The Massachusetts Siting Council notes that construction across Red Brook within the recommended timeframe of June to September should be compatible with herring migration, which was observed by the Siting Council on May 4, 1989.

On April 18, 1990, the Massachusetts Siting Council viewed the 1.5 mile loop and conducted a public informational hearing in Bourne.[3] No residences or structures other than

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3/ Notice of hearing attached as Appendix 3. Hearing transcript attached as Appendix 4.

two electric substations are located in the vicinity of the proposed pipeline. No environmental concerns were expressed at the hearing and no written comments were received by the Siting Council.

For the majority of its route, the pipeline travels along the northern side of an electric transmission line right-of-way which is bordered by a pine forest (Photos D1 - D9).[4] Algonquin proposes a 50-foot permanent new right-of-way and an additional 35-foot temporary construction right-of-way. The Massachusetts Siting Council recommends that Algonquin utilize the existing transmission line right-of-way to the greatest extent possible in order to reduce tree clearing along the route.

3. Medfield Loop, 3.3 mile 36-inch mainline loop in Norfolk and Middlesex Counties

The Massachusetts Siting Council originally reviewed this segment as part of Docket No. CP89-661-000 and endorsed the Medfield Loop variation recommended by the FERC Staff. The Massachusetts Siting Council now endorses the second route variation proposed by the Town Engineer of Holliston on March 27, 1990.[5] Although this route requires slightly more new right-of-way than the Medfield Loop variation, it avoids a residential development in Medway unknown to the Town Engineer of Holliston and Siting Council when the Medfield Loop was first proposed. Additionally, it avoids almost one mile of new right-of-way that would be required by construction along Algonquin's proposed route.

4/ Photos and descriptions attached as Appendix 4A. (Original photos sent to Kurt Flynn, Project Manager)

5/ Letter and accompanying map from Holliston Town Engineer to FERC, dated March 27, 1990, attached as Appendix 5.

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S6-4 We have recommended that Algonquin place the pipeline within the powerline right-of-way and limit the construction right-of-way requirements to 25 feet adjacent to the powerline right-of-way between MPs 4.1 to 5.5 of the proposed G-8 Replacement/Loop. This would eliminate permanent right-of-way clearing.

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S6-5 Comment noted. As discussed in section 6.3.2, we have re-evaluated the entire Medfield Loop Variation.

4. H-1 Replacement, 1.5 mile 10-inch replacement pipeline in Worcester and Norfolk

This segment was first proposed by Algonquin in Docket No. CP88-187-002, submitted to FERC on February 12, 1990. On April 17, 1990, the Siting Council viewed the proposed pipeline route and conducted a public informational hearing in Medway.[6] No environmental concerns were expressed at the hearing and no written comments were received by the Siting Council.

The proposed pipeline will travel in the center of two electric transmission lines for approximately 50% of its route. Environmental concerns are miminal for the majority of the route. However, the Siting Council identified one area of concern along this route. Residences will be impacted by construction of the pipeline at the the Milford Street (Route 109) intersection, approximate Milepost 0.5. At this intersection, there is one residence on either side of the pipeline on the southern side of Milford Street (Photos C-3, C-4) and one residence on the eastern side of the pipeline on the northern side of Milford Street (Photo C-5). Algonquin proposes to utilize a 10-foot temporary construction right-of-way on the western side of the existing right-of-way and 25 feet on the eastern side. Although these residences are outside the construction right-of-way, as noted on page 5-87 of the DEIS, a significant amount of mature trees which screen the residences on the eastern side of the pipeline from the right-of-way, will be removed by use of the full 25-foot construction workspace at this road crossing. Additionally, mature trees adjacent to the residence on the western side of the existing right-of-way will be affected by a 10-foot

6/ Notice of hearing attached as Appendix 6. Hearing transcript attached as Appendix 7. Photos and descriptions attached as Appendix 8. (Original photographs sent to Kurt Flynn.)

S6

S6-6 Limiting the width of the construction right-of-way in the area of State Route 109 is constrained by several engineering considerations. Since this is a replacement pipeline, the existing pipeline would require removal from the existing right-of-way and from under State Route 109. State Route 109 would require boring for the installation of the new pipeline.

Algonquin's proposed 65-foot-wide right-of-way through this area is most likely realistic and the minimum that would be required for construction. Some loss of mature trees would inevitably occur.

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construction workspace. Accordingly, the Siting Council recommends that Algonquin be required to reduce or eliminate the temporary new construction right-of-way for a distance of approximately 150 feet, on either side of Milford Street in Medway, in order to minimize the removal of mature trees to the greatest extent possible.

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Respectfully submitted,

Massachusetts Energy
Facilities Siting Council

By Stephen Klionsky
Stephen Klionsky
Its Attorney

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document on the following persons:

Mr. John J. Mullhaney, General Manager Marketing
Algonquin Gas Transmission Company
1284 Soldiers Field Road
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Judy M. Johnson, Associate General Counsel
Richard J. Kruse, Senior Counsel
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Stephen Klionsky, General Counsel
Energy Facilities Siting Council
100 Cambridge Street
Boston, MA 02202
(617) 727-1136

Dated at Boston, Massachusetts this 27th day of April 1990

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document on the following persons:

Mr. Ernest B. Abbott
Deputy General Counsel
Tenneco Gas Pipeline Group
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Houston, Texas 77252

Mr. Frederick G. Berner, Jr.
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Dated at Boston, Massachusetts this 27th day of April 1990

ENERGY FACILITY SITING COUNCIL

There were seven appendices attached to the EFSC letter. Because of the volume of material, they are not reprinted here.

S7

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

HISTORICAL PRESERVATION COMMISSION
Old State House
150 Benefit Street
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April 19, 1990

Mr. Kurt Flynn
Project Manager
Environmental Policy and Project Analysis Branch
Office of Pipeline and Producer Regulation
Room 7312
825 North Capitol St., NE
Washington, DC 20426

Re; Niagara Import Point Project DEIS
Docket Nos. CP88-187-001; CP88-171-001

Dear Mr. Flynn:

The Rhode Island Historical Preservation Commission has reviewed the above-referenced Draft Environmental Impact Statement in accordance with Section 106 of the National Historic Preservation Act. Our comments are as follows.

1 Tennessee Gas Co. - The proposed modification of Meter Station M-6 in Burrillville, Rhode Island (p. 4-70) will occur in an area previously surveyed for cultural resources as part of the Ocean State Power Plant project. Based on the results of that survey and a subsequent reconnaissance report provided to this office by the Public Archaeology Laboratory, we have determined that the proposed work will have no effect on properties listed or eligible for listing on the National Register of Historic Places.

S7-1 Thank you for your comment. These data have been incorporated into the text of the FEIS in section 4.

2 Algonquin Gas Co. - The proposed modification of the existing Burrillville Compressor Station off Route 100 in Burrillville, Rhode Island will take place within an area that has been disturbed by previous construction activities. It is our determination that the proposed work will have no effect on any property listed on or eligible for listing on the National Register of Historic Places.

S7-1 Thank you for your comment. These data have been incorporated into the text of the FEIS in section 4.

The Tiverton Loop is in an area that has the potential to contain significant archaeological resources. With regard to this office's review of the 2.1 mile Tiverton Loop, we first received information on a proposed survey of this project from the Public Archaeology Laboratory, consultants to Algonquin Gas, on May 15, 1989. An earlier proposal from PAL, received in January, 1989, did not include the Tiverton Loop. After we received additional information from PAL which clarified their survey proposal, on July 13, 1989 we issued them a permit to carry out a Phase I survey on the Tiverton Loop, among other Algonquin projects requiring archaeological investigations. On March 12, 1990 the PAL requested an extension on their permit for the Tiverton work, as they had been unable to carry out the work. This permit has been extended.

This information is provided to correct the statements on pages 4-84 and 5-100 of the DEIS which indicate that the RISHPO has not commented on the proposed undertaking or reviewed the PAL's survey proposal. Please correct these passages in the subsequent draft.

As the necessary archaeological work has not been carried out on the Tiverton Loop, it is premature to discuss project impacts on historic and archaeological resources. We are concerned that the language in the DEIS by which FERC references the requirements of Section 106 of the NHPA (5.1.11.1) only "recommends" that construction be deferred until the 106 review process is complete. Clearly any construction that preceded the 106 review would be in violation of the NHPA. It is important to emphasize the legal requirements of the NHPA, particularly in a case such as this, where the cultural resource identification process has hardly even begun. Until the requisite resource identification work is completed and the findings are incorporated into the DEIS, the document will be incomplete.

If you have any comments or questions, please contact Richard E. Greenwood, Project Review Coordinator, of this office.

Yours very truly,

Edward F. Sanderson
Executive Director
Deputy State Historic
Preservation Officer

cc: Valerie DeCarlo, ACHP

EFS:et

S7

S7-3 Thank you for your comment. These data have been incorporated into the text of the FEIS in section 4.

S7-4 We understand your concern. However, we refer you to section 7.3, FERC staff recommended measures for all applicants. The introduction to this section states that certain recommendations (conditions to the certificate) "require applicants to file with the Secretary of the Commission specific information for the review and approval of the Direction of OPPR prior to construction." The requirement to complete all Section 106 investigations, consultations, and mitigative/avoidance actions is one of these binding recommendations.

We cannot agree that until all Section 106 investigations and findings of effect are complete that the DEIS (or FEIS) is incomplete. We recognize that while NEPA and the NHPA are closely linked, compliance with these two authorities must often take place concurrently but with different completion mileposts. That is, not all FERC projects may have the Section 106 compliance complete prior to publication of the FEIS. For example, access to private land must often wait until after the FERC certificate is issued. In order to assure our Section 106 responsibilities are properly met, FERC, by attaching conditions to the certificate, prohibits commencement of construction of certain facilities until we and the SHPO(s) have reached agreement that adequate identification, evaluation, and treatment of all affected NRHP-eligible properties is complete.

S8

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Northwest District Headquarters
Box 309
Spooner, WI 54801

Carroll D. Besadny, Secretary
TELEFAX NO. 715-635-4105

April 25, 1990

File Ref: 1600

Ms. Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 N. Capitol St., NE.
Washington, DC 20426

RE: FERC Docket No. CP-88-171-001
Draft Environmental Impact Statement (DEIS)
Niagara Import Point Project

Dear Ms. Cashell:

We have completed our review of the above-referenced document and have the following comments:

- 3.1 No Action pages 3-2 and 3-3
  The one-third alternate fuel substitution scenario and the 100 percent substitution options are mentioned but not discussed. Further discussion of these options should be included in the document. 1

- Page 4-22, Table 4.1.3-6 Loop 7 and 8
  Several streams are not listed here, including Bardon, Pearson, Anderson and Smith Creeks in Loop 7, and the Montreal River, CWF III (M.P. 395.2) in Loop 8. Additionally, the Exceptional Resource Water (ERW) Classification is not addressed and applies to Anderson (M.P. 324), Reefer (M.P. 331.5), DeChamps and Fourche Creeks. 2

- Page 4-31, Table 4.1.4-1
  Salmon should be included in this table. 3

- Page 4-52, Table 4.1.4-2
  Muskeg Creek should be included in this table and discussed on page 4-31. 4

- Page 4-33, second paragraph, last sentence
  Rainbow trout are not stocked in the Iron River. Brown trout are stocked in portions of the Iron River. 5

EARTH YEAR
WISCONSIN

S8-1 The results of this study are presented in section 3.1. The purpose of this study was primarily to determine the likely air quality impact from not constructing any of the settlement projects and from constructing only a portion of the settlement projects. The text does discuss the results of this study. As identified, appendix B contains information used in the study to identify the emission data and the specific results forecast for 1992 and 1997. Included in this information are the alternative fuel consumption rates. As stated in section 3.1, the results indicate that, compared to natural gas, other fossil fuels emit more oxides of sulphur, nitrogen, and carbon into the atmosphere when burned. As with natural gas, emissions of air pollutants will increase. The primary purpose of this report is to determine the likely amount of additional pollutants that would enter the atmosphere if the proposed settlement projects are not constructed and it is necessary to substitute alternative fuels for natural gas.

S8-2 The Bardon, Pearson and Smith Creeks are shown as intermittent streams on the USGS topographic maps and are, therefore not included in our listing of perennial streams. After subsequent discussions with B. Gantz of the WIDNR, Anderson, Reefer and DeChamps creeks were verified as Exceptional Resource Class I trout fisheries per Administrative Code NR102.11. Fourche Creek is designated as CWFIII at the proposed crossing location.

S8-3 Comment noted; see revised table 4.1.4-1 for correction of this oversight.

S8-4 Comment noted; see revised table 4.1.4-2 and revised section 4.1.4.1.

S8-5 Comment noted; see revised section 4.1.4.1.

- Page 4-77, Recreation, Wild and Scenic Rivers, last paragraph
  The Bois Brule River is used for canoeing and kayaking, not rafting. 6
- 5.1.4.1.2, Site Specific Impact, page 5-31, Great Lakes
  Musket Creek needs to be included in the discussion. 7
- 7.1 Summary of the Staffs Environmental Analysis of the Proposed Action, page 7-3
  Muskeg Creek needs to be included in the discussion. 8

We appreciate the opportunity to comment on this document. If you or your staff have further questions regarding our comments, please contact Bill Gantz here in our district office at 715/635-4227.

Sincerely,

William H. Clark

William H. Clark
Environmental Impact Coordinator

WHC:sn
cc: Ron Nicotera - ER/4
Brule Area Office
DuWayne Gebken - EA/6
John Gozdzialski - Spooner
Kurt Flynn, Project Manager, Environmental Policy & Project Analysis Branch, Office of Pipeline & Producer Regulation, Room 7312, 825 N. Capitol St. NE, Washington, DC 20426
Paul Pederson, Chequamegon National Forest, 1170 4th Ave. So., Park Falls, WI 54552

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S8-6 Section 4.1.9.2 has been amended.

S8-7 Comment noted; see revised section 5.1.4.1.2.

S8-8 Comment noted; see revised section 7.1.

S9

United States of America
before the
Federal Energy Regulatory Commission

FILED
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REGULATORY COMM.

Niagara Import Point Project Docket No. CP88-171-001

Comments of the STATE OF CONNECTICUT on the DRAFT ENVIRONMENTAL IMPACT STATEMENT

Background

As part of the Niagara Import Point Pipeline Proposal, the Algonquin Gas Transmission Company is proposing to construct a loop of 1.1 miles of 36 inch-diameter pipeline in Chaplin, CT (Chaplin Loop) and a loop of 4.9 miles of 12 inch-diameter pipeline in Norwich, CT (E-1 Loop).

On October 13, 1989, the Federal Energy Regulatory Commission issued notice that it would prepare a Draft Environmental Impact Statement (DEIS) on the Niagara Import Point Pipeline Proposal and requested comment on the scope of the DEIS. In accord with the FERC request for information, the Office of Policy and Management, after coordination with the Departments of Environmental Protection, Agriculture, Transportation, Public Utility Control, Connecticut Historical Commission, Office of Consumer Counsel, and Council of Environmental Quality, filed comments on the scope of the DEIS on November 17, 1989.

S9

The Office of Policy and Management, after soliciting comments from the affected municipalities and after coordination with the above state agencies, files the following written comments on the DEIS for the Niagara Import Point Pipeline Proposal.

Need

As described in the Purpose and Need section (pgs. 1-4 & 5) of the DEIS, the various improvements proposed by Algonquin are related to the transport of natural gas to cogeneration facilities in Massachusetts and New Jersey. While scant information is provided as to how the various Algonquin improvements are related to this stated purpose and need, the proposed Chaplin Loop does not seem unreasonable since it loops their main transmission pipeline to Massachusetts. However, it is not possible to draw a similar conclusion with respect to the E-1 Loop. This project element involves looping an existing lateral line which terminates in New London County and is fed by a secondary transmission line. The relationship of this component of the project to the stated purpose and need should be explained.

Permits and Approvals

The permits and approvals cited on Table 2.7-1 are incorrect. The following table should be substituted for this referenced table.

Agency	Permit
CT Department of Environmental Protection	- National Pollutant Discharge Elimination System (NPDES) and state discharge permit
	- 401 Water Quality Certificate
	- Temporary Operating Permit (rock crusher if used)
CT Siting Council	- Certificate of Environmental Compatibility and Public Need

1 S9-1 Algonquin's system is designed to meet contract pressures and not to exceed a maximum gas velocity of 100 feet per second in any segment of these facilities. The 4.9-mile, 12-inch E-1 System Loop would allow maintenance of the existing contract delivery pressures on the E-System. The delivery of natural gas to the NEA cogeneration facility in Bellingham, Massachusetts, increases the volume of natural gas moved on Algonquin's mainline as it passes the E-System tap. As the natural gas volume increases on the mainline, the pressure drop along the mainline also increases, thus reducing line pressure at the E-System tap. Such a decrease in line pressure at the tap limits the force available to move natural gas through the E-System.

In order to maintain existing contract delivery pressures, given reduced line pressure at the tap, a pipeline loop must be added to the E-System. With a loop on the E-System, the force necessary to move natural gas, at contract volumes and pressures, is decreased, which remedies the reduction in line pressure at the E-System tap.

2 S9-2 Comment noted; see revised table 2.7-1.

Wetlands and Watercourses

The description of wetlands and watercourses which will be impacted by construction of the proposed pipeline loops lacks site specific information. A thorough analysis of potential wetland impacts would require a qualitative description of each wetland area along the proposed route, including information concerning functional values of each wetland area. The Yantic River will be crossed by the Algonquin E-i Loop in Norwich. This represents a significant stream crossing. The FEIS should describe activities that will minimize in-stream and stream bank impacts. Further, as the Yantic is subject to frequent flooding, the FEIS should also describe actions to protect against such floods both during the construction and the operation phases.

In the DEIS, inland wetlands are delineated according National Wetland Inventory (NWI), which is utilized by Federal agencies. However, the State of Connecticut defines and regulates wetlands based solely on soil types as required by Section 22a-38(15) of the Connecticut General Statutes and not the NWI. Additionally, watercourses, as defined by Section 22a-38 (16), are also regulated through this program. In addition to the NWI inland wetlands impacted by pipeline construction in this state, the areas defined as wetlands according to USDA Soil Conservation Service soil types must be identified along the route.

Groundwater Resource Protection

Along the Yantic River the Connecticut Department of Environmental Protection has identified a groundwater resource with a potential sustained yield of 4.9 million gallons per day. The FEIS should identify the potential impacts to the Yantic River aquifer and the construction and operating measures that should be taken to mitigate such impacts. This assessment of mitigation measures should include the existing public well which provides a back-up water supply for the City of Norwich.

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S9-3 Tables E-1 and E-2 in appendix E describe the type of wetland that would be crossed, with data organized by applicant, state, and milepost of the pipeline. We used the most generally accepted and widely understood method of description, the National Wetland Inventory Classification System of Freshwater Wetlands, developed by the FWS. These tables described the length of crossings, the wetland area that would be disturbed during construction, and the amount of wetland area that has been proposed to be maintained as cleared right-of-way. Additionally, the text in section 4.1.7 summarizes the number and types of wetlands found along each applicants' proposed routes. We believe this adequately describes the wetland resources that would be affected by this proposed project.

We do not describe the effect on each and every wetland that would be crossed by the proposed project. To do so would be extremely redundant. Instead, in section 5.1.7, we describe the potential impact from construction on the types of wetlands that would be crossed, both generally and specifically, by applicant, and identify the mitigation procedures that we have recommended to reduce impact on wetlands.

S9-4 The applicants would be required, at a minimum, to comply with FERC's Procedures for stream and wetland construction as presented in appendix D. These Procedures were developed to minimize turbidity, sedimentation, and other impact resulting from pipeline construction activities. Prior to construction across large rivers such as the Yantic, the applicants would be required to submit site-specific crossing procedures to FERC for review and approval. Flooding is not expected to affect operation of the pipeline. The applicant would identify and address flooding concerns as a part of the site-specific crossing procedures.

S9-5 FERC is a Federal agency and, in preparing this public document for the proposed Federal action, this agency and COE are required to comply with Federal law. In identifying and assessing impact on wetland resources, FERC and COE use the most currently accepted Federal methodology. These procedures, unlike those of Connecticut, utilize a combination of soil type, hydrology, and vegetation to determine the location and extent of wetlands. Consequently, we have required the applicants to field-delineate all wetlands prior to construction to verify wetland resources under COE 404 jurisdiction.

S9-6 In section 5.1.3.1.1, we have provided an analysis of potential impact on groundwater resources that would apply to the Yantic River aquifer. We have also provided adequate mitigation measures that would avoid or minimize this impact, including refueling/storage restrictions for fuels and other hazardous materials, dewatering guidelines (see also appendix D) and our recommended plans for spill prevention and containment and for groundwater monitoring (see section 5.1.3.1). The city of Norwich well, which is located approximately 500 feet from the proposed route on the opposite site of the Yantic River at MP 1.4, would be adequately protected by these recommended procedures during pipeline installation and operation.

As proposed, the Chaplin Loop would be entirely within Natchaug State Forest. The statement on page 5-94 regarding the impact of this proposal on this State Forest should be changed to read as follows.

> Significant concerns identified by the Connecticut Department of Environmental Protection staff include the illegal use of the right-of-way by off-road/all-terrain vehicles that result in erosion problems, illegal dumping of material in the right-of-way and the loss of aesthetic amenities.

Connecticut has reservations about the expansion of the existing right-of-way due to existing problems in the control of illegal uses of the right-of-way. This situation is compounded by Algonquin's lack of responsiveness to requests from the Connecticut Department of Environmental Protection to address these matters. There is reason for skepticism about Algonquin's long-term commitment to these matters, given their past level of interest.

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In theory, these situations should not develop into serious problems if the conditions described in Appendix C are diligently observed by Algonquin. It should be noted that representatives of Algonquin have already indicated to DEP field personnel a reluctance to the planting of conifers across the right-of-way, as identified in Appendix C, VI, B, because they purport that FERC discourages this method of control. Since this is a control method being offered by FERC in the DEIS, there appears to be a misunderstanding between FERC and Algonquin in this matter. The Connecticut Department of Environmental Protection believes this control option may be appropriate in the Natchaug State Forest and that the selection of the control method should be made by DEP.

Additionally, if FERC is going to rely upon mitigation measures, such as Appendix C, which are genarally appropriate actions, then it would be very helpful if the FEIS explained the methods used to enforce these measures and the remedies that are available to correct post-construction rights-of-way problems. The Department's interest in the long-term management of rights-of-way extends to all rights-of-way and not just those which traverse property under state agency management.

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S9-7 Comment noted. As described in section 5.1.9.2.1 and appendix C, section VI, Algonquin would be required to consult with each owner and manager of forestlands and offer to install and maintain off-road vehicle control measures, including the planting of conifer. In addition, Algonquin would be required to install these measures as requested. Algonquin must comply with all FERC certificate conditions. Lack of performance should be reported to the FERC Enforcement Branch.

S9-8 FERC has required that each applicant utilize at least one environmental inspector per construction spread to monitor contractor compliance with all environmental conditions. The duties and responsibilities of the environmental inspector are described in detail in appendix C. In addition, FERC staff will inspect and monitor compliance as necessary and respond to public complaints regarding construction or right-of-way restoration procedures being used by the pipeline construction contractors. See also S9-7.

S9

Herbicides

The DEIS only states that herbicides are not generally used to maintain vegetation in the right-of-way. Impact statements for other open season settlement projects have contained explicit statements that herbicides would not be used in right-of-way maintenance. A definitive statement regarding this maintenance practice in the FEIS would be appropriate and if a difference persists between open season projects on this subject, it should be explained in any final action by FERC. Connecticut would prefer to have the no herbicide policy apply to all projects and that the universal adoption of this policy would alleviate the need for any further evaluation of this subject. 9

S9-9 FERC's general policy is to discourage use of herbicides and encourage mechanical vegetation maintenance along natural gas pipeline rights-of-way. Definitive statements regarding an applicant's proposed means of vegetation maintenance for this project, as well as other open season projects, have been made by FERC when the applicant provides this information. With exception of specific instances, such as vegetation maintenance in wetlands or along streams, the applicants associated with the proposed NIP Project have not indicated by what means vegetation would be maintained along their respective rights-of-way. Because use of herbicides would be in compliance with EPA regulations, we do not normally preclude their use.

Historical and Archaeological Resources

There are no known historical or archaeological resources that will be directly and adversely impacted by the project. While cultural investigations are not adequately discussed in the DEIS, the Connecticut Historical Commission has received and reviewed supplemental information concerning archaeological investigations as provided by the Public Archaeology Laboratory Inc., cultural resource consultants for the Algonquin Gas Transmission Company. The scope of work proposed by the Public Archaeology Laboratory, Inc. for the cultural resource investigations previously recommended by the Connecticut Historical Commission appears to be state of the art and consistent with Connecticut's Environmental Review Primer for Connecticut's Archaeological Resources. 10

Protection of the state's diverse cultural heritage in accordance with the National Historic Preservation Act of 1966 will require continuing coordination of survey work undertaken by the Public Archaeology Laboratory Inc. and the Algonquin Gas Transmission Company with the Connecticut Historical Commission.

S9-10 Algonquin has provided us your December 5, 1989, comments as part of its resource report on cultural resources. We are pleased that the Public Archaeology Laboratory, Inc., work plan meets the requirements of your published standards.

We cannot agree that the cultural resources investigations are not adequately discussed in the DEIS. The status of the studies is provided in section 4.0; we have also added table 4.1.11-1. We refer you to section 7.0, Staff's Conclusions and Recommendations, for assurance that complete Section 106 compliance, including coordination and consultation with the SHPO, will take place prior to construction.

Transportation

The Algonquin E-1 Loop crosses a major state highway, State Route 2. There is no identified long-term impact. However, traffic control and safety are short-term impacts during pipeline construction. Coordination with and review by the Connecticut Department of Transportation of engineering data will be required to mitigate these impacts during construction of the pipeline.

Sincerely,

Joan Maloney

Joan Maloney
Under Secretary

April 27, 1990.

JM/JR:cb
cc: Kurt W. Flynn, Project Manager
State Agency Liaison Personnel
Chaplin and Norwich

ORIGINAL

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Tennessee Gas Pipeline Company) Docket Nos. CP88-171-001
and CP88-712-000

CNG Transmission Corporation)

COMMENTS OF THE NEW YORK TASK FORCE

In response to the Federal Energy Regulatory Commission's ("Commission") "Notice of Availability of Draft Environmental Impact Statement for the Proposed Niagara Import Point Project" ("Project"), dated March 16, 1990, the New York State Pipeline Task Force ("New York"), consisting of the New York State Departments of Public Service, Environmental Conservation, Agriculture & Markets, State, and Economic Development, and the Energy Office, respectfully submits written comments on the portions of the Draft Environmental Impact Statement ("DEIS") that are pertinent to the New York State segment of the Project. By notice dated March 16, 1990, Commission Secretary Lois D. Cashell advised that written comments must be filed on or before April 30, 1990. New York's comments are identified and segregated by DEIS section number.

APR 27 1990

S10

Page 2-19 - Section 2.2.1 Pipeline Facilities, and

Page 6-11 - Section 6.2 Tennessee Gas Route Variations

Hazardous waste sites are known to be located in the vicinity of the Tennessee Pipeline segments. Table 2-5 from the Environmental Report Volume I, filed with the Tennessee Gas application, lists several sites near the pipeline loops. At least two sites apparently not listed in that report are near the Segment 1 line in Erie County and should be further investigated for influence on the project area. These sites include industrial waste sites at the Erie County Home and Infirmary near milepost 230B-102+5.5. 1

S10-1 Our review of the proposed Tennessee loops did not indicate that construction would occur through any known hazardous waste sites. However, we have included a recommendation that if hazardous wastes are encountered during construction, Tennessee should stop construction and notify state and local agencies to determine the appropriate course of action.

The SEGMENT 3 line location on the south side of the existing pipeline may not represent the minimum environmental impact from MP 232+1.0 to the eastern end of the proposed looping segment (see Figure A-2-3). Switching the alignment to the north side of the #1 line would place the new construction further away from a residence at Bank Road and minimize wetland and stream disturbance during construction and maintenance. Staff of the New York State Department of Public Service ("DPS") has asked Tennessee Gas Pipeline Company ("Tennessee") to evaluate this routing re-alignment. 2

S10-2 Based on review of aerial photography, wetland maps, and alignment sheets provided by Tennessee, we do not see the advantage of relocating the proposed loop to the north side of the existing pipeline. Impact on wetlands, forestland, agricultural lands, and residences would be identical. At Bank Street, a residence is located 83 feet from the proposed loopline centerline. A small shed is located 49 feet from the proposed loopline centerline. Placement of the proposed pipeline on the north side of the existing pipeline would affect a residence located less than 50 feet from the relocated pipeline near MP 232+0.8.

The SEGMENT 4 map (Figure A-2-4) does not accurately depict the site resources. The attached Livonia quadrangle sheet shows the location of Interstate 390 and other road improvements associated with this new highway. 3

S10-3 We could discern no difference between your attached Livonia quadrangle map and the DEIS figure A-2-4, except that figure A-2-4 provided additional coverage to the north of the proposed pipeline.

As we stated in our response to comment S10-2, we cannot recommend relocating the proposed pipeline to the opposite side of the existing pipeline when there is no appreciable difference between the two locations. Based on review of aerial photographs, neither alignment would necessarily achieve your stated objectives of using agricultural field edges and paralleling the I-390 right-of-way.

DPS Staff has asked Tennessee to investigate using the south side of the existing #1 pipeline between MLV 234 and MP 232+2.0 (as well as further west in the phase I TEMCO facility). This alignment would make use of agricultural field edges, and would be parallel and adjacent to the I-390 right-of-way. It also would avoid crossing through a new meter station and a residential yard and garden at NY Route 15 (see Livonia quadrangle map). 3

Pages 2-22 to 2-25 CNG

Figure 2.2-5 - This figure and text should be revised to reflect the maximum right-of-way (R/W) clearing proposed by CNG Transmission Corporation ("CNG"). Drawings on maps submitted by CNG to the New York Public Service Commission ("PSC") in Case 90-T-0168 show forest clearing up to 205 feet wide on both sides of the Amtrak railroad east of Route 9J. The construction R/W on the figure should be 40'-205' and the permanent R/W should be 40' and not 40'-100'. 4

S10-4 Figure 2.2-5 is intended to represent a "typical" right-of-way cross-section for the existing, the construction, and the permanent right-of-way. Forest clearing in the vicinity of the Amtrak railroad is atypical and represents temporary expanded work space requirements necessary to bore under the railroad and Route 9J.

Page 2-29 - Section 2.3.1 Pipeline Construction Procedures

For disposal of clearing debris, New York encourages the chipping of slash and non-merchantable timber rather than burning or other disposal options. Chips can be put to use as temporary erosion control and site stabilization material. Whole-tree chipping equipment can be used to dispose of waste wood products 5

S10-5 Construction procedures as discussed in section 2.3 identify requirements and procedures proposed to be used by the NIP Project applicants. The applicants would dispose of all refuse in an approved and authorized manner in compliance with applicable laws and regulations. A recommendation has been added in section 7.3 to reflect these comments and concerns.

easily and quickly. No burning should be allowed in residential areas or during times of poor air quality.

Because staging and storage areas are likely to result in off-R/W impacts, they should be sited away from residential sites, if possible. Storage areas in agricultural lands should be treated the same as R/W sites in agricultural lands since the impacts can be severe due to equipment traffic. 6

Consideration of impacts on wildlife should include temporary effects during project construction. The long, linear nature of pipeline construction can affect the movement of individuals and populations of wildlife. Mitigation in the form of wildlife passages (earthen ditch plugs) in areas where wildlife are likely to traverse the R/W is acceptable and would be especially important during breeding seasons, hunting seasons, and in winter months when animals may be stressed. 7 8

Pages 2-36 and 2-38 Permits and Approvals

On page 2-36, the PSC should be substituted for the Department of Environmental Conservation ("DEC") as the state agency responsible for reviewing the pipeline and associated facilities in New York State. On page 2-38, the DEIS does not accurately note that the air permit is the only permit required from DEC. A review pursuant to the State Environmental Quality Review Act ("SEQRA") and stream, wetland, and water quality 9

S10-6 Generally, contractors do not site material and equipment storage yards in residential areas since these areas are unlikely to be located near transportation networks, such as major highways and railways. Sites of all such yards would be reviewed by FERC prior to construction.

S10-7 In DEIS recommendation 8 we recommend that applicants shall implement the "Erosion Control, Revegetation, and Maintenance Plan" for all disturbed areas, which includes any storage or laydown areas. We feel appendix C adequately addresses mitigation measures for any disturbed agricultural areas.

S10-8 Although pipeline construction could affect movement of small mammals, amphibians, and reptiles, the effects would be temporary and would be most prominent during breeding seasons. A pipeline construction spread generally proceeds at a relatively fast rate, often completing construction in any one area within 2 to 3 weeks (the open-trench period is considerably shorter). We feel that the time period required for individuals of a particular species to become aware of and accustomed to a particular type of passageway, such as earthen ditch plugs, in combination with the short time they would be installed, would not make the passageways a useful form of mitigation.

S10-9 Comment noted; see revised section 2.7 and table 2.7.1.

reviews would be addressed by the PSC in the Article VII certification process.

If, however, the decision of the United States Court of Appeals for the Second Circuit in National Fuel Gas Supply Corporation v. Public Service Commission of New York, 894 F.2d 571 (1990) that the Commission's exercise of its authority under the relevant federal statutes preempts the Article VII proceedings with respect to interstate pipelines is not overturned, then the list of state permits which would have to be secured from DEC, pursuant to its uniform procedures (6 NYCRR 621) and the State Environmental Quality Review Act (6 NYCRR 617) is considerably larger as well as different from those listed in Table 2.7-1 of the DEIS. A corrected list is set out below. In addition, Tennessee and CNG would presumably be required to comply with or seek waiver of any regulations or permits required by municipalities or agencies thereof which their route traverses, as well as Department of Transportation road crossing permits. 9

Permit		Applicant
Freshwater Wetlands	6 NYCRR 663	T/CNG
Tidal Wetlands	6 NYCRR 661	CNG
Wild, Scenic, Recreational Rivers	6 NYCRR 666	T
Protection of Waters	6 NYCRR 608	T/CNG
Water Quality Certificates	6 NYCRR 608.7	T/CNG

Permit		Applicant
Permits to Construct/ Certificates to Operate an Air Contamination Source	6 NYCRR Part 201	T/CNG
State Pollutant Discharge Elimination System	6 NYCRR 652, 750-757	T/CNG
Solid Waste Management	6 NYCRR 360	T/CNG

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Clarification is needed on page 2-40 of the DEIS regarding New York State coastal zone management requirements. Pipeline companies such as Tennessee and CNG must file certifications with the Department of State ("DOS") demonstrating that their proposals are consistent with the State Coastal Management Program. The term "application," as used in the DEIS, can be misleading. After certifying consistency, these companies must then await a concurrence from DOS; this concurrence is the DOS approval.

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S10-10 Comment noted; see revised section 2.7.

In addition to the required certifications by Tennessee and CNG for the Niagara and Hudson River crossings it is possible that several of the related nonjurisdictional proposals associated with the project may involve consistency reviews. The DEIS states (on p. 1-7) that nonjurisdictional facilities such as cogeneration facilities are an "integral part" of the jurisdictional project. If the Commission's approval of the Niagara Import Point Project is dependent on the approvals of these related nonjurisdictional facilities, then a consistency review by DOS is necessary. According to the DEIS, these facilities include 1) the Indeck Energy Services of Oswego, Inc. plant and pipeline in Oswego, N.Y. and 2) Cogen Energy Technology Inc. cogeneration plant in Castleton-on-Hudson (which appears to

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S10-11 Thank you for your comment. We have revised section 7 to include a recommendation that the related nonjurisdictional facilities obtain the necessary coastal zone consistency determinations.

be within the State's coastal area). The FEIS should address the possibility that these facilities are subject to federal consistency review.

Page 4-11 Section 4.1.2.3 Soils - Aboveground Facilities

The soils limitations listed in Table 4.1.2-2 for the National Fuel/Penn York Energy Concord Compressor Station include prime soils, high water table, and severe erosion potential. Drainage problems and frost-heaving are evident at the proposed site and on the proposed access road. The existing farm access road follows contours more closely than the proposed road and could be improved, thereby reducing overall site drainage, soil erosion and road maintenance problems. (Aesthetic considerations also favor improving the existing road rather than building a new road straight up the hill.) 12

Drainage for the compressor site has not been addressed. Drainage improvements should be designed to preclude new problems in downslope croplands. Runoff detention basins or ponds would trap sediments, protect downstream water resources, and enhance aesthetic and wildlife habitat values in the area. 13

Page 4-11 Section 4.1.3.1. Groundwater - Water Resources

Table 4.1.3-1 should be amended to include other public water supplies within the area of study. Supply wells for the Millgrove Mobile Park, which serves about 100 residents, are 14

S10-12 Comment noted. We see no need to relocate the access road and feel that professional environmental inspectors and erosion control and maintenance measures required by our plan would insure proper access.

S10-13 The erosion control measures outlined in appendix C would mitigate downslope erosion and sedimentation by utilizing slope breakers, vegetation strips, and sediment barriers.

S10-14 The groundwater supply wells identified have been included in table 4.1.3-1. The sink holes formed in association with minor karst in the Onondaga limestone in eastern Erie County, New York, formed as a function of groundwater modifications. The past groundwater changes that have resulted in sink hole development have included drainage of wetlands and major dewatering of surface mining areas. None of these activities are planned in connection with the construction of the proposed pipeline. No active surface mining activities are close to the proposed pipeline segments. Refer also to the USGS Water Resources Investigations Report 86-4317 entitled "Geology and Hydrology of the Onondaga Aquifer in Easter Erie County, New York," by Ward W. Stanbitz and Todd S. Miller.

located within 0.3 miles of the Tennessee Gas Pipeline at approximately milepost 230B-102+6.5 in the Town of Newstead. The water supply wells for the Quarry Hill Estates, serving some 400 residents, are within 0.5 miles of the Tennessee Gas Pipeline at approximate milepost 230B-103+1.5 in the Town of Newstead.

Both of these water supply sources are adjacent to an area with shallow groundwater movement and its relation to surface water. Residents of this area have expressed concern about excavation for the pipeline based on experience with other similar excavation in deposits of shallow, unconsolidated sediments overlying dense basal till and limestone bedrock. DEC has found indications of potential hydrogeologic connections of the Newstead "sinks" area and the Cedar Swamp wetlands (crossed at MP 230B-103+0.9) to the north. There are other areas of sinkholes, fractures and solution cavities in the vicinity. Prolific springs were noted at the crossing of the pipeline in the Cedar Swamp. More detailed information is available from the publication entitled "Hydrologic Appraisal of Five Selected Aquifers in Erie County, New York," U.S. Geological Survey-Water Resources Investigations Report 84-4334, by Miller and Staubitz.

14

The water supply well for the Alpine Manor Home for Adults is located approximately 0.5 miles south of the Tennessee Gas Pipeline segment 4 in the Town of Lima, Livingston County near milepost 234+4.0. In this area, the pipeline will cross an area of muck soils where many drainage systems are in place.

15

S10-15 The supply well identified near segment 4 has been included in table 4.1.3-1.

Pages 4-84 and 4-85 CNG

Because of the archaeological and historical sites located along the proposed CNG route, FERC should not approve the proposal until the effects of constructing through these sites are fully known or alternative alignments are explored.

16

Pages 5-6 and 5-7 Soil Compaction and Damage To Soil Structure

Although, as noted on page 5-7, the use of legumes is an ideal means of helping to restore soil tilth, such restoration is a process of at least three to five years which can easily be out of synchronization with the rest of a field's planting rotation. Therefore, to relieve soil compaction New York recommends that in affected agricultural sections of the R/W, CNG and Tennessee should shatter all such compaction with deep tillage by using such devices as, but not limited to, the "winged" deep-shank heavy duty subsoiler, the paraplow or the paratill, down to the bottom of actual compaction. Following such deep tillage, the agricultural topsoil that has been temporarily removed for the period of construction should be replaced, and where necessary, additional deep tillage should be undertaken during periods of relatively low soil moisture to ensure the desired mitigation and prevent additional subsurface compaction. If subsequent construction or cleanup activities result in new compaction, CNG and Tennessee should carry out additional deep tillage as necessary.

17

S10

S10-16 Thank you for your comment. We refer you to section 5.1.11 and DEIS recommendation 20. FERC has asked CNG to explore avoidance options; CNG is currently pursuing these investigations.

S10-17 Thank you for your comment. Revisions pertaining to soil compaction mitigation have been made to appendix C.

Page 5-7 Loss of Soil Fertility

New York agrees with the DEIS concerning the agricultural soil resource impacts associated with the mixing of the soil horizons, i.e., subsoils, topsoil and stone, and with the recommended removal of stones having a four-inch or greater diameter from the upper 12 inches of soil. Additionally, New York agrees with the principle of separation of topsoil from subsoil, and recommends the peeling of the topsoil zone (generally between 8-12 inches) over both the trench area and the construction work zone to prevent topsoil destruction and the loss of fertility on tillable agricultural lands. For this reason, the profile diagram (Figure 5.1.2-1; not to scale) of topsoil stripping on page 5-10 should be supplemented with a second diagram (see modified lower section of the diagram attached as Revised Figure 5.1.2-1), which reflects additional width of stripping topsoil from the "work side" of the R/W, which is where the most damaging long-term rutting and mixing of the soil profile will occur to agricultural soils.

New York recommends that the FEIS include the following:

- At the request of the landowner, full-width R/W stripping will be performed. This will require extra space to store the topsoil; as a result, the total R/W for construction in agricultural land may be wider than the norm.

18

S10-18 **Thank you for your comments. Revisions made to the Erosion Control, Revegetation, and Maintenance Plan in appendix C have considered the Task Force's recommendations. Figure 5.1.2-1 has been revised to reflect full-width right-of-way topsoil stripping as well as the ditch and spoil topsoil segregation.**

- In agricultural land where the soil structure is vulnerable (e.g., silty and clayey lacustrines, fragipans, and seasonally wet), full-width stripping will be performed. Based upon soil surveys, the project applicants will identify areas where such soils occur along the route.
- Full-width topsoil stripping will be performed in cultivated areas that have steep slopes in which subsoils would have to be cut to create a level grade and at locations where additional work room is required for such purposes as boring under road.

18

Finally, topsoil segregation should be applied to all areas where such practices will encourage revegetation, not just in agricultural areas. Replacement of topsoil would increase the likelihood of establishment of desirable species, reduce the amount of chemical fertilizer needed, and hasten re-establishment of vegetation on the site. Residential yards and garden sitea should be treated with this technique also.

Pages 5-7 to 5-10 Erosion Control, Revegetation and Maintenance Requirements

New York endorses the minimum erosion control measures as stated in 5.1.2.2. We particularly endorse daily installation of temporary slope breakers. A similar measure should be applied to the trench. Trenches open for days and weeks on long slopes

19

S10-19 Comment noted. Our trench breaker requirement in appendix C and trench plug requirement of appendix D are adequate.

can erode during summer rainstorms and overflow, and deposit large amounts of soil onto roads and into adjacent roadside ditches, wetlands, and streams. Temporary trench breakers or earthen plugs are recommended for installation at the end of each working day, as with slope breakers (page 5-8). 19

Pages 5-8 and 5-9 Trench Breakers (and the issue of impaired soil drainage due to trenching)

New York fully supports the FERC trench breaker spacing "...such that the bottom of one breaker is at the same elevation as the top of the next breaker downslope" and recommends requirement of the same for each respective project. However, trench breakers may not fully mitigate the man-made impairment to soil drainage caused by trenching through soil profiles which are densely stratified with a naturally dominant lateral drainage.

Such natural, lateral drainage in the subsoil and substratum runs parallel to the surface of the terrain. Once the stratified soil horizons are altered due to trenching, the lateral drainage is permanently altered, with the soil-water then seeking the zone of least resistance, i.e., the backfilled trench. Without man-made corrective practices such as intercept drain lines to abate the waterlogging of the backfilled trench area, the R/W area is highly vulnerable to excessive soil saturation. This impairment of soil aeration due to the alteration of the soil profile is degrading to agricultural crop 20

S10-20 Thank you for your comments. Lateral drainage mitigation will need to be applied on a site-specific basis. The plan in appendix C outlines procedures to adequately mitigate this potential problem. See also our discussion in section 5.1.2.2.

productivity and the use of farming equipment, as well as to the overall integrity of affected crop fields for their long term management.

20

The lacustrine, fragipan and dense basal till soils, the three major soil groups in New York State, are characterized by dense, stratified subsoil and/or substratum horizons. In Niagara Import Point Project, lacustrine soils occur at relatively lower elevations and are the ancient lake-laid sediments occurring on the lake plains (e.g., Niagara County, northern Erie County and central Livingston County). Fragipans occur at relatively higher elevations (e.g., the "plateau" country -- southern Erie County, portions of Wyoming County and similar lands). The dense basal tills occur at moderate elevations in the northern half of the central plains and also with inclusions in its southern half (i.e., the northern portions of Wyoming, Livingston and Ontario Counties).

21

Since the majority of proposed pipelines are parallel and adjacent to older, existing pipelines, New York recommends that the respective companies' existing R/W data base for affected agricultural lands and the respective lands themselves be inventoried by the project sponsor over the course of the project layout and construction for areas of re-occurring as well as new episodes of soil wetness. The Commission should designate that such areas be identified to receive efficient mitigation practices such as subsurface intercept drain lines. Mitigation

S10-21 **We feel the mitigation measures contained in appendix C are adequate to minimize effects on agricultural lands.**

practices could be installed during the restoration stage of the projects or as subsequent post-restoration phase during project operations and management, but not later than two years following activation of the pipeline.

Page 5-9 Vegetation Strip/Silt Fence/Sediment Barrier

On page 5-9, the DEIS mentions buffer strips and silt fences adjacent to roads and streams. New York is aware of the objections of some applicants in other projects to constructing sediment barriers across the traffic side of the R/W. New York suggests that broad based dips be constructed in the traffic pathway on the upslope side of public roads and streams to divert surface runoff into the sediment barriers, silt fences, or vegetative strips (see Figure 8 in Tennessee's Appendix B - Sedimentation and Control Plan).

22

S10-22 Our plan also provides for temporary silt fences.

Pages 5-11 and 5-12 Drainage Tile Location/Protection Repair

References in the DEIS indicate that replacement tile line repairs which extend "across the trench" should be extended 1.5 to 2.0 feet into the trench wall; and that backfill under the tile should be compacted to decrease infiltration. Based upon our experience of the tile line repairs which cross trenches, New York believes that the minimum extension should be increased to 2.0 to 3.0 feet into the trench wall for shouldering support.

23

S10-23 Proper installation and testing of repaired subsurface drainage systems would be conducted by professional drainage system specialists. This requirement in appendix C, and our DEIS recommendation 14 provide adequate protection.

In addition to the purpose of compaction of backfill under the tile as stated in the DEIS, and noted above, compacted backfill under a new tile line adds to the support of the replacement unit and helps prevent future settling of backfill, thereby preventing a future debilitating sag in the grade of the buried drain line. This helps to sustain the gradient needed for the gravity flow function of the tile line. 23

In many agricultural areas of New York State, the problem wet spots in crop fields were originally abated by the use of the old stone (or French) drain lines, installed by hand in the later 19th and early 20th centuries. Although such old stone drain lines in croplands are still functioning in a relatively undisturbed condition today, trenching across a stone drain would obliterate them. Once disturbed by mechanical excavation, the stones will offer no visible evidence of their existence along the wall of a trench as do severed tile or plastic drain lines. New York recommends therefore that the applicants should list the locations of stone drainage lines in cropland, rotation hayland-cropland, hayland and improved pasture in consultation with farmland owners/operators. Based upon the list, the applicant should install new drain lines to serve the complete area originally served by the stone drain(s) destroyed by construction as a part of project restoration. Such work may extend outside of the R/W on an as-needed basis to ensure 24

S10-24 **Please refer to appendix C, section II-A concerning mitigation of this problem. Refer also to comment response S10-23.**

efficient gravity flow function of the replacement tile drain lines.

Page 5-25 - Section 5.1.3.2.2 Surface Water Site-Specific Impacts

New York concurs with the recommendation in the DEIS for dry-ditch crossing methods for high-quality streams, and the directional drilling of the Niagara River. Plans for drilling fluids management, including disposal plans, should be provided by the pipeline for state comment prior to final Commission approval. 25

S10-25 Comment noted.

Page 5-26 CNG

According to the DEIS, CNG has not submitted site-specific plans for the Hudson River crossing. The FEIS should evaluate the impact of the pipeline on future dredging and on Hudson River traffic as related to the pipeline's depth in the river bed. The U.S. Army Corps of Engineers is looking at the possibility of dredging the river to a depth of 35 feet (plus one or two feet depending on sediment type). 26

S10-26 These issues would be addressed as a part of CNG's application for a section 10 permit from the COE.

Page 5-41 Section 5.1.4.2.2 Site-Specific Impact - Wildlife

Wildlife habitat at the National Fuel/Penn.York Concord compressor station could be enhanced by releasing from competition the existing overgrown stand of apple trees in the forested area adjacent to the compressor site. Also, habitat 27

S10-27 Comment noted; see revised section 5.1.4.2.2.

improvements would result from permanent drainage detention basins or settling ponds designed to contain stormwater runoff. 27

Page 5-55 - Section 5.1.7.2 Wetlands Construction and Mitigation

New York concurs with the DEIS recommendation that impacts to wetlands be minimized by several means, including: limiting fuel transfers to small quantities; limiting clearing of woody vegetation in R/W construction and maintenance; limiting placement of fill materials in wetlands, and removal of any type of fill used; and use of spoil containment devices.

The practical application of certain procedures by pipeline compa: .es may be difficult to monitor in many circumstances. Daily inspection of erosion and sedimentation control devices, and placement of spoil pile control devices throughout wetlands are apparently objectionable to pipeline companies. New York recommends that a pragmatic solution to many wetland crossing issues and problems could be achieved by simply limiting the duration of major wetland disturbances by treating them as distinct, separate projects, as is the case with protected streams. Many wetlands are simply too wet for typical construction access: limiting disturbances to a short number of days is a viable means of accomplishing many of the goals of minimizing impacts. Pipeline companies may assert that this is unreasonable or not workable, but experience in New York demonstrates that by limiting the duration of impacts, overall 28

S10-28 We do not agree that limiting the duration of construction in wetlands would necessarily reduce impact. It could result in increased impact if the contractors are forced to rush through the crossing of a specific wetland site. Reduced construction time could also require increased work space, therefore, affecting a greater area of the wetland. Our experience with pipeline construction through wetlands is that the contractors attempt to complete each wetland crossing in as short a time as possible. In addition, treating each wetland crossing as a distinct separate project could be an extremely unreasonable request to place on a pipeline applicant, especially when considering some of the longer pipeline projects.

disturbance to wetlands can be minimized. Further, potential for exposure to heavy rain or other unforeseen circumstance is decreased by limiting to a short duration the length of time a wetland location is disturbed by construction.

28

New York endorses the wetlands revegetation techniques described in the DEIS as well as the requirement that pipelines develop procedures to control undesirable vegetation. We would expand this requirement to include all undesirable vegetation, however, and not limit it to exotic species. This would incorporate the selective treatment of vegetation in wetland R/W areas and would elevate wetlands management on R/W to a more scientific basis, as opposed to the industry standard of "mowing when needed." While control of undesirable vegetation in wetlands is an evolving science and practical control methods may be lacking, the pipelines should at least monitor re-vegetation success and watch for early invasion of undesirable species. Control procedures may be most readily accomplished before invasions lead to major populations of undesirables. This can be achieved by having wetland biologists inspect the R/W in the growing season following construction--when sites are relatively open and undesirable vegetation should be apparent. Hand removal of individual plants is feasible at this time and may prevent spread of populations.

29

S10-29 As discussed in section 5.1.7.2, we have recommended that applicants address the invasion and control of "undesirable" plant species in disturbed wetland areas. Since each state has differing views on how this problem can be monitored and controlled, we have recommended that each applicant work with the affected states to develop the most appropriate (for the particular species) or best available technique.

Page 5-115 - Section 5.2.1.2 Tennessee Deliveries, Gas Alternative Systems (G.A.S.)

G.A.S. received New York certification in June, 1989, but final Environmental Management and Construction Plans remain to be prepared and approved. The final pipeline route is slightly different than that indicated in Figure A-9-1. Residences, a pond, wetland and fire station would be avoided by following the modified route indicated in the attached revised Figure A-9-1.

30

S10-30 Comment noted; figure A-9-1 has been revised to reflect the alignment of the pipeline route certified by the NYPSC in Opinion and Order 89-17.

Pages 7-9 to 7-20 FERC Staff Recommended Measures

The FERC staff recommendations contained within pages 7-9 to 7-20 should be modified as necessary to respond to the above noted recommendations of New York.

31

S10-31 Comment noted; we have considered each NYSTF recommendation, and where we feel it appropriate, we have modified our DEIS recommendations. See section 7.3 of the FEIS.

In addition, Measure #16 should be modified to permit the incorporation of excavated rock into barriers to adverse access to the R/W, as needed.

32

S10-32 DEIS recommendation 16 has been revised to include "without approval of the landowner."

Page C-2, APPENDIX C, Section II. Preconstruction Planning

New York recommends that the screening and landscaping planning requirements for new compression and metering facilities be expanded to include existing facilities adjacent to the new facilities.

Furthermore, New York recommends that APPENDIX C be expanded to include a post-construction assessment of needs for

33

S10-33 The incremental visual effects of adding facilities to existing compressor and metering stations are minor and do not warrant pre- or postconstruction plans.

vegetation screening, including the need for additional plantings, removal or re-arrangement of existing plantings on the R/W at: road crossings, in residential areas, and at meter and compression facilities. 33

Page C-7, APPENDIX C, Section VII. Maintenance

Measure B, regarding R/W vegetation clearing restrictions, should be modified to permit treatment of undesirable exotic vegetation in wetlands as needed instead of only once every three years in accordance with the procedures developed from Appendix D.II.E.4. 34

Questions regarding these comments should be addressed to Jim de Waal Malefyt, New York State Department of Public Service, Three Empire State Plaza, Albany, New York 12223 or by telephone at (518) 474-1611.

Respectfully submitted,

NEW YORK STATE
PIPELINE TASK FORCE

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William J. Cowan
General Counsel
Saul A. Rigberg
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Public Service Commission
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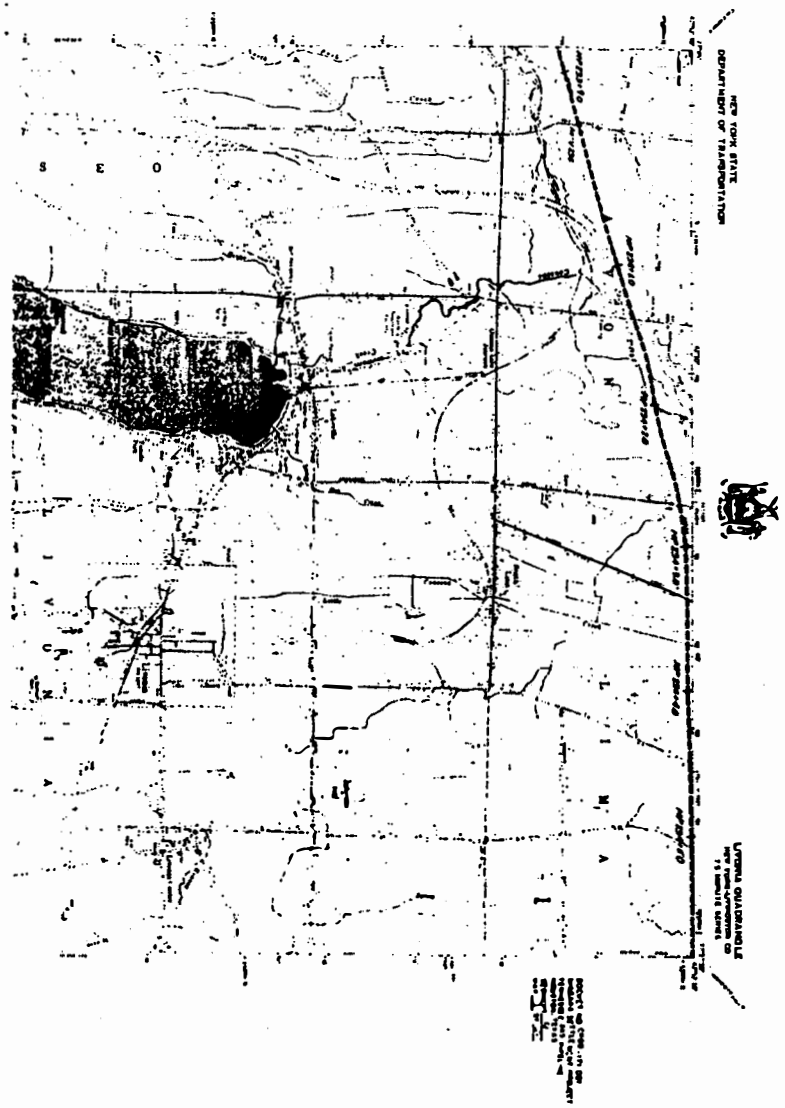
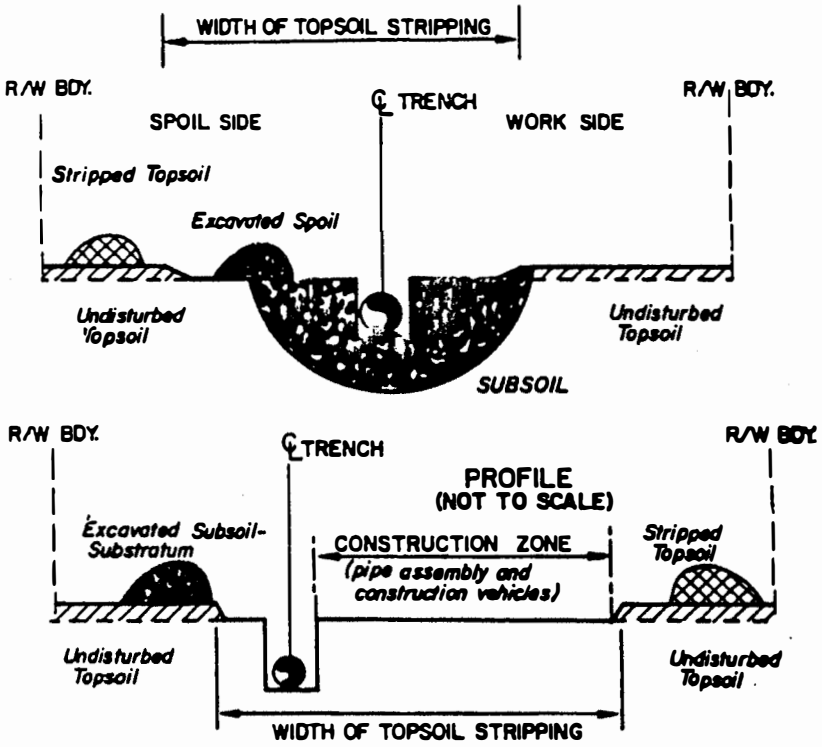
3 Empire State Plaza
Albany, New York 12223

Dated: April 30, 1990

S10

S10-34 We believe that limiting right-of-way vegetation maintenance to no more than once every 3 years has an overall environmental benefit that outweighs the potential for undesirable exotic species to become established. Please refer to response S10-29.





FOR AGRICULTURAL AREAS

REVISED FIGURE 5.1.2-1

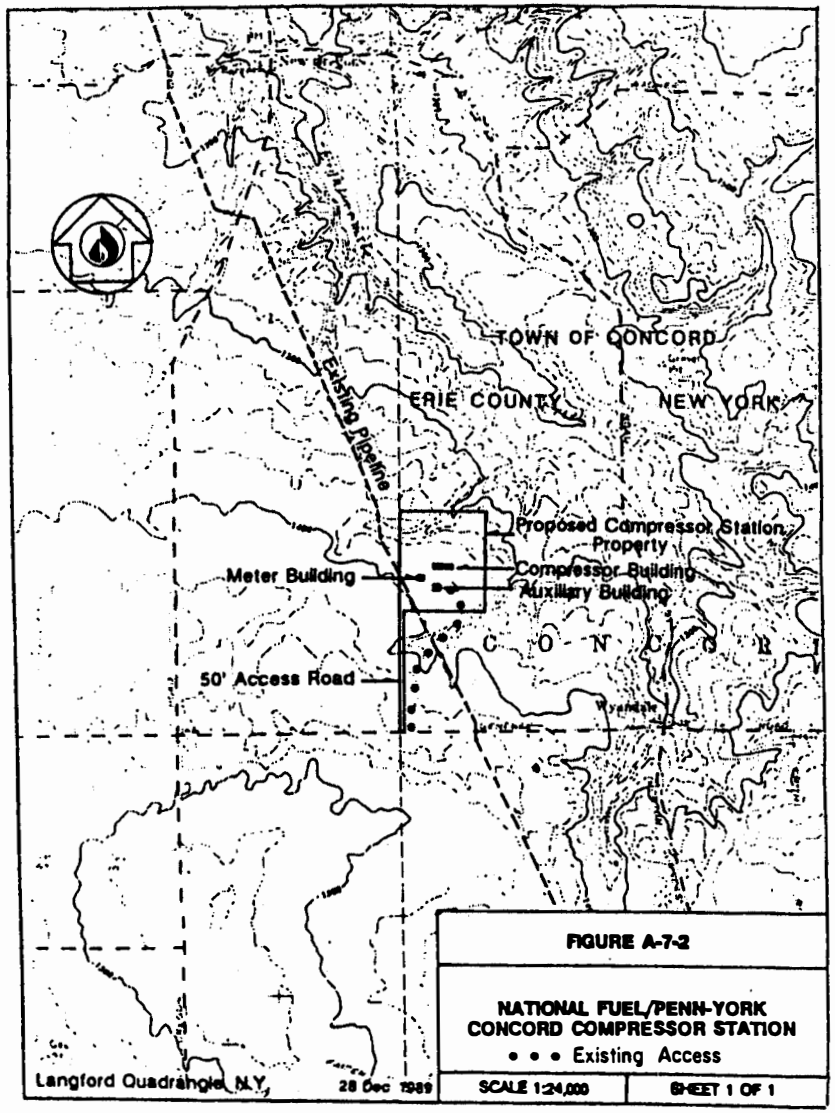
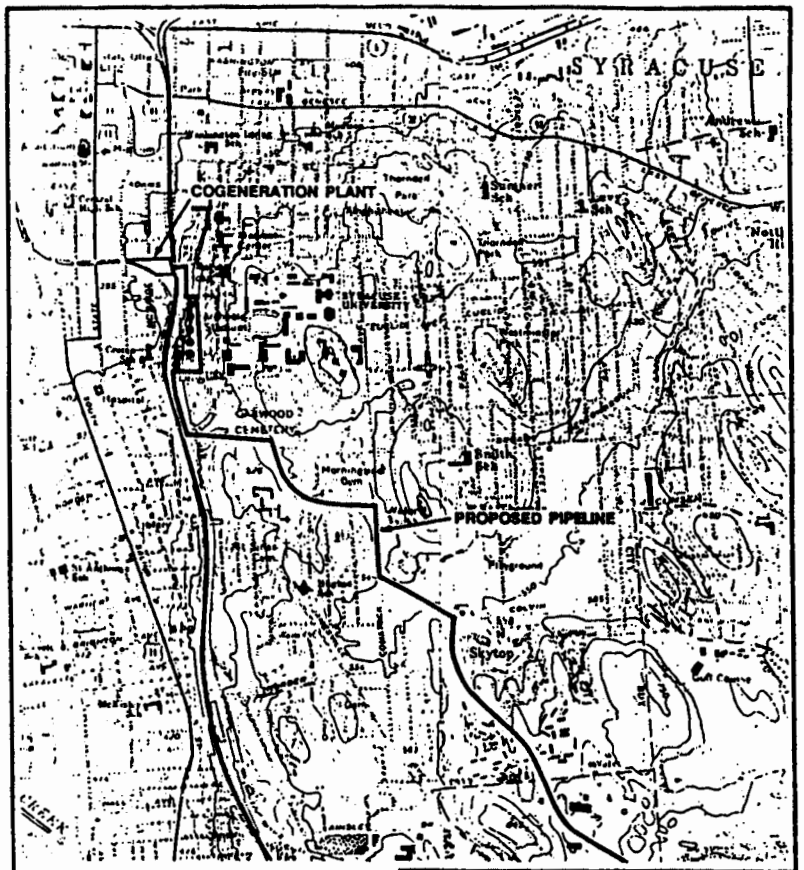


FIGURE A-7-2

NATIONAL FUEL/PENN-YORK
CONCORD COMPRESSOR STATION

• • • Existing Access

SCALE 1:24,000 | SHEET 1 OF 1

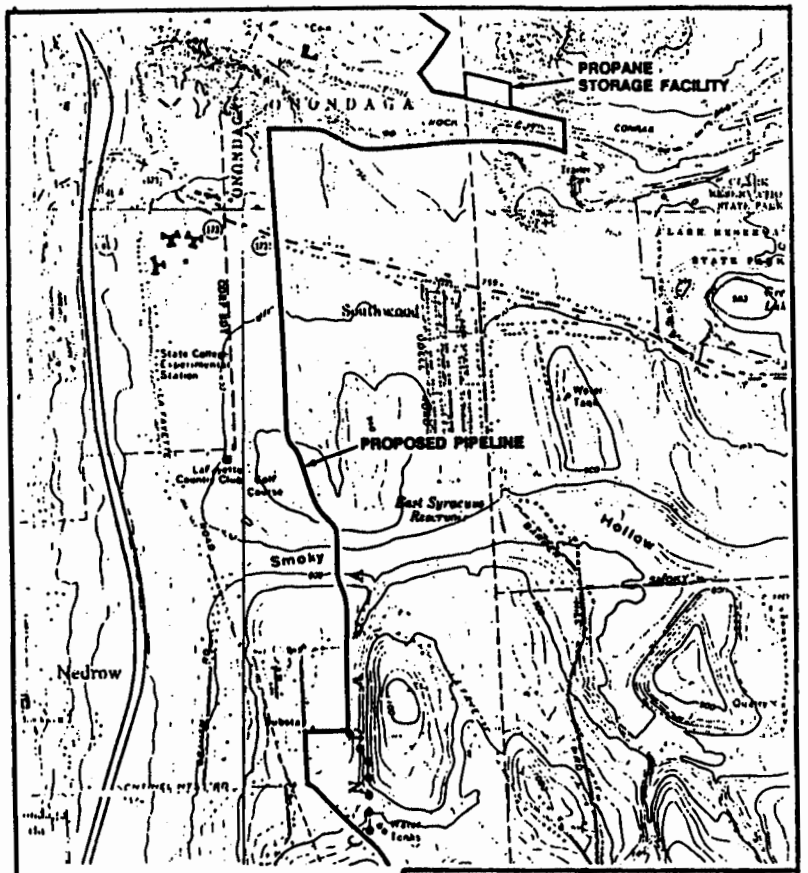


••• Modified Route

FIGURE A-9-1

GAS ALTERNATIVE SYSTEMS
COGENERATION PLANT AND PIPELINE

SCALE 1:24,000 | SHEET 1 OF 3



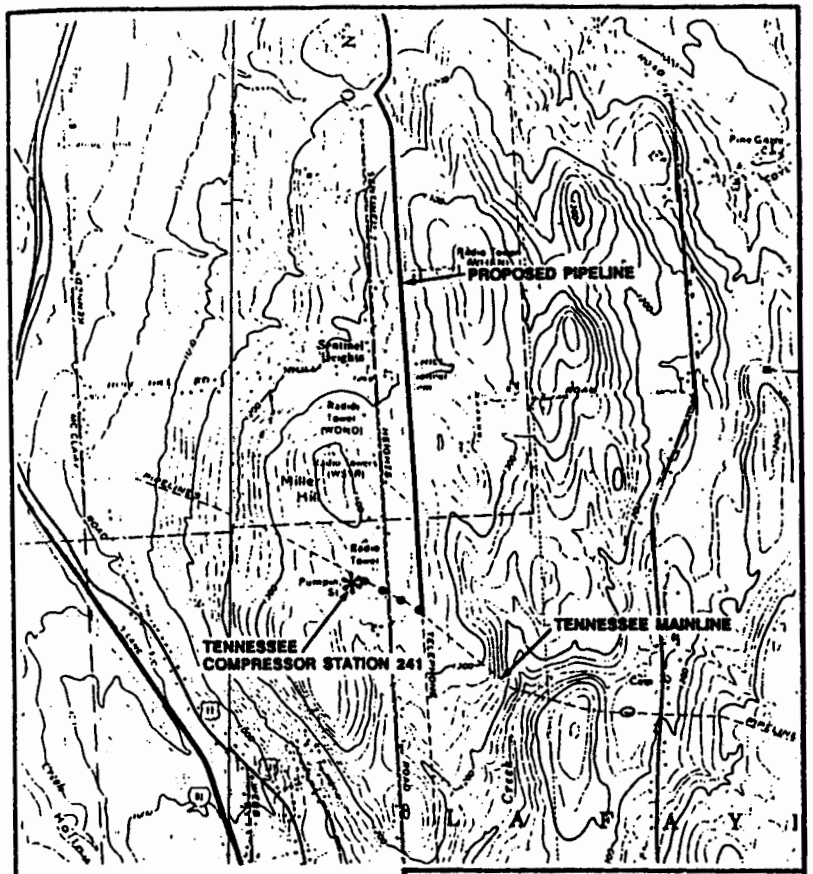
• • • Modified Route

N

FIGURE A-9-1

GAS ALTERNATIVE SYSTEMS
COGENERATION PLANT AND PIPELINE

SCALE 1:24,000 | SHEET 2 OF 3



• • • Modified Route

N

FIGURE A-9-1

GAS ALTERNATIVE SYSTEMS
COGENERATION PLANT AND PIPELINE

SCALE 1:24,000 | SHEET 3 OF 3

CERTIFICATE OF SERVICE

I, Richard A. Solomon do hereby certify that I have this day served a copy of the foregoing document by first-class mail, postage prepaid, upon all interested parties in this proceeding.

Richard A. Solomon

Washington, D.C.
April 27, 1990

BEMIDJI REG 1 TEL: 218-755-4024 May 10,90 14:39 No.010 P.02

Berger-
Strand
Paul
FYI /

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

DNR INFORMATION
(612) 296 6157

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To Kent Flynn | From Paul Stolen
Co. | Co.
Dept. | Phone #
Fax # | Fax # 218-755-1024

April 27, 1990

Secretary
Federal Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Docket No. CP88-171-001
Niagara Import Point Project
Draft Environmental Impact Statement

Dear Sir:

The Minnesota Department of Natural Resources (DNR) has completed a review of the Draft Environmental Impact Statement (EIS) regarding the proposed construction of a pipeline looping project by Great Lakes Gas Transmission Company. The following comments regarding the proposed pipeline project are provided for your consideration in developing the Final EIS on the project.

Page 2-1. The note regarding a possible size increase for Loop 7 should not be treated lightly in the Final EIS. An increase in size may cause an increase in right-of-way width as well. The assessment of impacts resulting from the project, as discussed in the Draft EIS, in many cases assumed very little additional land requirements over and above that used by the existing pipeline. 1

Page 2-18. Land requirements for pipeline construction as depicted in Figure 2.2-1 appears to underestimate the right-of-way width through hill sections of the pipeline route through Minnesota. Much of the Minnesota route is hilly, in fact, and would therefore require a different construction configuration than shown in the typical. Because the glacial terrain is very jumbled, we believe that the original construction right-of-way for the pipeline was much wider than the 75' shown in the diagrams. 2

The diagram shows construction in flat terrain. Construction of large diameter pipeline on any terrain that deviates from 0 degrees on a side slope causes a geometric increase in right-of-way width. This is caused by the need for side-hill cutting to construct a level work pad of about

S11-1 The same equipment can be used for installation of either 36- or 42-inch-diameter pipeline. The increase in diameter should not significantly increase the width of right-of-way required for construction.

S11-2 We agree that, in steep terrain, especially when traversing side slopes, typical right-of-way width requirements could be greater. We have revised section 2.2.1 accordingly. Already noted in section 2.2.1 is the fact that more right-of-way is often needed at most road, railroad, stream and river crossings. In these instances greater environmental effects could occur than for the typical condition. However, we believe that the typical condition provides a reasonable basis for analysis. Site-specific impact that could result in potentially significant effects is discussed in section 5.

80 feet, according to a study of pipeline construction in Montana (Stolen, P., 1982, Construction of the Northern Border Pipeline in Montana, Interagency Pipeline Task Force, Montana Department of Natural Resources and Conservation). This requirement can vary dependent on the direction of slope and direction of construction. Side boom tractors, for example, require a work pad to the right of the track.

Construction in such areas can typically require rights-of-way of 200-300 feet or more. This extra width is needed for the work pad and for storage of the excavated material. Diagrams from the Montana study showing typical construction in hilly areas of about 7 degree slope are attached. The hilly moraine areas along the existing pipeline route in Minnesota often have slopes steeper than depicted in the enclosed diagrams.

The existing pipeline route is close to some environmentally sensitive features in Minnesota. The construction right-of-way is the important consideration, not the permanent right-of-way. The DNR recommends that the Final EIS include estimates of land requirements in terrain with 5-10 degree slopes, and provide a diagram of side-hilling along the existing pipeline on such slopes. The diagram should indicate the extent of side-hill cutting, width of the work pad, and spoil storage requirements. Estimates of the percentage of the route that involves hilly terrain should also be provided. Discussions regarding environmental impacts resulting from the proposed pipeline will need to be modified to reflect the changes in land requirements in hilly areas. 2

Page 5-44. The DNR will provide additional input to Great Lakes during the development of the proposed survey for sandhill cranes as discussed in the Draft EIS. 3

Page 5-56. We support the requirement that construction of right-of-way width be limited to 50 feet in wetlands. The Draft EIS states that Great Lakes Gas Transmission Company takes exception to this requirement. If the assessment of impacts in the EIS is based on the use of procedures that may be rejected by the applicants, it raises some questions about the adequacy of the EIS. The Final EIS should clarify the relationship between the procedures outlined in Appendices C and D and the extent to which the applicants will abide by them. We are unclear as to what mechanisms are used to ensure that agreed upon mitigation procedures are followed during construction. 4

Page 5-57. The DNR is concerned about visual impacts that will result from the widening of the utility corridor and construction activities. In order to minimize visual impacts, we recommend that any timber used to construct temporary corduroy roads in wetlands and wet areas come from 5

S11-3 Comment noted.

S11-4 Comment noted. However, after serious review of this condition, together with review of valid applicants' comments, we have revised this condition to limit the maximum right-of-way width through wetlands to 75 feet. Please refer to comment and response G6-76.

It is the applicants' legal responsibility to abide by all conditions set forth in a certificate issued by FERC. All procedures discussed in the revised appendices C and D would be applied to each applicant receiving a certificate from FERC. As discussed in responses G7-5 and G7-6, we would allow the applicants an opportunity to request relief from any particular procedure, on a site-specific basis and only after review by FERC staff. We recognize that in the past, what has been agreed to on paper and what actually occurred on a construction spread may not be the same. Consequently, we have required the applicants to employ at least one environmental inspector per construction spread. Duties and responsibilities of that inspector are fully described in appendix C. As further described in response S9-8, FERC would conduct environmental inspections and field compliance checks as required.

S11-5 Appendix D, section II, identifies procedures to be used for wetland crossings. These procedures specify that no trees located outside of the right-of-way are to be cut for timber to construct equipment pads. Also see comment response G4-47.

the disturbed right-of-way or from timber stands scheduled for harvest in current 10 year plans. Additional cordwood material should not be cut from stands that are convenient to the right-of-way but are not on the planned harvest list. 5

Page 5-59. For additional information regarding control of purple loosestrife in Minnesota, the DNR suggests that Great Lakes contact Luke Skinner, Coordinator of the Purple Loosestrife Program at (612) 297-3763. 6

Pages 6-1 to 6-8. The DNR may have additional comments regarding the proposed alignment variations pending further review by field staff. Additional comments will be provided as soon as possible. 7

Page 7 15, No. 40. "MIDNR" should be changed to MNDNR. 8

If you have questions regarding our comments, or if you require additional information from the DNR, please contact Cheryl Heide from my staff at (612) 296-9228.

Sincerely,

Thomas W. Balcom

Thomas W. Balcom, Supervisor
Natural Resources Planning and Review Services

Attachment

c. Marlyn Weston
John Chell
Robert Hance
Steve Colvin
Jon Nelson
Tom Lutgen
Bonita Eliason
Robert Welford--U.S. Fish and Wildlife Service

900051-3

S11-6 Thank you for this comment.

S11-7 See response to comment letter S-12.

S11-8 Section 7.3 has been revised.

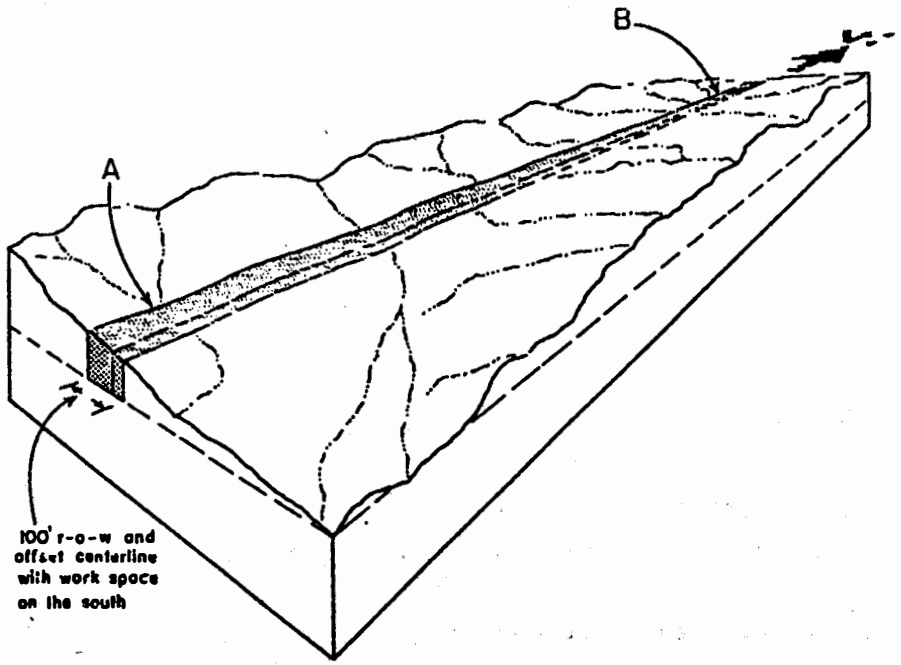

FIGURE 1

Generalized view of an east-west 100' pipeline Construction right-of-way as foreseen in Northern Border Pipeline Company's applications to cross Montana state lands. The terrain is typical of Montana state lands crossed in Phillips and Valley counties, where, aside from drainages, the steepest slopes are on the order of 5-7°, and rangeland is the primary land use.

December 1981

DNRC
Northern Border Pipeline

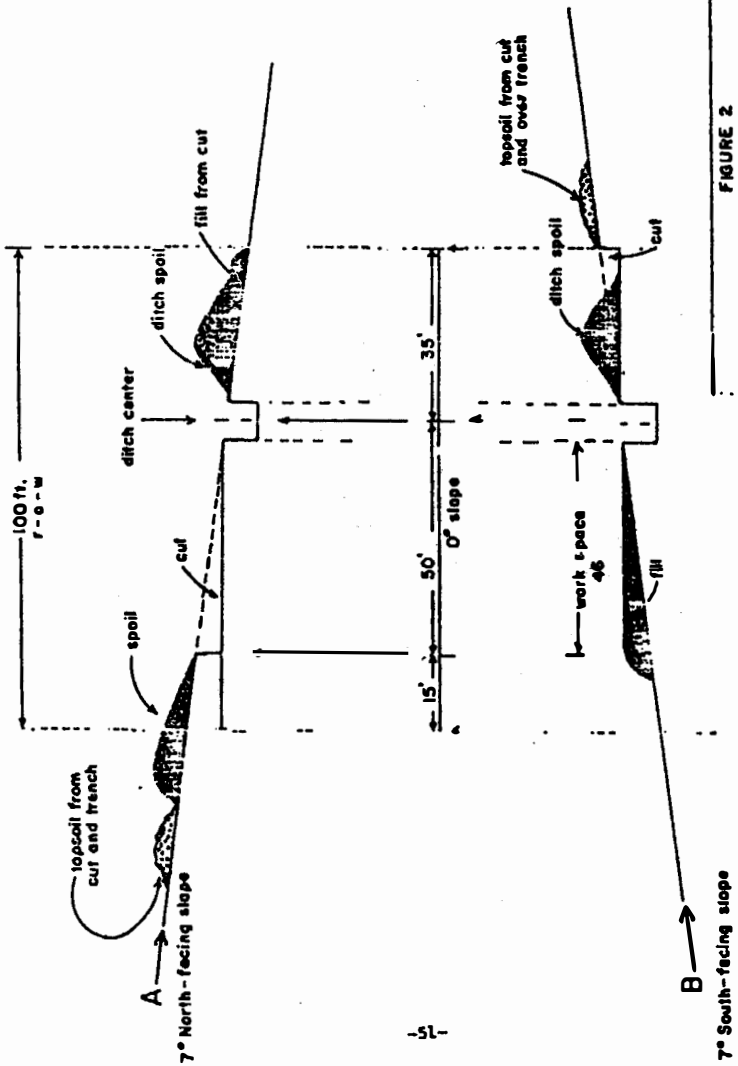

FIGURE 2

Cross sections of the cleared right-of-way at points A and B in Figure 1, as seen looking west.

Trench dimensions are depicted at 7' deep and 6' wide.

December 1981

DNRC
Northern Border Pipeline

Conclusions

The photographs and figures in this section indicate the following possible conclusions about r-o-w width requirements and topsoil stripping:

1) Any deviation from flat terrain (0 degree slope) causes a geometric increase in width requirements, primarily for soil and spoil storage.

2) There is often a progressive increase in r-o-w width after initial r-o-w clearing as the different stages of construction proceed.

3) There were numerous areas of extra r-o-w width needed beyond the 100 foot requested by DNRC.

4) There was a high potential for topsoil mixing in the numerous side-hill cuts.

5) There was an inconsistency in depths to which topsoil was stripped on state land parcels, and an inconsistency in keeping topsoil and substrate in separate piles.

6) Construction crews demonstrated an exceptional ability to re-contour the disturbed surface to the original configuration and replace topsoil when it had been correctly stripped.

7) A r-o-w narrower than 100 feet (approximately 85 feet) is quite possible and reasonable on truly flat terrain (0 degree slope), but appears impractical on terrain with a slope greater than 5 degrees.

8) Separate topsoil storage piles on side-hills require a wide r-o-w. Recontouring without tearing up ground beyond the piles requires even greater widths.

These issues are discussed further in the next section on state lands, and in the conclusions section.

CONSTRUCTION ON MINNESOTA STATE LANDS

MNC applied for an easement to cross lands managed by the Department of State Lands (DSL) in early January, 1981. At its April meeting the State Board of Land Commissioners refused them an easement, preferring a lease, effective May 2. Construction started two days later. The IMF assisted DSL staff and MPPC in the necessary paperwork primarily because of time constraints, and because MPPC (and IMF) was in the midst of negotiations with the Office of the Federal Inspector concerning federal and state roles during and after construction (see pages 64 and 74 below).

Federal legislation on the ANGTS required that MPPC build the pipeline according to general and site-specific environmental stipulations developed in part with federal and state agencies, and under the supervision of the OFI. The DNRC had examined drafts of these stipulations during the preparation of the EIS on the project. To keep federal and state

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

Celebrate MINNESOTA 1990

PHONE NO. REGIONAL ENVIRONMENTAL REVIEW SPECIALIST FILE NO.
ECOLOGICAL SERVICES SECTION
DIVISION OF FISH AND WILDLIFE
2115 BIRCHMONT BEACH ROAD NORTHEAST
BEMIDJI, MINNESOTA 56601

May 16, 1990

Mr. Kurt Flynn, Project Manager
Environmental Policy and Project Analysis Branch
Office of Pipeline and Producer Regulation Room 7312
825 North Capital Street Northeast
Washington, D.C. 20426

Re: Docket No. CP 88-171-001
Niagara Inport Point Project Draft EIS

Dear Mr. Flynn:

This letter provides you with additional information concerning alignment variations recommended in the Draft EIS. These variations are described in pages 6-1 to 6-8 of the draft and were referred to in the Minnesota Department of Natural Resources' comment letter of April 27, 1990 (letter of Thomas Balcom, Minnesota DNR to FERC Secretary.) This current letter concerns Fish and Wildlife Division concerns about the wetland crossings.

I understand that you are in urgent need of knowing our position on these variations in order to meet your final EIS schedule. We have visited four sites where re routes around wetlands are recommended. The sites in Marshall County were visited by representatives of the Division of Fish and Wildlife, the field representative for the Division of Waters (who reviews the two protected waters permits for the Marshall County sites), and Braun Engineering representatives. The Clearwater County sites, which are not State protected wetlands, were visited by myself.

We have the following comments:

A. GENERAL COMMENTS: In the past, we have recommended avoidance of wetlands as a first priority, then if this cannot be done, appropriate mitigation and compensation. We have recommended following the existing alignment as a general policy, because only during construction will additional right-of way be needed. This general policy also applies to wetlands even though wetlands are given special status.

Mr. Kurt Flynn
May 16, 1990
Page 2

Maintenance practices such as clearing vegetation every one to three years adversely affects wetland habitats to some extent. Therefore, our reasoning is that following the existing alignment means following habitat that has already been degraded to some extent.

We would recommend a re-route only if a wetland has special values that cannot be mitigated.

Our site investigations of the four proposed re-routes shows that, if mitigation measures are followed, the re-routes creating new rights-of-way around wetlands are not necessary. Reasonable mitigation measures exist that will reduce impacts to the wetlands from following the existing alignment, and, if mitigated as recommended, the wetlands have no characteristics that make them stand out from others nearby. A discussion of each of the re-routes follows:

1

B. U.S. ROUTE 59 VARIATION (page 6-6): Field inspection revealed several features about this wetland, and this re-route, as follows:

a. About one-half mile of State protected wetland is crossed by the existing alignment. New construction will therefore affect about four acres of additional wetland since, according to the engineering consultant to Great Lakes (Braun Engineering, Inc.), an additional twenty five feet would be cleared to construct the new loop. This area would not be cleared during maintenance, and thus impacts are lessened. This impact appears to be less than what is stated in the draft EIS.

b. The proposed new alignment would cross some wetland West of US 59, and would result in some clearing of forest areas. Landowners in the area usually oppose clearing of forested areas because they are scarce.

c. The wetland is not locally unique and the mitigation measures listed in E. will reduce impacts to an acceptable level; also, there are opportunities for enhancing the existing environment if the existing alignment is followed.

2

C. NEW SOGIM WETLAND (page 6-6) Again, field inspection of this State protected wetland provided new information, as follows:

a. It is unclear from the Draft EIS how much wetland is affected by following the existing alignment. Page 6-6 and Table 6-1 state that 7.4 acres of wetland would be affected by following the existing alignment, but the map of the area shows a considerably smaller wetland crossing (figure A-1-19.) Our site visit confirmed that the map is more accurate, and that most of the rest of the area between MP 63.7 and MP 64.0 is wet prairie, not wetland.

3

S12-1 Comment noted; we have reviewed these route variations and have incorporated the comments in this letter. We do not agree with MNDNR's comments regarding the Clearbrook Wetland Variation. Please refer to revised sections 6.1.1, 6.1.2, 6.1.3, and 6.1.4.

S12-2 Comment noted; see revised section 6.1.1.

S12-3 Comment noted; see revised section 6.1.2.

Mr. Kurt Flynn
May 16, 1990
Page 3

b. This wetland is probable the most significant of the four wetland crossings identified in the Draft EIS because it is sandhill crane habitat. We heard cranes north of the wetland crossing site during the field visit. However, we feel that the construction time restriction (see the mitigation section) is an adequate measure to avoid impacts to the cranes. Impacts to the area identified as "Wild hand" will be reduced by re-vegetation with native species.

c. In this area of Minnesota we manage for habitats dominated by native grasses and other species characteristic of open prairie, and in some cases aspen or brushy inlands. We do, however, recognize that forested patches are important to landowners for windbreaks or aesthetic reasons. The re-route in this area would result in loss of a forested windbreak important to its owner. We do not think that avoiding the New Solum wetland, if impacts to it are mitigated as described in E., justifies this loss. 3

d. This area is attractive to nesting waterfowl but lacks open water important for rearing ducklings. The mitigation in F. provides compensation for wetland impacts by providing open water habitat currently not found in the immediate vicinity.

D. PINE LAKE WETLAND (page 6-6) The site visit to this unprotected wetland in Clearwater County, where the existing alignment crosses a small portion of a large wetland, showed that:

a. The impacts of the proposed new alignment around this wetland would be high. First, the re route would cross a wetland with a small stream right in the corner of section 19. In addition, the "road corridor" referred to in the Draft EIS is a very narrow forest road on a narrow (less than fifty feet in places) ridge in a glacial moraine. A new construction right-of-way would be wide because of the steep terrain, and there are small wetlands on both sides of the road in some places. This is a bad choice for a new alignment. Besides being excellent upland wildlife habitat, this road is locally important for recreation, and may be (if residents are correct) a segment of an historic road. 4

b. The existing alignment crosses a small portion of the large wetland, and mitigation will provide wetland values to compensate for losses.

E. CLEARBROOK WETLAND (page 6-7) This unprotected wetland crossing just two miles from the Pine Lake wetland, has the following characteristics that again recommend against a re route: 5

a. The fringe of a large wetland is crossed by the existing

S12-4 Comment noted; see revised section 6.1.3.

S12-5 Comment noted; we do not agree with MNDNR that the proposed route traverses the fringe of this large forested wetland. Both NWI and USGS maps clearly indicate the proposed route traversing the middle of this wetland. Although the existing cleared right-of-way may now consist of grasses and pasture, additional clearing of this wetland would be required for construction of the proposed route. We feel that construction through agricultural land results in only a minor, short-term impact. Consequently, we stand by our recommendation for this route variation. See revised section 6.1.4.

alignment. Most of it is (or was) a Type 8 wooded wetland. Tamarack, birch, and some aspen are present, but the existing alignment in the wetland is mostly heavily pastured, with the natural vegetation changed. This factor heavily favors choosing the existing alignment rather than re-routing.

b. The actual distance of wetland crossed is probably about one third mile, so the area affected by construction clearing is about four acres rather that the 2.6 acres stated in Table 6-1. 5

c. The new alignment would likely raise land use conflicts that would not be offset by avoidance of wetland impacts by re-routing.

d. The mitigation measures provided in E. are adequate mitigation for any impacts to the wetland

E. MITIGATION. Here are both general mitigation measures that apply to all four wetlands and measures specific to each.

a. General measures - applies to all four re-route areas:

1) Removal of crown: In some areas along the present right-of-way, soil was piled over the pipeline trench, creating a strip of upland through the wetland. This should be removed and spread over the right-of-way when the new pipeline is laid.

2) Creation of open water: In each of the four re-routes, excavating open water ponds would create habitat and provide mitigation. The details vary, and the landowners contacted so far have been agreeable. Department of Natural Resources employees are assisting with contacts and with design details. 6

3) Removal of spoil to upland sites: When mitigation ponds are created, spoil should be placed on upland sites rather than side casting or dozing in the wetland. This can be accomplished by excavating the pond near the wetland edge or by hauling to an upland site.

4) Vegetation maintenance: To the extent possible, brushy vegetation, sedges and grasses should be allowed to regrow in the right-of-way through wetlands.

5) No herbicides in wetlands: Vegetation control should be accomplished mechanically rather than chemically.

b. US 59 Variation - Two additional mitigation measures apply:

1) The northern part of this wetland provides an area for open water creation. It is Soo Line Railroad property. Two open water areas each about one half acre in size averaging about three feet deep should be created within the wetland. In this region of Minnesota, the Section of Wildlife constructs "double-wide" ponds of a size 80x300 feet with a dragline in wetlands to create open water habitat. These ponds could be of 7

S12-6 We concur with general mitigation measure numbers 1 and 4. We recommend that Great Lakes consult with MNDNR about removing the existing crown of soil placed over their existing mainline in these wetlands. We do not recommend the creation of additional water bodies as additional mitigation. In light of the minimal impact that MNDNR has indicated would occur to these wetlands from pipeline construction, we feel this enhancement measure is not warranted. FERC does not prohibit, nor encourage the use of herbicides for control of vegetation on rights-of-way. Any use of herbicides must be in accordance with EPA regulations.

S12-7 See response S12-6. We concur with the construction window of April 1 to June 30 through this wetland. See revised sections 6.1.1.

Mr. Kurt Flynn
May 16, 1990
Page 5

similar design. The feasibility of placing the excavated organic soils in gravel pits (which are next to the wetland) to create additional wetland should be explored.

2) No construction activities should take place within one half mile of this wetland between April 1 and June 30 to prevent interference with possible sandhill crane nesting. 7

c. New Solum Wetland - Two mitigation approaches apply here:

1) Open Water: Two one half acre ponds averaging three feet deep should be created on the south and east side of the wetland.

2) No construction activities should take place within one-half mile of this wetland between April 1 and June 30 to prevent interference with possible sandhill crane nesting.

3) Native grass reseeding: The "Wild Land" area referred to in the draft EIS is dominated by native grasses. The non-wetland portion of the right-of way between MP 63 and MP 64 should therefore be re-established to native grasses. The seed mixture should consist of at least sixty percent big bluestem, with the remaining forty percent being an unspecified mixture of little bluestem, switch grass, Indian grass, and prairie dropseed. Seed should be obtained locally. This area should be monitored to ensure re-establishment. 8

S12-8 See response S12-6 and S12-7. We concur with the recommendation for reseeding the designated wild land with native grasses.

d. Pine Lake Wetland- Mitigation should consist of creation of a several small ponds 0.1 to 0.3 acres in size one to three feet deep on land to the south of the wetland crossing site. The landowner in this area (either the southeast corner of section 18 or the northwest corner of section 19) is agreeable. 9

S12-9 See response S12-6.

e. Clearbrook Wetland - Mitigation should consist of creation of several small ponds 0.1 to 0.3 acres in size one to three feet deep in the wetland area. The landowner in the northeast one quarter of section 29 is available. 10

S12-10 See response S12-6.

Sincerely,

Paul Stolen

Paul Stolen
Environmental Review Specialist
Department of Natural Resources

PS:cln

L1

TOWN OF DEWITT
6565 KINNE ROAD
DEWITT, N.Y. 13214

BURTON LOWITZ
SUPERVISOR

TOWN BOARD
ELAYNE O'BRIEN
JAMES GUYETTE
S. BARRY SHERLOCK
Jos. Simonetta
DONALD RECHERT
JAMES FISHER

February 26, 1990

Federal Energy Regulatory Commission
825 N. Capitol Street N.E.
Washington, D.C. 20426

Attention: Mr. Kurt Flynn

RE: F.E.R.C. Docket #CP88-171-001

Dear Mr. Flynn:

As Supervisor of the Town of DeWitt, I am writing you in support of the efforts of Tennessee Gas in the above matter to secure permission to bring additional supplies of natural gas to Central New York.

Our community has a special problem that would be totally eliminated by an early approval this year of this project and its prompt completion in 1990-91.

An application to build a co-generation project in Syracuse, (adjoining DeWitt), known as the GAS Orange Project has been approved and is awaiting early construction. This project contemplates and requires an alternate fuel supply in case of emergency weather conditions. 1

The alternate supply approved by the NYS PSC and vigorously opposed by the Town of DeWitt is a massive underground propane fuel facility supplied by rail and located within our Town's borders and near several residential subdivisions.

The approval of the Tennessee Gas proposal will eliminate the need for the propane project. It will also eliminate potential human error which may cause a dangerous situation in transporting large quantities of propane almost daily by rail through the Village of East Syracuse, the City of Syracuse and the Town of DeWitt from November through April of each year.

Please speed the approval process wherever possible and advise me of its progress and time frame so that I can assure our Town Board and citizenry of your interest and concern in protecting our community and providing an adequate, safe natural gas fuel supply for future needs and economic growth.

Very truly yours,

Burton Lowitz

Burton Lowitz
Supervisor

BL/bjs

L1-1 **Thank you for your comment.**

L2

County of Marquette

RESOURCE MANAGEMENT/DEVELOPMENT DEPT.
County Courthouse
Marquette, MI 49855
906/228-1535

April 6, 1990

FILED
OFFICE OF THE SECRETARY
90 APR 17 PM 3:14
FEDERAL ENERGY REGULATORY COMMISSION

Secretary,
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Dear Sir:

Re: Docket #CP88-171-001

The Marquette County (Michigan) Planning Commission has reviewed the draft Environmental Impact Statement for the Niagara Import Point Project. Our review focused on the Great Lakes Gas Transmission Company (loop 10). That loop is located in Wells and Ewing Townships in Marquette County.

In general we found the draft EIS to be satisfactory. However we wish to bring two potential environmental concerns to your attention.

First is Michigan History Division Archaeological site #20MQ22. It is located in T42N, R24W, Section 26. The state has not disclosed the exact location. Although it is classified as a minor site, there may be other sites in the vicinity waiting to be discovered. Please contact Barbara Mead at the Michigan History Division, 208 N. Capitol, Lansing, Michigan, 48913 phone 517 373-6416). 1

Second is a threatened plant which has been located by the Michigan Natural Features Inventory. MNFI has also declined to provide us with either a genus/species or an exact location. Our computer has indicated it is in T42N, R25W, Section 25. MNFI can be reached through Sue Crispin at the Michigan Department of Natural Resources, Division of Land Resource Programs, Box 30028, Lansing, Michigan, 48909 (phone 517-373-1552). 2

L2-1 Thank you for the site information. The cultural resources consultant to Great Lakes Gas has and will continue to consult with the Michigan State Historic Preservation Officer regarding potential impact on sites. The consultant is also in the process of carrying out Phase 1 (identification) survey for all the proposed Great Lakes facilities.

L2-2 There is a recorded occurrence of a state-designated threatened plant in Michigan within T42N, R24W, section 25. Great Lakes Loop 10 would pass through this section. However, the MIDNR (MIDNR, 1989c) indicated that the proposed pipeline route would be nearly 1 mile from the plant location. For this reason, this plant was not included in the DEIS.

L2

Thank you for the opportunity to review this document and to have input into the final environmental impact statement.

Sincerely,

Gwen Timmons

Gwen Timmons, Chair
Mgt.County Planning Commission

PSG:gn

Enclosure

cc: James Kippola, Senior Planner
Barbara Mead, Assistant State Archaeologist
Sue Crispin, MNFI
SUE File
MCPC
Kurt Flynn

L2

MARQUETTE COUNTY
RESOURCE MANAGEMENT AND
DEVELOPMENT DEPARTMENT

SPECIAL AND UNIQUE
ENVIRONMENTS
NOMINATION FORM

90 APR 17 PM 3:14
FILED
OFFICE OF THE SECRETARY

RECORD NUMBER: 1a0062 NOMINATION DATE: [illegible]

CATEGORY: CULTURAL TYPE: ARCHAEOLOGICAL SITE

LOCATION

NAME OF SITE: 20N022

TWN RNG SEC SUB SUB DESCRIPTION
42-[illegible]

EWING

PHYSICAL DESCRIPTION OF SITE/AREA

low significance; one artifact [illegible]

[illegible]

MI

[illegible]

State List: 3/88

MARQUETTE COUNTY
RESOURCE MANAGEMENT AND
DEVELOPMENT DEPARTMENT

SPECIAL AND UNIQUE
ENVIRONMENTS
NOMINATION FORM

RECORD NUMBER: 3a0101 NOMINATION DATE: 08/10/8[illegible]

CATEGORY: NATURAL TYPE: PLANT

LOCATION

NAME OF SITE:

TWN RNG SEC SUB DESCRIPTION
42-24-20-

EWING

PHYSICAL DESCRIPTION OF SITE/AREA

Threatened Plant (3)

3a1

[illegible]

MI

[illegible]

MNFI Element List (Helena SE)

L3

TOWN OF HOLLISTON

OFFICE OF THE
TOWN ENGINEER

TOWN HALL
HOLLISTON, MASS.
429-4141

March 27, 1990

Secretary,
FEDERAL ENERGY REGULATORY COMMISSION
825 North Capitol Street, N.E.
Washington, DC 20426

Re: FERC Docket Nos.CP89-646-000 and CP89-654-000

I wish to express the Town of Holliston's appreciation and renewed confidence in not only the effectiveness of the regulatory system, but also in the gratifying sensitivity of the proponents. Since my previous recommendations on the possible routing of the project at the Medway-Holliston area, I received consequential information regarding the effect of the variation on Medway's residential density.

I realize that it is virtually impossible to satisfy every party affected by the project, particularly in view of the unanticipated rate of development. Nevertheless, I optimistically submit an additional request for a variation to the proposed pipeline route in the Medway area.

Attachment A shows a portion of FIGURE A-2, PROPOSED MEDFIELD LOOP (sheet 19 of 12), enclosed in Volume III of the DEIS. Attachment B shows that same area at a greater scale, showing the latest land subdivision at the area. Again, on each attachment, the present pipeline route variation is highlighted in pink. The alternate route which I respectfully propose is highlighted in blue.

This new recommendation will avoid literally passing through existing dwellings in Medway. It will also avoid one stretch of wetlands in its entirety. The new route, rather than continue through the existing pipeline easement, would follow the Boston Edison Company (BECo) easement on a northeasterly direction up to approximately 350 feet from the Medway/Holliston boundary. It would then follow the town boundary (on a parallel 350 feet south) in an easterly direction until meeting anew with the pipeline.

As a note of clarification, the scale indicated in the lower right hand corner of the PROPOSED MEDFIELD LOOP map should be 1" = 25000 INCHES, and not 1"=25000 feet. Care should be taken not to misinterpret any other map due to a scale discrepancy.

Respectfully,

Ivan R. Lopes, P. E.
Town Engineer

cc: Board of Health
State Rep. Barbara Gardner
Mr. Lonnie Lister, Project Manager
Energy Facilities Siting Council
Mr. Jay Newton, Medway

703 WASHINGTON STREET P.O. BOX 267 HOLLISTON, MASSACHUSETTS 01746

1

L3-1 We have reevaluated the Medfield Loop Variation. Section 6.3.2 has been revised to reflect your comments.

L3

EXISTING 24" MAINLINE
EXISTING VALVE V-1-1
EXISTING V-1-12" PIPELINE
M.P. 0.0
MEDWAY
MILLIS
ATTACHMENT A
PROPOSED 7.5 MILE 36" DIAMETER PIPELINE LOOP
MEDFIELD LOOP
VARIATION
HOLLISTON
NORFOLK
M.P. 5.00
MASSACHUSETTS

L3

ATTACHMENT "B"

L4

April 12, 1990

FILED
90 APR 27 AM 10: 50

Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

Re: FERC Docket Nos. CP88-171-001

Dear Secretary:

The Medway Planning Board has reviewed the proposed pipeline work and has serious concerns with respect to some specifically in the area northeast of Winthrop Street to the Medway/Holliston/Millis town lines.

There are several subdivisions in that area in various stages ranging from preliminary plans to completed homes and streets of which your Designers/Engineers are apparently unaware.

1 It is the official position of this Board, by vote of April 10, 1990, that the proposed new link be routed along the existing Edison easement from Winthroo Street northeasterly to the Medway/Holliston line at which point it should turn due east along Hill Street, across Holliston Street, and cross Country until it intersects the existing 50' easement per the attached plan. Any other routing will severely impact the new residential developments in this area.

Very truly yours,

MEDWAY PLANNING BOARD

Allan B. Fraser
Clerk

ABF/lkf

cc: Medway Selectman
Medway Board of Health
Holliston Selectmen
State Representative - Barbara Gardner
Energy Facilities Siting Council
Mr. Jay Newton, Medway
Mr. Michael Greenburg, Medway

L4-1 We have reevaluated the Medfield Loop Variation. Section 6.3.2 has been revised to reflect your comments.

L5

CITY OF NORWICH

CONNECTICUT

April 19, 1990

Secretary,
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.,
Washington, D.C. 20426

Docket Number CP88-171-001

The following comments are in reference to the "Niagara Import Point Project Draft Environmental Impact Statement, Algonquin E-1 Loop." The City of Norwich requests that FERC address the following comments in the final Environmental Impact Statement.

1. Section 4.1.3.1 of the DEIS addresses ground water in the area of the proposed NIP project. The proposed Algonquin E-1 Loop alignment passes through the Yantic River Aquifer near mile post #1.

The Yantic River Aquifer has been identified by the Connecticut Department of Environmental Protection as one of 39 stratified drift aquifers in the State of Connecticut estimated to have a potential high yield in excess of 5.0 million gallons per day for water supply. The potential yield of this aquifer has been estimated at 10.9 million gallons of water per day.

The City of Norwich is currently preparing Aquifer Protection Regulations pursuant to Connecticut Public Act 89-305 to regulate development within the aquifer.

The impact to the Yantic Aquifer resulting from the construction and operation of the Algonquin E-1 Loop should be investigated in the EIS. The location of Yantic Aquifer is shown on the attached map.

Specific concerns include the following:

a) Impact on the aquifer if blasting is required for pipeline construction.

b) Contamination of the aquifer from the methanol used in hydrostatic testing of the pipeline.

c) Potential pollution of the aquifer resulting from the use of herbicides to maintain the pipeline right-of-way.

1

L5-1 A discussion of potential impact on groundwater resources resulting from pipeline construction and operation was presented in section 5.1.3.1.1. and would apply to the Yantic River aquifer. Algonquin has stated in its Resource Report for water resources (CP88-187-001), that no chemical additives would be used during hydrostatic testing of the proposed pipeline. Algonquin's right-of-way maintenance procedures involve only mechanical clearing of vegetation. Herbicides are not proposed to be used for vegetation control. Blasting and contamination concerns are addressed by mitigation measures discussed in section 5.1.3.1.2. and DEIS recommendation 10, modified (see section 7.3). Our recommended procedures and mitigation measures would adequately protect groundwater resources by avoiding or minimizing potential impact.

L5

d) Contamination of the aquifer resulting from refueling o machinery during the construction phase of the pipeline.

2. Well Site #1 is owned and operated by the City of Norwich Public Utilities and is located approximately 500 feet downstream of the proposed pipeline location. Well Site #1 draws water from the Yantic Aquifer and the Yantic River. The well has the potential to provide one million gallons per day, and it is the back-up water supply for the City of Norwich. The location of the well site is indicated on the attached map.

It is requested that the EIS address potential impact to the well, water quality and water supply which may result during construction and operation of the pipeline.

3. The proposed E-1 Loop (mile post 1.5) is located within the 100 year flood plain of the Yantic River. The Yantic River is subject to frequent flooding. The United States Department of Agriculture, Soil Conservation Service, the Connecticut Department of Environmental Protection, and the New London County Soil and Water Conservation District prepared the Yantic River Watershed Plan which is a flood prevention plan for the City of Norwich. The project involves construction of dikes, the relocation of structures and the removal of sediment from the Yantic River.

The proposed E-1 Loop will pass through a section of the flood prevention project area. It is recommended the EIS investigate potential conflict between the proposed pipeline and the flood prevention project, and any pipeline design or structural requirements for placement in a flood plain.

The location of the proposed E-1 Loop and the flood prevention project are shown on Figure 14.3, sheet 3 of 3 as attached.

For further information on the Yantic River Watershed Plan contact:

Philip H. Christensen
State Conservationist
Soil Conservation Service
16 Professional Park Road
Storrs, CT 06268-1299
Telephone (203) 429-9361

4. As noted in Section 2.1.3 of the DEIS, Algonquin has indicated that the facilities included in the proposed NIP Project will change from what was originally proposed. It is requested the City of Norwich have an opportunity to comment on any changes to the E-1 Loop.

5. The wetlands disturbance as indicated in the DEIS may be underestimated. The Official City of Norwich Inland Wetlands and Watercourses Map is only a guide, it was developed from the Soil Survey of New London County, Connecticut which is a general soil type map. It is recommended that the proposed pipeline location be field inspected by a soil scientist to determine the exact location of all wetlands which may be

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L5-2 **Comment noted. Information has been incorporated into table 4.1.3-1. A discussion of potential impact on groundwater is presented in section 5.1.3.1.1.**

L5-3 **Pipelines commonly cross or are located within floodplains, floodways, and rivers and are installed in marine environments. Measures we have recommended in section 7.3 and in our Erosion Control, Revegetation, and Maintenance Plan and Stream and Wetland Construction and Mitigation Procedures provide adequate protection.**

The DOT Minimum Federal Safety Standards in 49 CFR Part 192 provide adequate protection for the flood prevention project in terms of environmental resources and structural requirements.

L5-4 **No changes were made to the E-1 Loop as originally proposed by Algonquin.**

L5-5 **All wetlands potentially affected by the proposed project would be field-delineated prior to construction. Refer to comment response F11-3.**

impacted as a result of the pipeline improvements. The site Specific Impact of the wetlands should be addressed in the EIS.

7. Section 5.1.3.2.2 Site Specific Impact of the DEIS does not address the potential impact to the Yantic River. A 130 foot crossing is proposed. It is recommended the EIS address potential impact to the River that may result during the construction and operation of the pipeline.

In addition, it is requested Site Specific Procedures as outlined in Section 5.1.3.2.1 of the DEIS be prepared for the Yantic River crossing.

8. The proposed E-1 Loop will cross two branches of Gardner Brook near mile post 4.5. It is requested the EIS address the potential impact to the Gardner Brook that may result during the construction and operation of the pipeline. It is also requested Site Specific procedures as outlined in Section 5.1.3.2.1 of the DEIS be prepared for the crossings.

9. Section 5.1.12.1 of the DEIS addresses Safety Standards, it is requested that the EIS address the safety standards that will be implemented for the development of the E-1 Loop. It should also indicate the location of the Gas Control Center for the E-1 Loop and provide the Emergency Response Plans for pipeline leaks or malfunctions.

10. Table 2.7.1 of the DEIS identifies the Environmental Permits for the Proposed NIP Project. The table indicates that permits are required for wetland crossings on the local level from the Conservation Commission. In a telephone conversation with Kurt Flynn, Project Manager, on April 18, 1990 he indicated that the permits outlined in Table 2.7-1 are not a requirement of the Certificate of Public Convenience and Necessity. This issue should be clarified, the permit requirements outlined in the table give the impression that they are required as part of the Certification. The EIS should also indicate jurisdiction of FERC Certification as it relates to state and local permits.

11. The proposed pipeline is aligned through a densely populated area and will pass through a major river and wetlands. It is strongly recommended that Algonquin and/or pipeline contractors notify the City of Norwich (Planning Department, Public Works, Public Utilities) to conduct a pre-construction conference prior to site disturbance. The pre-construction conference should be informational in nature and provide the City with the specific construction details, inspection of the installation of the erosion and sediment control measures, and provide project phases and timing. It is also recommended a single contact person be designated to act as a liaison and troubleshooter between the City of Norwich and Algonquin.

12. The construction of the proposed gas pipeline will destroy a number of stonewalls which are an integral part of New England's history and heritage. It is requested that all stone walls that are damaged during the construction of the pipeline

L5

6 L5-6 In section 5.1.3.2.1., the discussion of general construction and operational impact on surface water resources would apply to the Yantic River crossing. Site-specific concerns and construction procedures would be addressed in the site-specific construction procedures that Algonquin would be required to submit to FERC for review and approval prior to construction.

7 L5-7 Algonquin would be required to construct the crossings of these streams according to our Procedures as presented in appendix D. The impact on water quality would be temporary, occurring primarily during in-stream construction. The mitigation measures provided in our Procedures would adequately minimize or avoid any potential short- or long-term impact on the Gardener Brook tributaries, which are currently designated as class B/A.

8 L5-8 As discussed in section 5.1.12.1, the proposed pipelines would be designed, constructed, operated, and maintained in accordance with the DOT Minimum Safety Standards in 49 CFR Part 192. It is beyond the scope of this EIS analysis to discuss the individual safety standards for each pipeline segment. The emergency plan for the E-1 Loop can be obtained from Algonquin, which is required to establish and maintain liaison with the appropriate fire, police, and public officials.

9 L5-9 Comment noted; refer to revised section 2.7.

10 L5-10 Comment noted. The need for a preconstruction conference and a specific contact between Algonquin and the city of Norwich is a matter to be discussed between the city of Norwich and Algonquin representatives.

11 L5-11 Generally, the applicant would restore all fences or stone walls removed or disassembled during construction. However, we have added a recommendation that Algonquin restore all stone walls following construction along the proposed E-1 Loop. Access to the pipeline would be as agreed upon between Algonquin and the landowner.

be repaired. However, it would be acceptable to maintain a permanent access way (one vehicle wide) through the walls for future maintenance of the pipeline.

13. The Wawecus Hill Road Variation as outlined in Section 6.3.1 of the DEIS is the preferred route. As noted in the DEIS the proposed pipeline would encroach upon 3 houses in a newly constructed subdivision on Wawecus Hill Road, the alternate route will have the least impact on existing residential development.

14. Listed below are proposed or pending development proposals near the pipeline. The location of the proposals are shown on the attached map.

a) A large residential development was proposed and received conceptual approval in the area adjacent to the CL&P right-of-way (alternate route) north of Old Salem Road,(near mile post #4.7-4.9) however, such conceptual approval has since expired. At this time there are no plans currently pending before the City Commissions, however, they are anticipated in the near future.

b) The parcel south of Salem Turnpike adjacent to the existing Salem Turnpike Meter Station (near mile post # 4.9) has recently been rezoned to the Planned Commercial Zone, and a large shopping mall complex is proposed on the site.

c) An office building complex is proposed on a parcel east of the Salem Turnpike Meter Station.

d) The pipeline alignment passes near a proposed miniature golf and entertainment center near mile post 1.5. The recreation park proposal is currently in the approval phase before the Zoning Board of Appeals and the Inland Wetlands, Watercourses and Conservation Commission. The developer plans to start construction during 1990.

It is requested that FERC consider the above noted future development proposals in the EIS.

15. It is recommended Algonquin maximise the use of existing right-of-way for construction and limit the construction right-of-way to 50 feet in all areas where the proposed pipeline is adjacent to residential development.

If you have any questions please contact Ellen Schmidt Grady at 203-886-2381 during the hours of 8:30 A.M. and 4:30 P.M.

Very truly yours,

Ernest Zmyslinski

Ernest Zmyslinski
City Manager

ESG
Attachments
cc: Mr. Kurt Flynn, Project Manager
Mr. John Radacis, Office of Policy and Management

L5

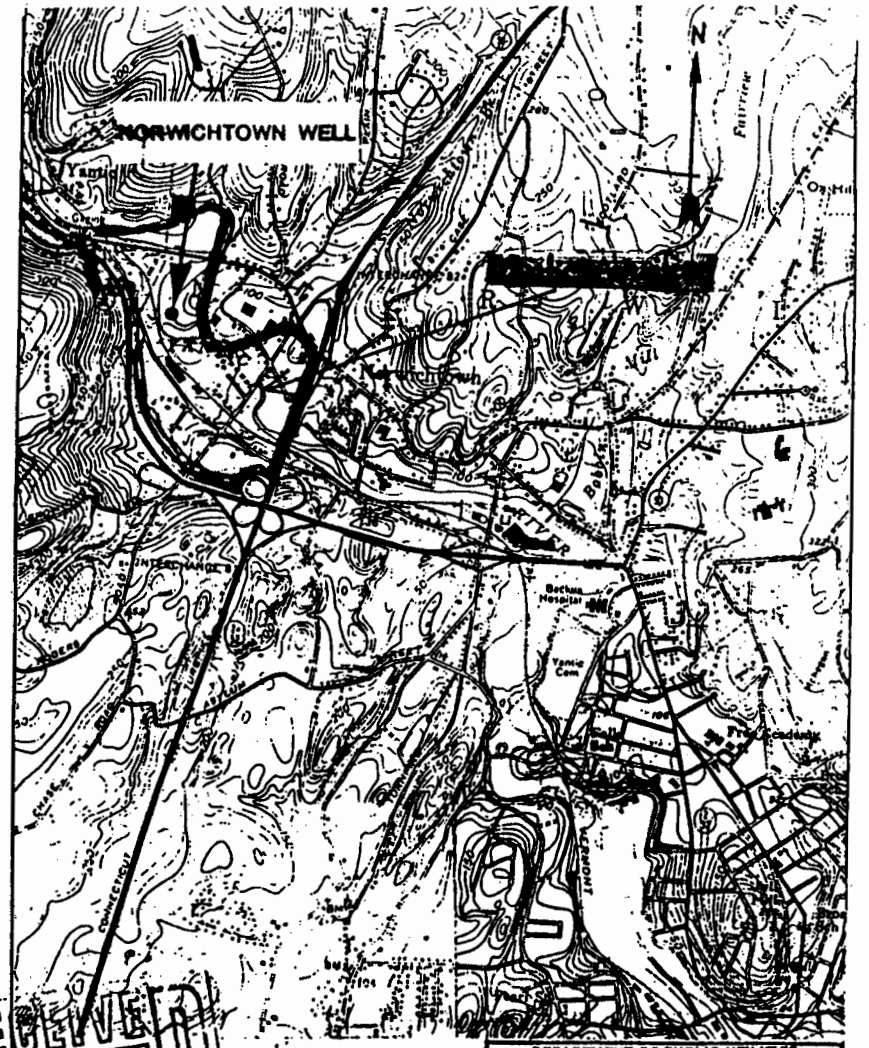
12 L5-12 **Comment noted.**

13 L5-13 **Section 4.1.9.1.1 has been amended to incorporate your comments.**

14 L5-14 **Generally, we recommend reducing the construction right-of-way only in congested residential areas and in areas where the removal of trees or vegetation could result in long-term, irretrievable loss. Reduction of the normal 75-foot-wide construction right-of-way would result in a slowdown in construction as efficient movement of equipment and materials is hampered by the narrower right-of-way.**

Our review of the proposed E-1 Loop identified the following residences of concern. At West Town Street, a residence would be located on the opposite side of the construction right-of-way. A business is located on the construction side of the proposed right-of-way within 10 to 15 feet of the edge of the construction right-of-way. By necessity, the construction right-of-way width would be reduced through this area. At Browning Road, four residences are located over 50 feet from the proposed construction right-of-way in a generally cleared and open area. No trees would be removed, except on the property of one residence where ornamental plantings would probably be disturbed. We have recommended that construction and permanent rights-of-way be reduced at Wawecus Hill Road along the Wawecus Hill Road Variation to avoid removal of existing tree screening of the powerline right-of-way.

L5



DEPARTMENT OF PUBLIC UTILITIES
NORWICH CONNECTICUT

LOCATION PLAN
Yantic Aquifer
NORWICHTOWN WELL

FIGURE II-6

RECEIVED
1 7 1990
CITY OF NORW

The well house is 15'x25', in good condition, and enclosed within a 6 ft. chain link fence. Entrance is through a 12 ft. wide double gate.

Water quality tests on this well are performed on a regular basis. At the present time, the water from this well receives chlorination before entering the distribution system. The untreated water quality at this well is within acceptable limits required by Connecticut DOHS.

Water quality analysis for iron and manganese indicate that these values are well below acceptable limits and have remained unchanged over the last several years. During the period of time from 1984 to 1988, the sodium and chloride concentrations in the water supplied from this well were found to gradually increase, but still remain within acceptable limits. Sodium and chloride concentrations over this period are given in Table II-3 below.

TABLE II-3
NORWICHTOWN WELL SODIUM AND CHLORIDE CONCENTRATIONS

Date of Sample	Sodium (mg/l)	Range (mg/l)	Chloride (mg/l)	Range (mg/l)
7/19/83	3.5	--	14.3	--
7/82-6/83	7.0[1]	6.0-7.5	15.0[1]	10.0-20.0
7/16/84	10.6	--	23.4	--
6/84-7/85	10.2[1]	9.8-10.7	23.8[1]	15.0-27.0
7/24/85	11.8	--	32.0	--
6/85-7/86	11.7[1]	1.6-13.7	33.4	31.5-35.3
7/8/86	14.0	--	35.2	--
7/86-6/87	14.2[1]	13.5-15.0	39.2[1]	35.2-41.9
7/21/87	15.8	--	42.4	--
7/19/88	16.4	--	52.1	--

[1]Geometric Mean

The reason for this gradual increase may have been due to the well's proximity to a DOT salt storage area, located approximately 2,500 ft. northwest of the well. The salt storage area has been removed from the zone of contribution. To insure continued compliance with Connecticut DOHS standards, the Norwich DPU is planning to add chemical treatment. This treatment will include pH adjustment, chlorination, fluoridation and corrosion control.

According to a hydrogeologic study presented in the 1968 Maquire report, the aquifer has a potential for development of 1.9 MGD.

Data for the Norwichtown Well is presented in Table II-4 on Page II-17.

Well pump inspection reports are presented in Appendix D.

:E II-4: NORWICHTOWN (TANTIC) WELL CHARACTERISTICS

Date Installed	1971
epth, ft. (from original ground surface)	89.00
Casing diameter, in.	18.00
Screen - type	Stainless Steel
- openings	120-slot, top 10 ft. 160-slot, bottom 5 ft.
-length (ft.)	15.00
Static Water Level, ft. November 30, 1988	13.20
'ouping Water Level, ft. November 30, 1988	39.60
Pump Discharge, gpm November 30,1988	725.00
Specific Capacity, gpm/ft November 30, 1988	27.50
Specific Capacity, gpm/ft In 1971 When Well Was New	32.00
Pump Rated Capacity - flow, gpm	700.00
- TDH, ft.	240.00
Chemicals added	Chlorine

TE: DOHS requires treatment before this well is used on a regular basis. NDPU has designed treatment and expects to construct within two years.

Groundwater Safe Yield

The only feasible method for estimating the well's safe yield at this time is described in the Connecticut DOHS Guidelines for Water Supply Plans. The method in the guidelines pertains to confined or bedrock wells and thus, is not strictly applicable for the Norwichtown Well. Nevertheless, the method calls for using 90% of the well yield, assuming an 18 hour day operation. The full well yield is not used to allow consideration for screen incrustation, plugging and well inefficiencies. For Norwichtown Well, the calculation is as follows, based upon the actual pump capacity:

Pump Capacity	= 700 gpm
90% of Capacity	= 630 gpm
Safe Yield at 18 hours/day	= 0.68 mgd

By installing several observation wells and performing a 72 hour pump test, data can be gathered which would determine if the well is hydraulically connected to the river, the limits of pumping, and aquifer characteristics. This information will be required in order to satisfy State regulations for mandatory Level B Aquifer Mapping by July 1990. For these reasons, it is recommended the DPU immediately implement a monitoring well installation/pump test program at the Norwichtown Well.

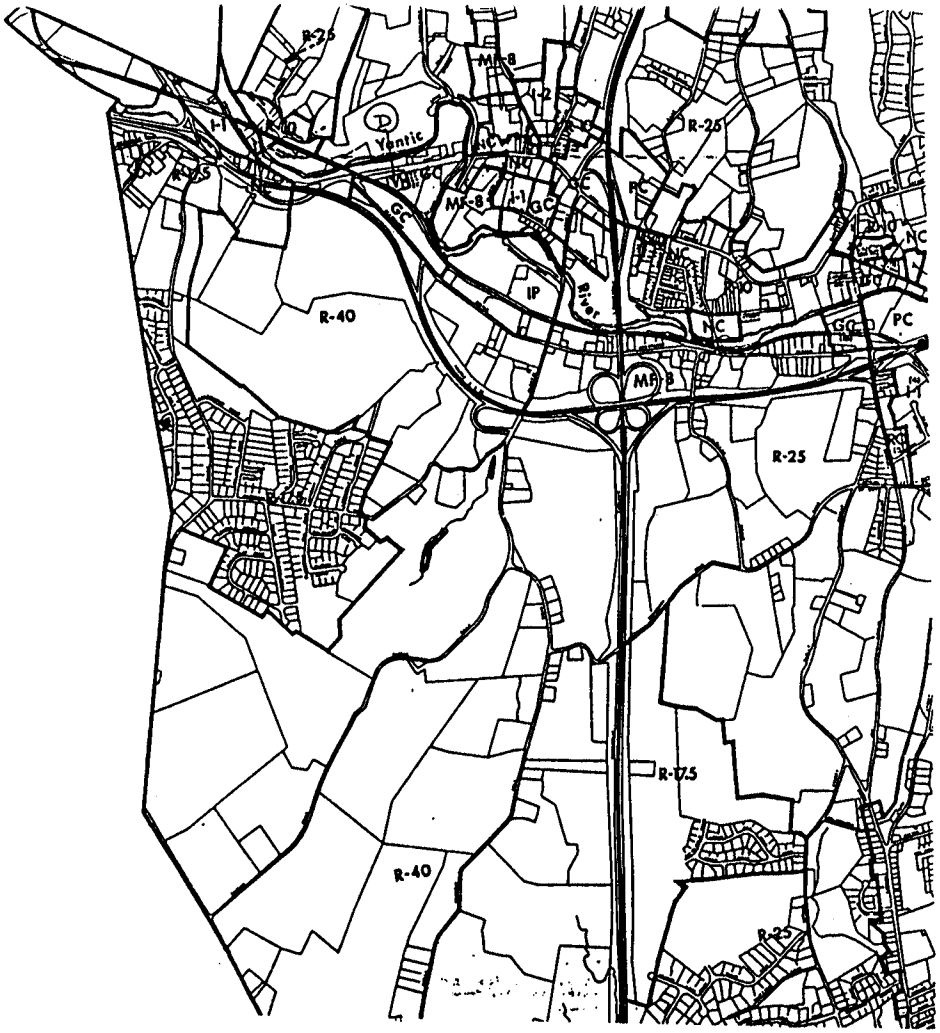
Margin of Safety (Present Conditions)

The computed margin of safety for the Norwich Department of Public Utilities system is 1.67 assuming Deep River and Norwichtown well to be the only active sources at this time. This is based on the yield of active sources divided by the 1988 Average Day Demand. The combined production of Deep River Reservoir and Norwichtown Well is 5.59 MGD. (Deep River Reservoir is 4.91 MGD, Norwichtown Well is 0.68 MGD).

Treatment Facilities

Presently, the only treatment available in the system is Deep River Reservoir, although fluoridation, pH control and corrosion control will be available at Norwichtown Well by 1992 as required by the DOHS before the well can be used continuously. Approximately 99% of the system's potable water is supplied from Deep River Reservoir. The outlet conduit leading from the gatehouse is a 42 inch steel line 48 inch RCP pipe which divides into two branches at the downstream toe of the dam. Each branch of the resulting "Y" is valve controlled with the 42 inch diameter leg acting as an outlet pipe and the other leg, a 30 inch diameter conduit leading to the water treatment plant. The water is metered at the influent to the treatment plant and at the discharge header to the City from the finished water pumping station. Both raw and finished water meters are Fisher Porter, 30 inch, flow tube type meters. The difference in flow between these meters is the water used for backwashing the filters and withdrawing sludge from sedimentation basins. This water is wasted to lagoons.

L5



L6

TOWN OF HOPKINTON, MASSACHUSETTS 01748

OFFICE OF THE SELECTMEN

April 23, 1990

Lois D. Cashell, Secretary
FEDERAL ENERGY REGULATORY COMMISSION
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: DOCKET No. CP88-171-001

Dear Secretary Cashell:

In accordance with the comment procedure outlined in the front of the "Niagara Import Point Project Draft Environmental Impact Statement", I am enclosing comments forwarded to our office by the Chairman of the Hopkinton Conservation Commission, Mr. Peter Cholakis.

We appreciate your consideration of the concerns expressed by the Commission.

Sincerely,

Theodore D. Kozak
Executive Secretary
TDK/ek
cc: Mr. Kurt Flynn, Project Manager

L6

CONSERVATION COMMISSION

Town of Hopkinton, Massachusetts 01748

MAR - 8 1990

TO: Executive Secretary

FROM: Conservation Commission

DATE: March 7, 1990

SUBJECT: NORTHEAST SETTLEMENT EXPANSION PROJECT DOCKET No. CP88-171-001
TENNESSEE GAS PIPELINE COMPANY

The impact of this project will be significant and harmful to the environment versus any gain to the community.
The Commission objects to this project unless proven it is a benefit to the town's safety and welfare.
Typical of our concerns is what might happen to numerous, valuable vernal pools and the breathing areas of numerous "animals" when blasting is required to get thru ledge as it would be. 1

L6-1 We acknowledge that pipeline construction may affect vernal pool habitats that may be locally important breeding areas for certain amphibians and reptiles. However, we feel that any such impact that may result from construction of Tennessee's proposed Segment 9 in Hopkinton would not significantly affect or endanger any wildlife populations. We also acknowledge that blasting may affect wildlife habitat associated with ledges and outcrops, but are unaware of any significant habitats or species that may be affected by such activity in Hopkinton. As stated in the DEIS, we have concluded that, while the proposed project would result in impact on the environment, such impact would not be significant.

L7

town of

LONGMEADOW, MASSACHUSETTS

incorporated 1783 phone 567-5433 01106

CONSERVATION COMMISSION

April 28, 1990

Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

RE: Docket # CP88-171-001

Dear Ms. Cashell,

The Longmeadow Conservation Commission appreciates the opportunity to comment on the Draft Environmental Impact Statement (DEIS) on the Niagara Import Point Project, dated March 1990. We have many concerns about the project's impact on wetlands in Longmeadow.

The DEIS fails to give specific reasons why an alternate route, or variation, was not adopted. As quoted from the DEIS "None of the route variations were found to be environmentally preferable to the proposed route". This statement is vague at best. It does not address any issues or give any specific reasons.

The alternate route south from MP 261+1.8 to the Northeast Utilities right-of-way in Connecticut would be largely through dry fields and woodlands and cross Raspberry Brook at right angles. Upon reaching the Northeast Utilities right-of-way (ROW), the alternate route would follow the ROW easterly then northerly, still with the ROW, to the existing Tennesse Gas ROW at approximately the Longmeadow-East Longmeadow boundary. This alternate route would avoid the problems and dangers to Wolf Swamp School and the residences west of and along Wolf Swamp Road.

In contrast, if the proposed route is used, the area between MP 261+1.8 and MP 261+3.0, plus or minus, is almost 100 % wetland. This area is a combination of permanent wetland and the Longmeadow Brook Valley. Upon leaving the brook valley, the route must rise through a steep ravine to the upland. At the present time this ravine and its sides are

L7-1 As stated in section 6.2.1, the Longmeadow Variation was not recommended because: 1) a longer crossing of the Fannie Stebbins Memorial Wildlife Refuge would be required; 2) additional wetlands would be affected; and 3) the Connecticut Water Service's active Spring Lots Wellfield would be crossed. Additionally, the variation would cross Raspberry Brook, which is known habitat for the spotted turtle, a Massachusetts-listed species of special concern.

1 Generally, pipeline construction through wetlands would not significantly alter the wetland functions as no wetlands would be filled or drained. Therefore, no wetland loss would occur. Furthermore, our recommended procedures (see appendix D) in conjunction with state and/or local agency-imposed conditions would further ensure that the quality of each wetland crossed would not be degraded.

Our recommended procedures for erosion control, revegetation, and maintenance (see appendix C) set forth measures to minimize the potential for erosion on steep side slopes both during and after construction. Although the potential for severe erosion may exist along the ravine, proper construction and restoration techniques can effectively neutralize the problem. This is evidenced by the presently stable condition of the ravine along the existing pipeline right-of-way.

stable. If the proposed route is used, rather than the alternate route, the potential for erosion of the ravine and its sides are significant. Erosion controls can mitigate to some degree the potential for significant erosion. However, one good rain fall, not to mention consecutive days of rain, could cause severe sedimentation within the Longmeadow Brook Valley and surrounding wetlands, resulting in permanent damage to these sensitive areas. We strongly urge the adoption of this alternate route, and/or the consideration of other alternate routes. 1

In regards to p. 7-16, it is our view that Tennesse Gas Pipeline should conduct a survey for the common moorhen, and a survey for the many-fruited loosestrife, as proposed, immediately and before any further planning is done. 2

It is the opinion of the Longmeadow Conservation Commission that it is inappropriate to place the loop pipeline through wetlands or conservation land and the Fannie Stebbins Wildlife Refuge. 3

Yours truly,

Anne C. Rogers, Chairperson
Longmeadow Conservation Commission

AR/dk

cc: Mr. Kurt Flynn, Project Manager
Environmental Policy and Project Analysis Branch

Board of Selectmen, Longmeadow

L7

L7-2 As described in section 5.1.5.2 of this FEIS, we have recommended that surveys for the common moorhen and the many-fruited false loosestrife be conducted prior to construction and in consultation with the MNHESP. If these species are found and it is determined they could be affected by construction of Tennessee's proposed loop, we have further recommended that Tennessee work with the MNHESP to develop appropriate mitigation plans, including route changes, to minimize impact on these species.

L7-3 Comment noted.

L8

town of
LONGMEADOW, MASSACHUSETTS
phone 567-5433 20 Williams Street 01106

BOARD OF SELECTMEN
EDWARD T. HEAPHY, CH.
ARLENE C. MILLER
ROBERT F. CHERITANO

PATRICIA A. VINCHESI
Administrative Assistant

April 27, 1990

Secretary
Federal Energy Regulatory Commission
825 North Capital Street
Washington, D.C. 20426

RE: Niagara Import Point Project Draft Environmental Impact Statement, Segment 8, Town of Longmeadow, Massachusetts

Dear Mr. Secretary:

Thank you for giving the Town of Longmeadow an opportunity to comment on the draft environmental impact statement (EIS) relative to the Niagara Import Point Project.

In general, the Town echoes the sentiments echoed on page 1-7 of the report that indicates if the project receives all necessary state and local approvals then the impact of the environmental report is somewhat mitigated. However, the Town believes it has raised significant concerns to FERC regarding environmental considerations, and in fact, these considerations must be met before any local approvals are given.

It is apparent in the EIS that concern has been given by FERC to the comments previously submitted by the Town regarding this project and we extend our appreciation for having our concerns evident in the EIS. Some outstanding issues do exist and are listed below:

* Our Conservation Commission is particularly concerned that the restoration of slope occurring in the Meadows will be impossible to replicate in its present condition. The Town supports the recommendations outlined in the EIS and requests comment and review before any final mitigation plan is approved by FERC. Please also review the specific comments submitted to FERC by our Conservation Commission. 1

* FERC's proposal to place the proposed loop line on Wolf Swamp Road on the other side of the existing pipeline under an existing sidewalk which partially parallels Wolf Swamp Road has been reviewed as an alternative and the Town supports this variation. (page 4-66) (page 6-12, 6-12) Town Engineer's Review: 3/29/90, 4/27/90. 2

L8-1 See response to L7-1 and section 6.2.1. We are modifying DEIS recommendation 53 to have Tennessee consult with the Town of Longmeadow to coordinate on the development of the required mitigation plans.

L8-2 Thank you for your comment. We wish to note, however, that this proposal is Tennessee's proposal not ours (FERC's). Our recommended variation in the DEIS was to place the pipeline in Wolf Swamp and Denslow Roads (see DEIS section 6.2.2). We have reconsidered and now recommend adoption of Tennessee's proposal to place the pipeline under the sidewalk on Wolf Swamp Road. See revised sections 5.1.9.1.1 and 6.2.2 and table 7.2.1.

L8

Thank you for giving us the opportunity to comment. We look forward to being allowed an additional review of the mitigation plans filed by Tenneco regarding this project. If we can provide any further information, please don't hesitate to contact our Board.

Sincerely,
BOARD OF SELECTMEN

Edward T. Heaphy, Jr.
Chairman

ETH/PAV/cf

cc: Superintendent of Public Works
Conservation Commission
Tree Warden

* Page 4-78 lists Wolf Swamp School as approximately 300 feet away from the proposed loop. This is incorrect; the distance is only 180 feet. Town Engineer's Review: 3/29/90. 3

* Concerns about disruption to the Wolf Swamp school, residences and the athletic field still exist and we request that as much additional consideration as possible be given to these areas. 4

* The Town is in agreement with FERC's recommendations of items 49, 50, and 51 on pages 7-16. 5

* The Town is in agreement with the requirement to have Tenneco file a site-specific mitigation plan for construction and restoration in the Fannie Stebbins Memorial Wildlife Refuge and Meadows area and respectfully request review and comment before any final plan is approved by FERC. (page 7-17) 6

* The Town is in agreement with FERC's recommendations of items 54 and 55 on page 7-17. 7

* The Town supports and re-emphasizes the need to have the construction of the pipeline environmentally sensitive to the Town of Longmeadow's publicly owned lands. (Page 7-6). 8

* The Town still maintains concerns about the potential loss of trees as a result of pipeline construction and will request replacement by Tenneco of any damaged trees in excess of one year following construction. Despite the acceptance of the Wolf Swamp Road variation, the Town maintains its concerns about our treebelt populations. (Page 5-53,5-54) (Page 5-85). 9

* Again please note that the well-fields located in Enfield, Connecticut and discussed on page 5-87 are also reserve well fields for the Town of Longmeadow, MA. 10

* No information exists as to an emergency evacuation plan in the event of a gas leak or explosion. We have received no information to date regarding this despite our inquiries to Tenneco and would like some details as to how this would work. 11

L8-3 Thank you for your comment. See revised section 4.1.9.2.

L8-4 Thank you for your comment. We have included a recommendation in section 7.3 that Tennessee submit mitigation plans for construction through the Wolf Swamp Athletic Field.

L8-5 Thank you for your comment.

L8-6 Thank you for your comment. Also, see response to L8-1.

L8-7 Thank you for your comment.

L8-8 Thank you for your comment.

L8-9 We have revised table 5.1.9-3 to recommend that Tennessee replace any trees that are damaged during construction.

L8-10 Comment noted.

L8-11 As stated in section 5.1.12.1., DOT Minimum Federal Safety Standards in 49 CFR Page 192, each pipeline operator is required to establish an emergency plan to minimize hazards in the event of a natural gas pipeline emergency and to establish and maintain liaison with appropriate fire, police, and public officials. Key elements of the emergency plan are listed in section 5.1.12.1. It is beyond the scope of the EIS to analyze the specific details of each emergency plan. This is an issue which must be discussed between the town and Tennessee.

rec'd 3/21/90 G1

Jay Newton
16 Fairway Lane
Medway. Ma. 02053
3-19-1990

Flynn
ral Energy Regulations Commission
ironmental Policy and Project Analysis Branch
fice of Pipeline and Producers Regulation
oom 7403
825 North Capitol St., N.E.
Washington, D.C. 20426

Subject: FERC Docket Nos. CP89-646-000, CP89-654-000, CP89-661-002 and CP88-187-002

Hi,

Here is the information I have available at this time. I will be collecting more but you indicated the need to get something to you ASAP. Thanks for your help last Friday, the 9th. I have a much better understanding of the process for siting the gas line. Hopefully what I have included will show you something new (our development).

First, please take a look at the map I have labeled "Town of Medway". This is just a portion of the water department map which show where the original pipeline follows the powerlines and then splits off to the east. This "old" line goes through my backyard. I am number 16 in the development marked "Chestnut Hill Estates". You can match up this part of the map with the other enclosed copy of the page 10 of 12 of figure A2 of the above docket numbers.

See the fork? Algonquin's proposal would have bypassed most of our development and missed 14 house lots and avoided 3 road crossings and 7 houses that are within 50 feet of the pipeline. These last houses are marked very approximately in red or green the "Medway" map. You will note that they are on both sides of the pipeline which would make it difficult to avoid them by using one side or the other of the original pipeline. In addition, the houses marked with green are ON the easement, with one on the north side and one on the south side. The lots in the northwest part of the development (marked with blue) do not have houses on them yet so there would be less disruption if Algonquin's original proposal were followed.

I canvassed most of my neighbors this weekend and the ones that were home, signed on the next page. A couple others called me later and will sign the next copy if needed. W[redacted] wit[redacted] right [redacted]. We would all appreciate it if the new pipeline did not further restrict our ability to enjoy our country properties, by reducing forever the area in which we could grow and enjoy trees.

I visited the Holliston Town engineer. He will now be writing you a letter also to see if some other route can be worked out since he did not know our community existed when he made his original proposal. I will contact you this week to discuss this information and see how I should augment it.

Thanks again for your help.

Warmest regards,

Jay Newton

G1-1 We have reevaluated the Medfield Loop Variation. Section 6.3.2 has been revised to reflect your comments.

1

G1

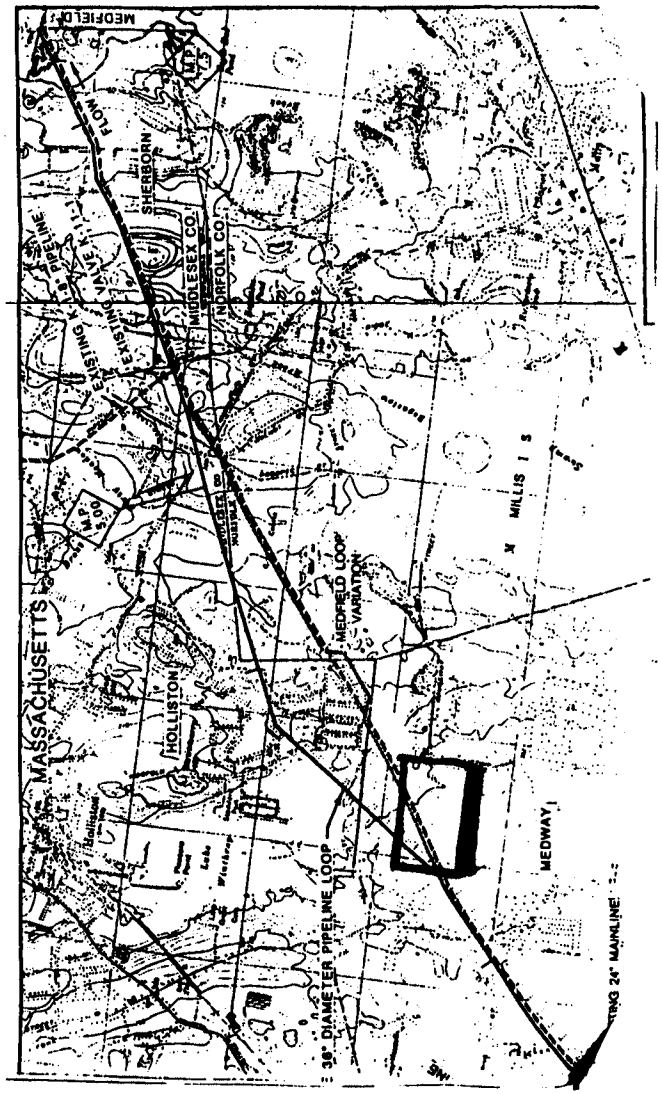
.S. The Algonquin people say that you are the only ones who have the ,erial maps, so I could not check to see if our development is on them. I can say however that the first houses were built in early 1988 and that ay house was definitely complete by October 1988.

The following people are neighbors and abutters to the existing pipeline in Chestnut Hill Estates and would rather have the pipeline go around their development if at all possible.

Stephen Malinyak 14 Fairway Ln., MEDWAY
John M Clark Jr 19 Fairway Ln MEDWAY, MA
Michael Greenberg 13 Skyline Dr., Medway, MA 533-9698
[illegible] 15 Skyline DR Medway MA --1956
[illegible] 16 Fairway LANE Medway Ma.
Mary R. Gill 11 Skyline Dr., Medway, MA 02053 533-6463

Note: Kurt, the Hollistan Town engineer was also unaware of our development and will be sending you a letter. Only one person per household signed and not all people were able to be contacted or if contacted were available to sign.

Jay M.



G1

Kurt Flynn

Jay Newton
16 Fairway Lane
Medway, Ma. 02053
April 25,1990

Secretary
Federal Energy Regulatory Commission
825 North Capitol St., N.E.
Washington, D.C. 20426

Docket Nos. CP88-171-001 Niagara Import Point Project

Dear Sir or Madam,

I oppose the Medfield Loop Variation that might route the new pipeline through the original Algonquin R.O.W. which happens to be in my back yard. I have enclosed a plot plan of my property, and several other maps and notes that might help you with your siting decision. Also enclosed is a copy of the letter you received from Michael Greenburg for which I supplied the attachments. The main reason for this is so you can associate me (and my letter) with that neighborhood, and better understand my location.

The Medway water map I have included shows approximately where my lot is in Medway and its relation to the pipeline.

I realize that many alternatives will be considered and it is still possible that the route behind my house could be chosen. If this is the case, I respectfully request that the new pipeline and construction work be done within the existing R.O.W. If any of my property needs to be taken for either permanent or construction R.O.W., then the privacy and natural aspects of my property would be severely affected.

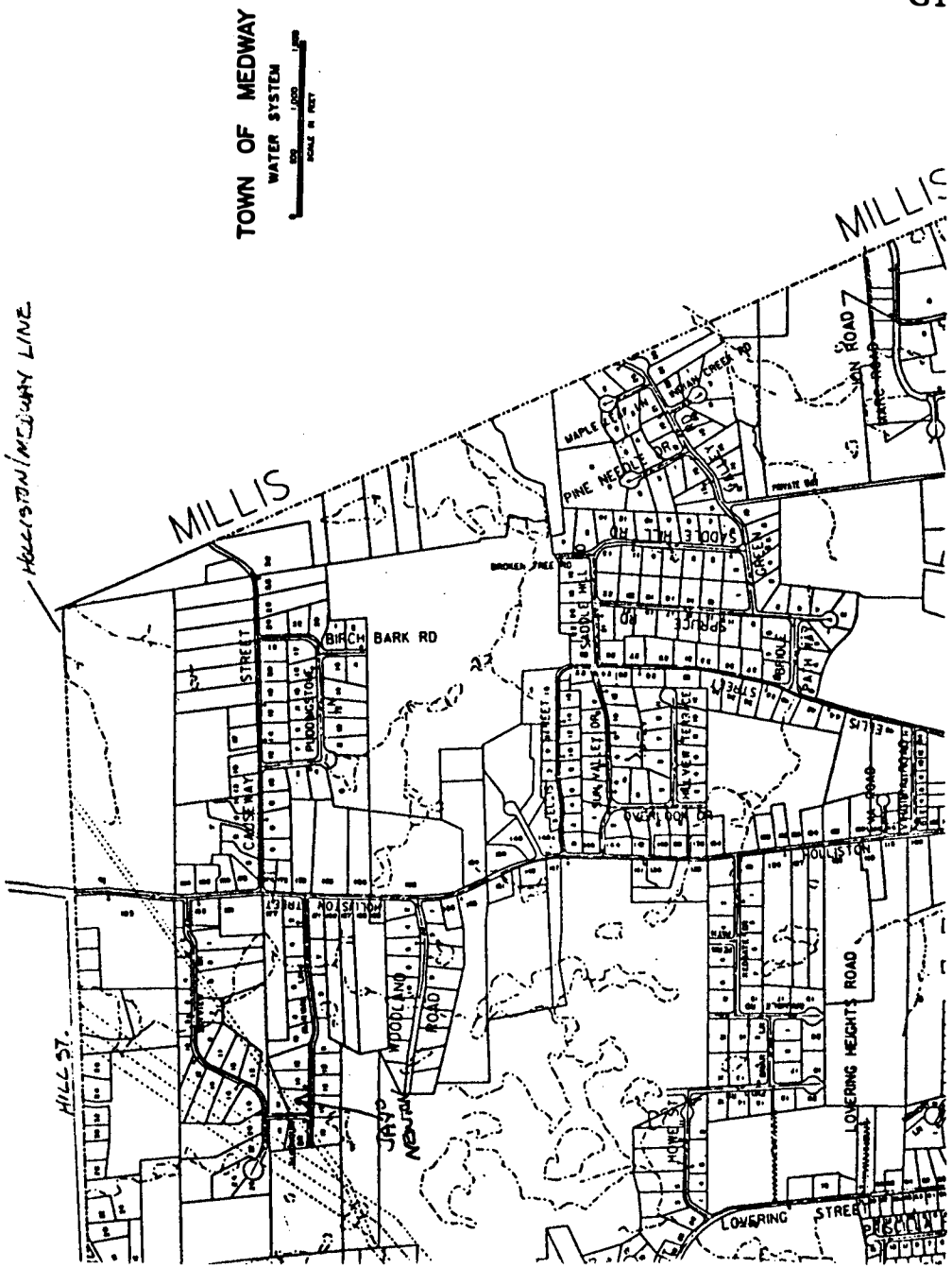
Unlike the Holliston Town Engineer has said, not all of Medway is on town sewer and my development is not. So a large portion of my property has no trees because of the space needed for a septic system. The enclosed plot plan will show you what I mean. I have taken great pains to keep the wooded parts of the property as natural as possible. I do not clean out the leaves or small bushes and fallen branches so it can be a home to insects, small animals and birds. This approach has worked. I have squirrels, chipmunks, rabbits, and many different birds. I also put up a blue bird house which has resulted in bluebirds raising a brood and returning this year. For birds, a wide variety of plant life is important including mature tall trees like maple and oak and shorter scrub trees, bushes and fields. I have all of these on my 1 acre plot of land now and the wildlife appreciates it. If the R.O.W. is enlarged for any reason, nearly all of this would be lost forever. 1

Finally, I like the limited amount of privacy provided by the trees when the leaves come out in the summer. The pictures I have enclosed do not have any leaves because they are not out yet this year. The pictures are numbered and there are corresponding numbers and arrows on the plot plan to indicate in what direction I pointed the camera.

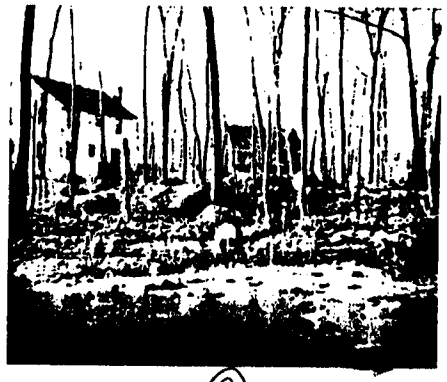
Please avoid disturbing this little bit of wilderness, when making your decision to site the pipeline.

Warm regards,

Jay Newton



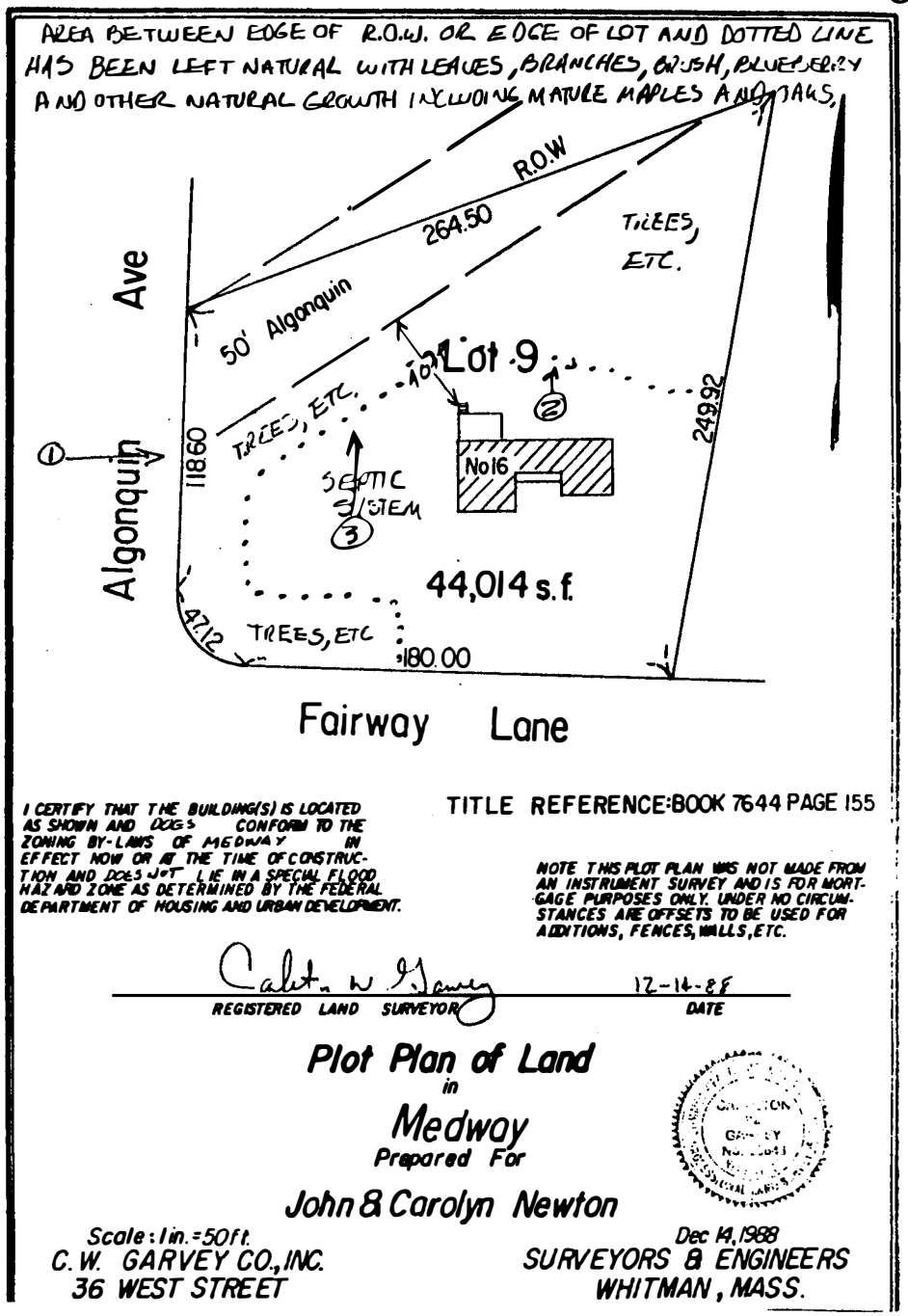
① clearly shows tree buffer between house on right and pipeline (cleared area) on left



② from backyard looking at earth berm created when last easement was constructed pipeline is just behind it.

③ From side yard looking toward easement notice blue bird house.

G1



I CERTIFY THAT THE BUILDING(S) IS LOCATED AS SHOWN AND DOES CONFORM TO THE ZONING BY-LAWS OF MEDWAY IN EFFECT NOW OR AT THE TIME OF CONSTRUCTION AND DOES NOT LIE IN A SPECIAL FLOOD HAZARD ZONE AS DETERMINED BY THE FEDERAL DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.

TITLE REFERENCE: BOOK 7644 PAGE 155

NOTE THIS PLOT PLAN WAS NOT MADE FROM AN INSTRUMENT SURVEY AND IS FOR MORTGAGE PURPOSES ONLY. UNDER NO CIRCUMSTANCES ARE OFFSETS TO BE USED FOR ADDITIONS, FENCES, WALLS, ETC.

Calvin W. Garvey — 12-14-88

REGISTERED LAND SURVEYOR — DATE

Plot Plan of Land
in
Medway
Prepared For
John & Carolyn Newton

Scale: 1 in. = 50 ft.
C.W. GARVEY CO., INC.
36 WEST STREET

Dec 14, 1988
SURVEYORS & ENGINEERS
WHITMAN, MASS.

Jay Newton
16 Fairway Lane
Medway, Ma. 02053
April 25, 1990

Secretary
Federal Energy Regulatory Commission
825 North Capitol St., N.E.
Washington, D.C. 20426

Docket Nos. CP88-171-001 Niagara Import Point Project

Dear Sir or Madam,

Below are a few observations I have made, while walking, running and biking through the area near my house and Algonquin's proposed loop in Medway, Ma.

Hill St. option (by Medway Town Planning Board) seems to make sense because it is on the town line and it uses the Power line ROW. There are a few houses on the south side of the street but they are set back quite a ways from the road. There is only one house on the north side of the road in the affected area which is also not too close to the road. This option would take no new ROW from anyone.

Following Skyview/Skyline Drive (I think it is now Skyline Drive) from the cul de sac down to Holliston St. would work fine because there is a very short distance and no buildings on the edge of Holliston St from Skyline to where the pipeline crosses, and it looks like unuseable land. When the new loop crossed the original pipeline on Skyline, it would then be in the proper position (south) of the existing line so one of the crossovers suggested by the Holliston Town Engineer would be avoided. 1

The other possibility would be to follow Skyline from cul de sac to where the pipeline crosses Skyline and then follow the existing pipeline keeping the new loop on the north side. This way it would miss the house that sits on the south side of the existing ROW and affect their yard very little (who am I to say).

Hope these help. Please feel free to call if you have any questions.
Jay Newton home 1-508-533-4008 and work 1-617-890-6300 x3377

Jay

KURT - because I only have one - I sent a copy - full size - assessor's map of most of the area for the Secretary, be sure to ask to see it.

Jay

Rec'd 4/2/90

G2

113 Lafayette Blvd.
Williamsville, NY 14221
March 28, 1990

Secretary
Federal Energy Regulatory Commission
825 North Capitol St., N.E.
Washington, DC 20426

Re: Docket No. CP88-171-001

Dear Sir:

I provided written comments on October 24, 1989 on your agency's Federal Register Notice of October 19 announcing your intent to prepare a Draft Environmental Impact Statement (DEIS) for the Niagara Import Point Project. My specific concerns dealt with the impact that the construction of Tennessee Gas Pipeline's Segment 2 crossing near Lewiston, NY would have on the important salmonid fishery on the Lower Niagara River.

I recently received a copy of the DEIS for the project. The DEIS alleviated my concerns by stating that the pipeline would be installed across the Niagara River using directional drilling methods. Page 5-33 of the DEIS made it sound that directional drilling would definitely be the method of choice and that "there would be no in-stream work and the fishery in this river would not be affected." Based on this, I didn't plan on providing comments on the DEIS.

My position in this matter changed, however, when I learned that the directional drilling method of pipeline installation was not a certainty. A Tennessee Gas official in Hamburg, N.Y. recently indicated that the company had contracted Earth Dimensions, Inc. of East Aurora, N.Y. to conduct core sampling of the Niagara River bottom. The core sampling is scheduled for the April 2-13, 1990 time-frame to determine the feasibility of the directional drilling method based on the bottom composition. The implication here is clear. The results of the core sampling may preclude the use of directional drilling and require different methods to be used. These alternate methods may very well require in-stream work and have a major impact on the Lower Niagara River fishery! 1

This possible use of alternate pipe installation methods is a significant new issue which needs to be tracked closely. It would require substantive modification of the DEIS prior to preparation of the Final EIS to properly guage the actual impact of Tennessee Gas Pipeline's Segment 2. As the DEIS is written now, it leads one to believe that we are commenting on the directional drilling method alone!

Please don't hesitate to contact me if further information is needed.

Sincerely,

James S. Cumming

cc: Mr. Kurt Flynn, Project Manager

G2-1 Thank you for your comment; we have recently been informed by Tennessee (Honig and Thibodeaux, 1990) that the core sampling of the Niagara River bottom, as referenced in this comment, has been completed. Preliminary results indicate that the subsurface composition under the river is similar to that found in earlier samples on the shore. Since these substrates appear to be acceptable for directional drilling, Tennessee has indicated that it is still planning to directionally drill the proposed Niagara River crossing. Consequently, this plan would be incorporated into Tennessee's certificate conditions should this project become certificated. As such, any deviation from this plan must be reviewed and approved by FERC prior to construction. Should open-cut trenching of the river be proposed by Tennessee, FERC's subsequent review would include the review and comments of all appropriate state and Federal agencies.

G3

LAW OFFICES OF
HOWARD L. NEWELL
655 WORCESTER ROAD
POST OFFICE BOX 2569
FRAMINGHAM, MASSACHUSETTS 01701-0566

HOWARD L. NEWELL
MICHAEL M. GREENBURG

FRAMINGHAM (508) 875-3151
BOSTON (617) 431-1267

April 10, 1990

Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

RE: Proposed Algonquin Gas Pipeline
FERC Docket No. CP88-171-001
Niagra Import Point Project

Dear Sir or Madam:

I am writing on behalf of myself and the other property owners of Fairway Lane, Algonquin Way and Skyline Drive, Medway, Norfolk County, Massachusetts, whose properties abut the currently existing Algonquin Gas Pipeline presently under consideration by your office.

It has come to our attention that plans are currently underway for the expansion and/or alteration of the pipeline and that several proposals are now being examined. Of particular concern to myself and the other property owners is the proposal entitled "Medfield Loop Variation."

It is my understanding that the "Medfield Loop Variation" contemplates the expansion of the existing right-of-way for 1.8 miles and would require the clearing of 11.3 acres of woodland. Of great concern, however, is the effect that such an undertaking would have on the properties through which the right-of-way runs. 1

For your convenience enclosed please find individual plot plans for the affected properties together with a site map indicating placement of structures with relation to the existing right-of-way. Please note that even the slightest expansion of the way on either side would cause untold damage to the values of the properties affected. In several cases the "Medfield Loop Variation", if pursued, would require the demolition of existing homes and/or the replacement of sewage septic systems. In several other cases previously buildable lots owned by individuals planning construction would be rendered non-buildable and hence valueless. Additionally a large area of wetlands runs

G3-1 We have reevaluated the Medfield Loop Variation. Section 6.3.2 has been revised to reflect your comments.

LAW OFFICES OF
HOWARD L NEWELL

through much of the proposed expansion area. It is thus readily apparent that pursuit of the "Medfield Loop" proposal would result in immeasurable expense to Algonquin Gas Company and untold human cost to all involved.

For the above reasons I would urge you to thoroughly examine all other proposals for the pipeline in question and that the "Medfield Loop Variation" either be abandoned or modified with input of the affected property owners. 1

If you have any questions in this regard or if I can be of any further assistance to you, please do not hesitate to contact me.

Sincerely yours,

Michael M. Greenburg

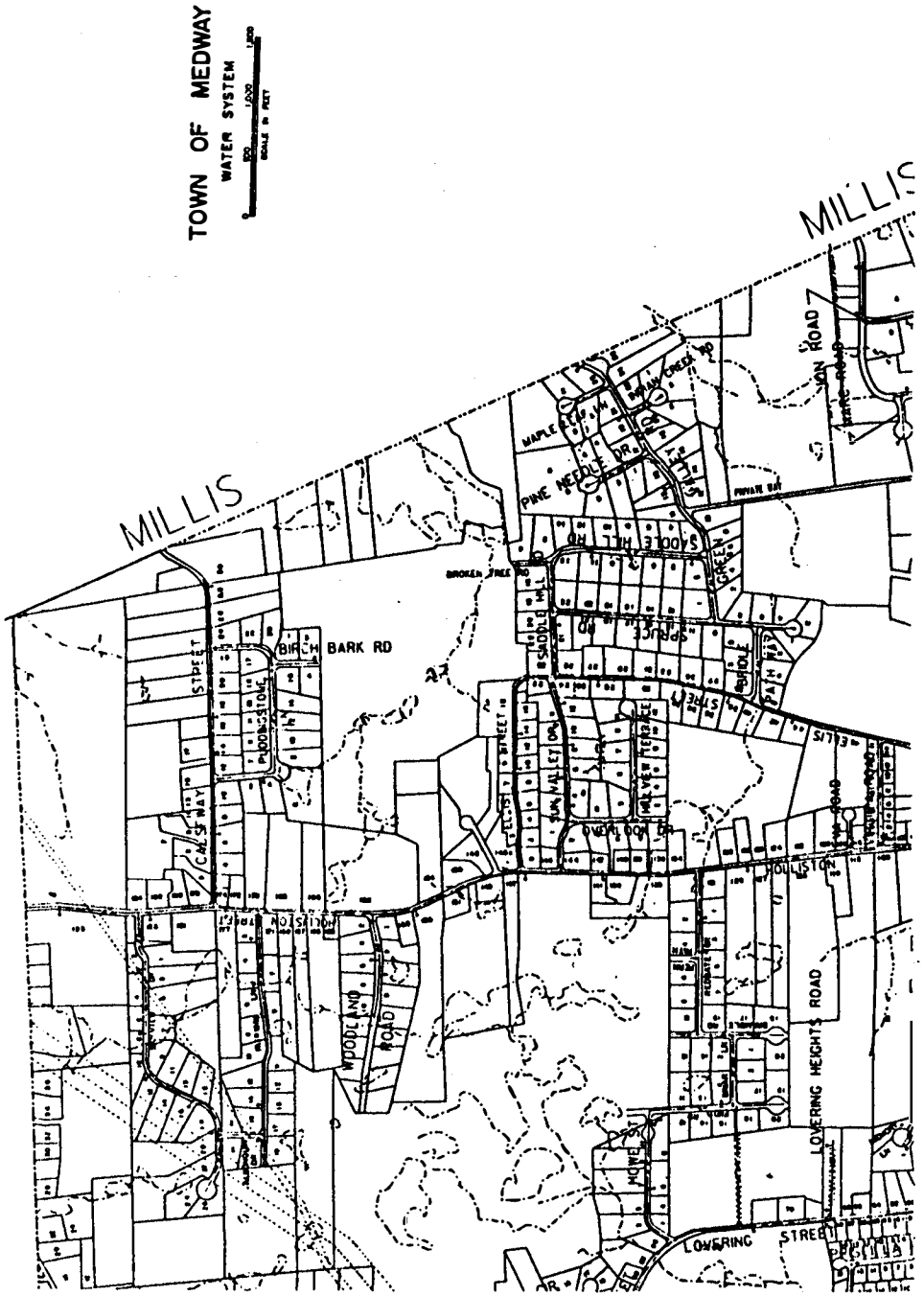
MMG:lgp
Enclosures

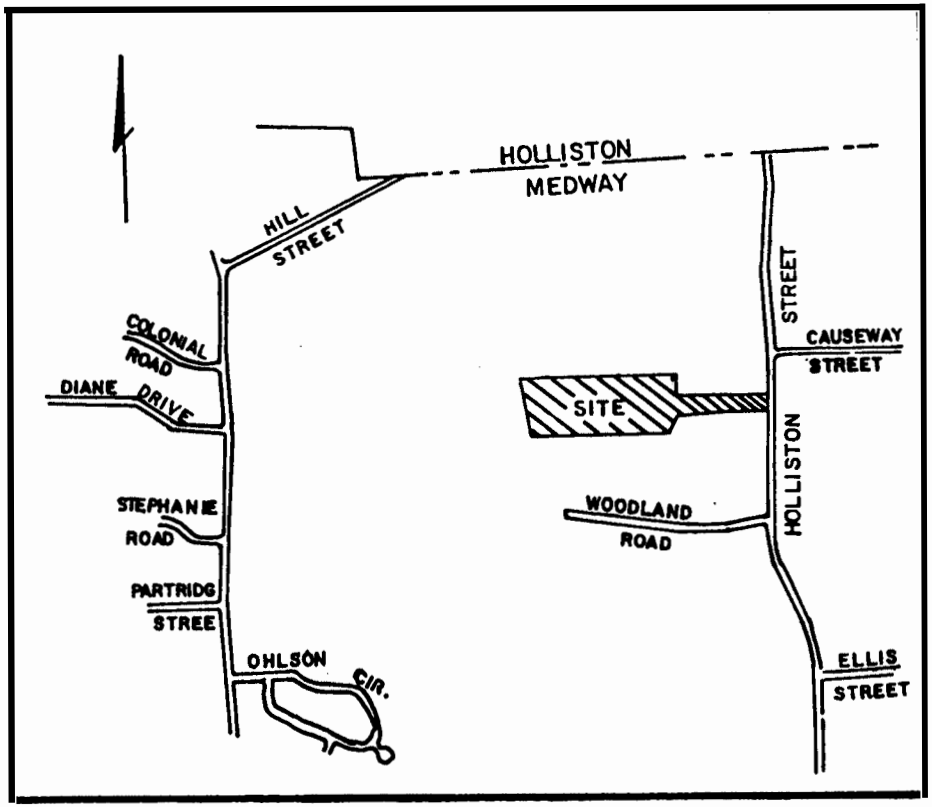
cc: Medway Planning Board

DESCRIPTION OF ENCLOSURES:

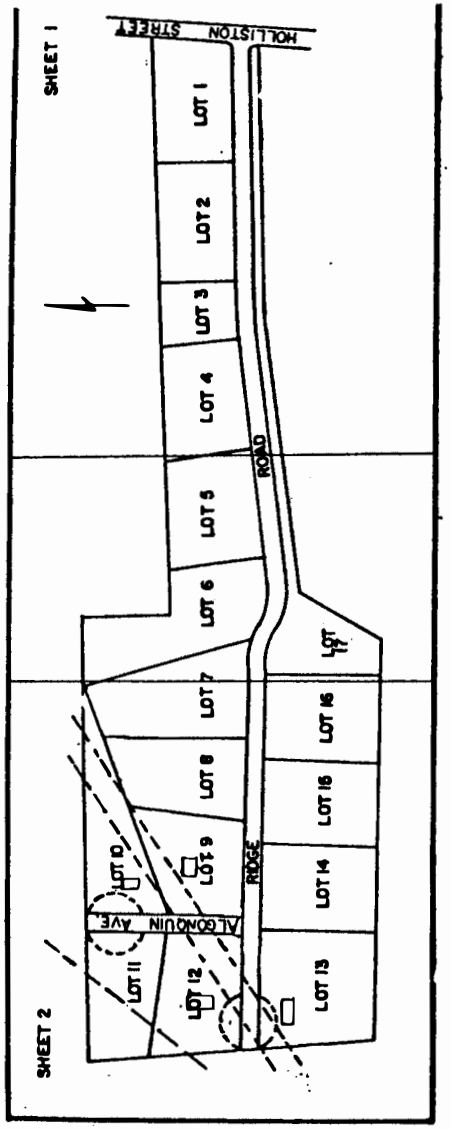
Enclosed please find photocopies of a Town of Medway water map, Skyview and Chestnut Hill Estates development plans and individual plot plans.

The water map is the only one that has a reliable scale on it. The rest of the copies are reduced so scales are not always accurate. However the distances between houses (drawn in) and the R.O.W. are accurate. In most cases, the numbers on the plans are "LOT" numbers. The water map is the only exception, it uses street addresses. More complete, larger maps are available upon request.





LOCUS FOR CHESTNUT HILL ESTATES



KEY MAP
SCALE

PICTURE Reduced so scale inaccurate

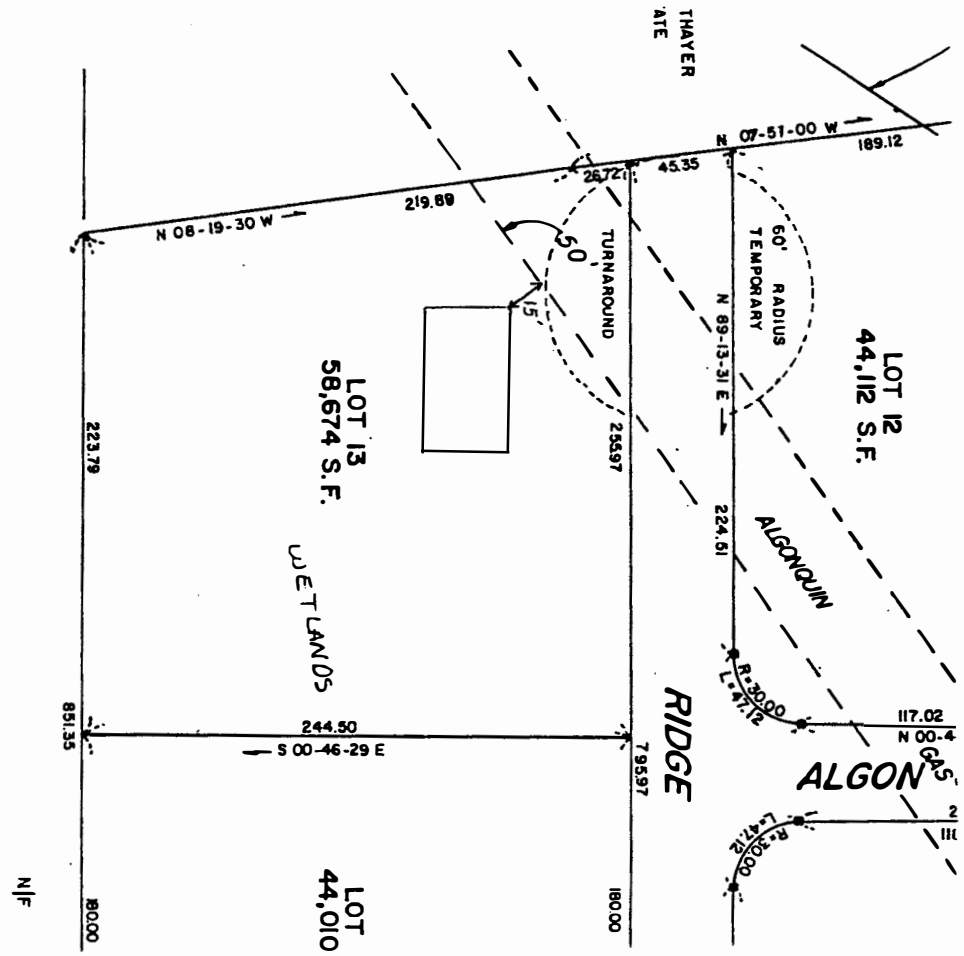
FOR CHESTNUT HILL ESTATES
(SOUTH SIDE OF DEVELOPMENT)

Houses are shown in their approximate locations, see individual maps for exact distances.

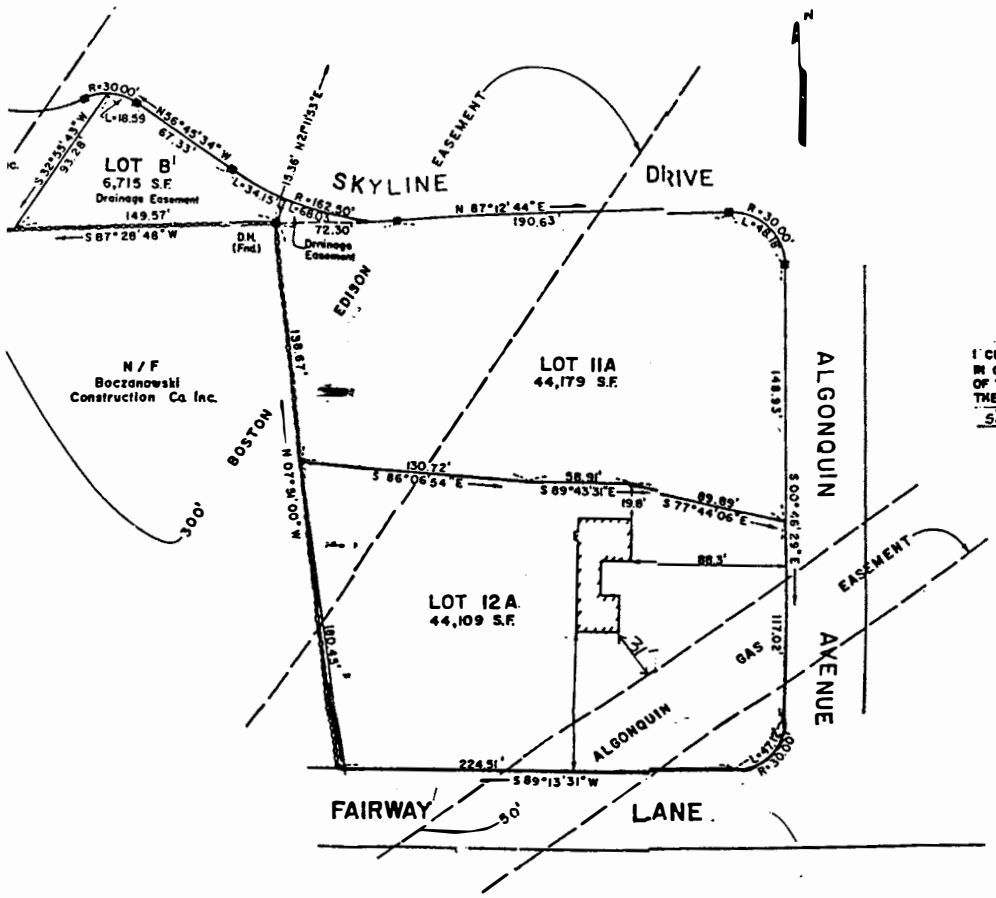
1 and 2
3 and 4
5 thru 7
8

UST

FOR REGISTRY U



G3



Norfolk Registry of Deeds
Dedham, Mass.
Received Oct. 14, 19
With

Filed as No. 1119 19
Pl. Bk. 373
Attest:
Registr
FOR REGISTRY USE ONLY

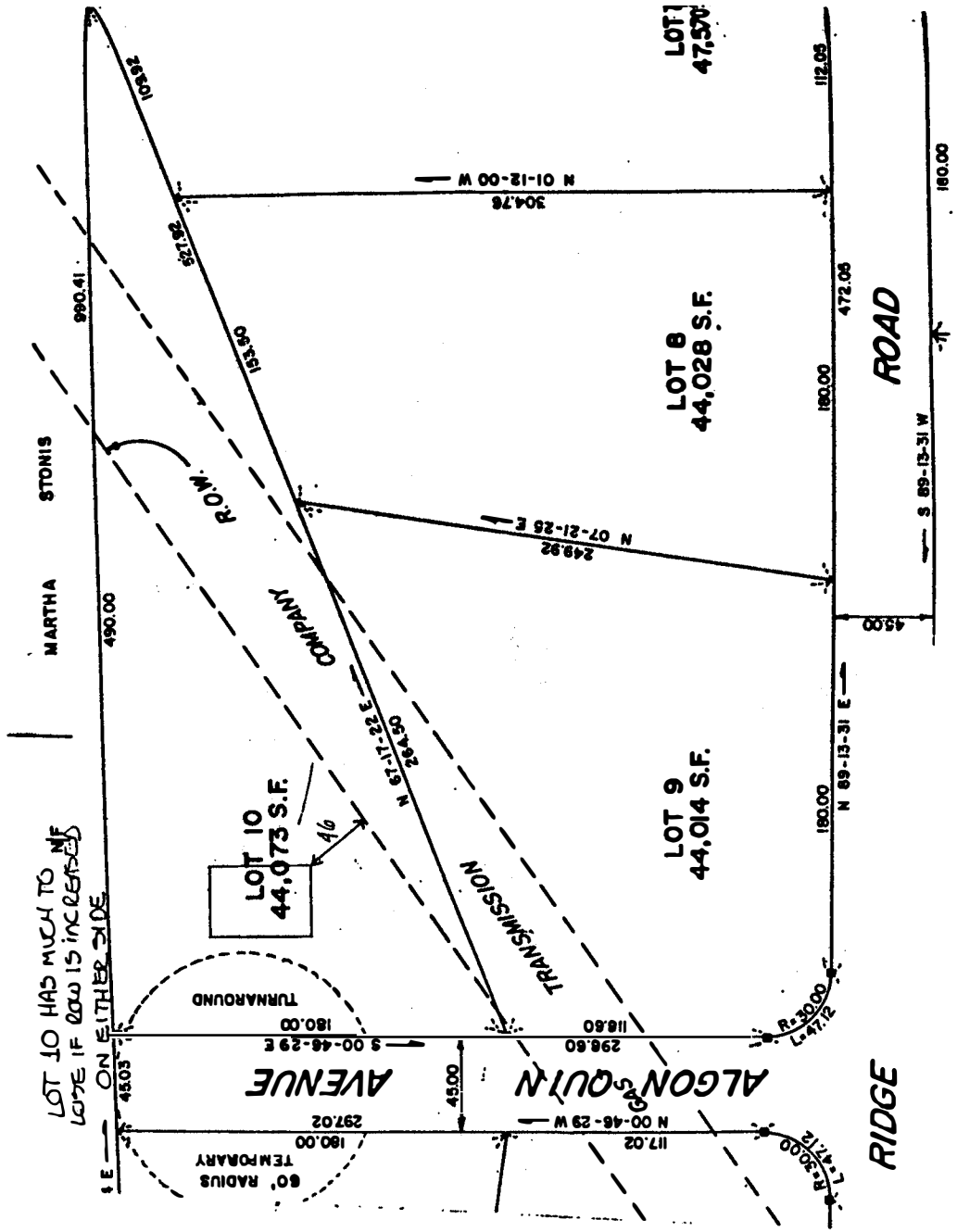
I CERTIFY THAT THIS PLAN HAS BEEN PREPA
IN CONFORMITY WITH THE RULES AND REGULA
OF THE REGISTERS OF DEEDS ADOPTED UND
THE GENERAL LAWS CHAPTER 36, SECTION 13
Sept. 12, 1986
DATE
ALEXANDER V. ZALESKI R.L

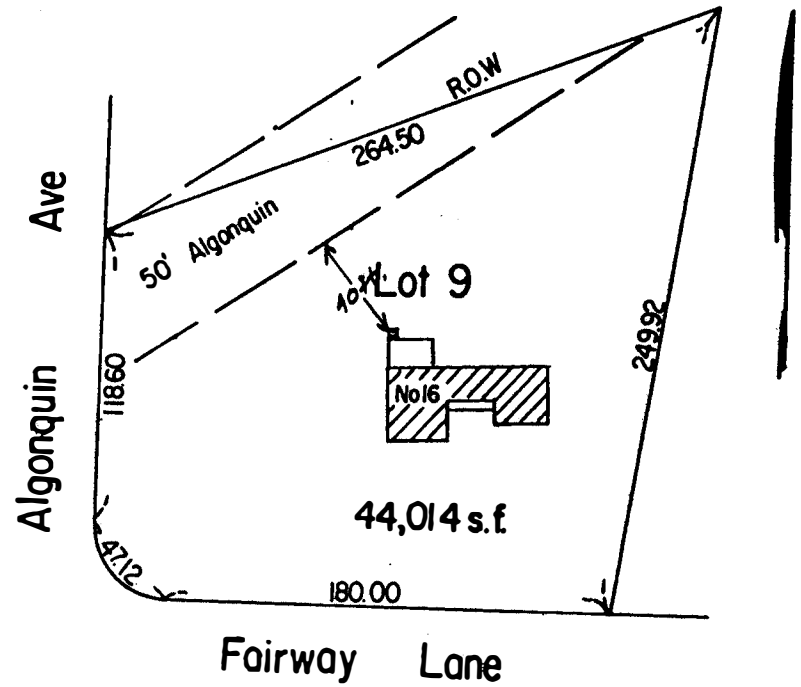
APPROVAL UNDER THE SUBDIVISION
CONTROL LAW NOT REQUIRED.
MEDWAY PLANNING BOARD
James D. Brockway, Agent

DATE APPROVED 9-22-86
DATE ENDORSED 9-22-86
BEING A MAJORITY

PLAN of LAND
in
MEDWAY, MA
Prepared For: Boczanowski Construction
Scale: 1" = 40' SEPTEMBER 12, 1981

11 & 12
SIMONE
T B AS





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TITLE REFERENCE: BOOK 7644 PAGE 155

NOTE THIS PLOT PLAN WAS NOT MADE FROM AN INSTRUMENT SURVEY AND IS FOR MORTGAGE PURPOSES ONLY. UNDER NO CIRCUMSTANCES ARE OFFSETS TO BE USED FOR ADDITIONS, FENCES, WALLS, ETC.

Calvin W Garvey — 12-14-88

REGISTERED LAND SURVEYOR — DATE

Plot Plan of Land in Medway

Prepared For

John & Carolyn Newton

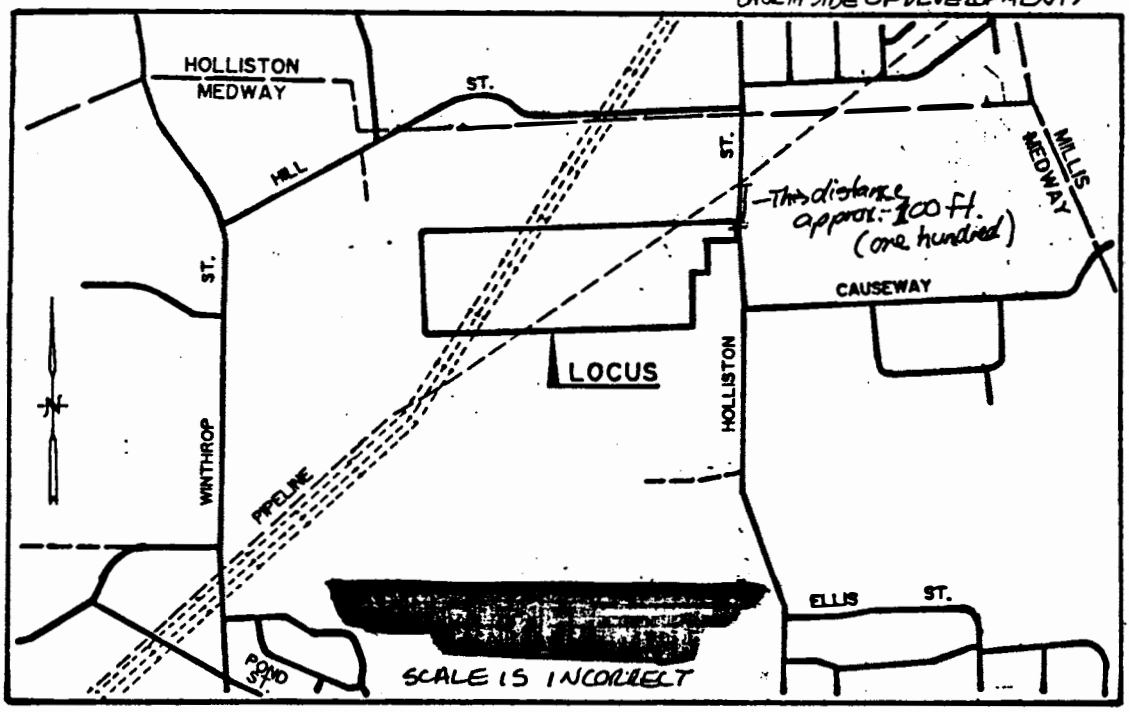
Scale: 1 in. = 50 ft.

Dec 14, 1988

C.W. GARVEY CO., INC.
36 WEST STREET

SURVEYORS & ENGINEERS
WHITMAN, MASS.

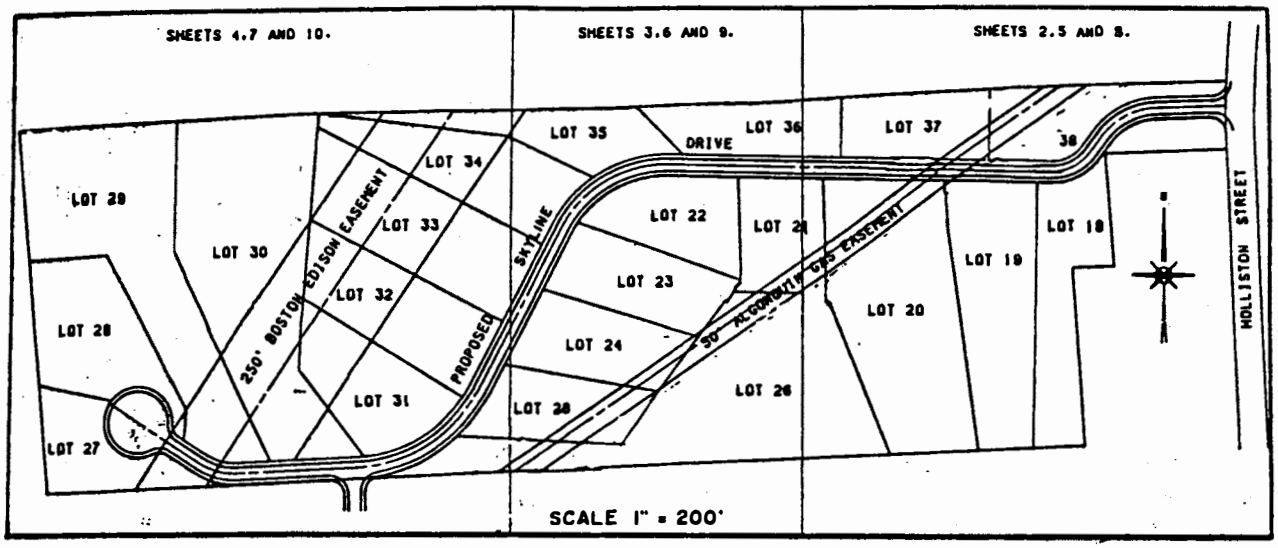
LOCUS MAP FOR SKYVIEW ESTATES (NORTH SIDE OF DEVELOPMENT)



HORIZONTAL CONTROL IS BASED ON MASSACHUSETTS STATE PLANE COORDINATE SYSTEM AS SHOWN ON PLANS. VERTICAL CONTROL IS BASED ON USGS DATUM.

B.M. RIGHT/FRONT NUT ON BONNET HYDRANT AT INTERSECTION OF

G3



"I Corine M. Fallon ASSISTANT CLERK OF THE TOWN OF MEDWAY, RECEIVED AND RECORDED FROM THE PLANNING BOARD COVENANT APPROVAL OF THIS PLAN ON Feb. 1, 1988 AND NO APPEAL WAS TAKEN FOR TWENTY DAYS NEXT AFTER RECEIPT AND RECORDING OF SAME."

DATE February 23, 1988

ASSISTANT CITY CLERK Corine M. Fallon

OWNER & APPLICANT

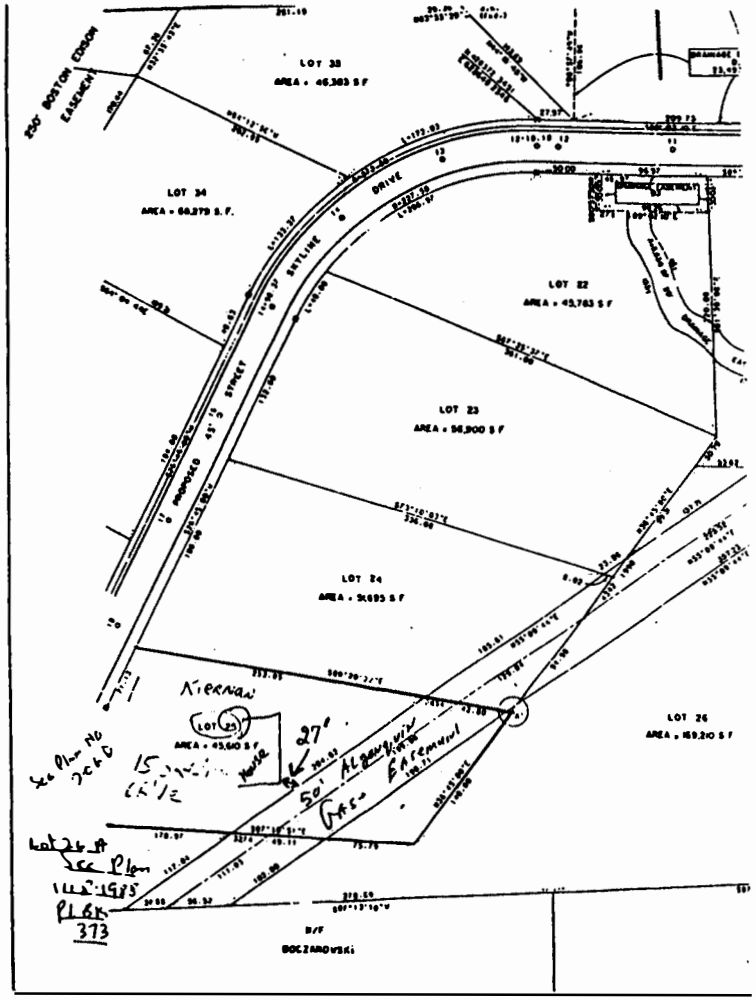
BOCZANOWSKI CONSTRUCTION INC
P.O. BOX 260
MEDWAY, MASSACHUSETTS 02053

OTE:
I CERTIFY THAT THIS PLAN ONFORMS
O THE RULES AND REGULATIONS OF THE
EGISTER OF DEEDS, NORFOLK COUNTY.

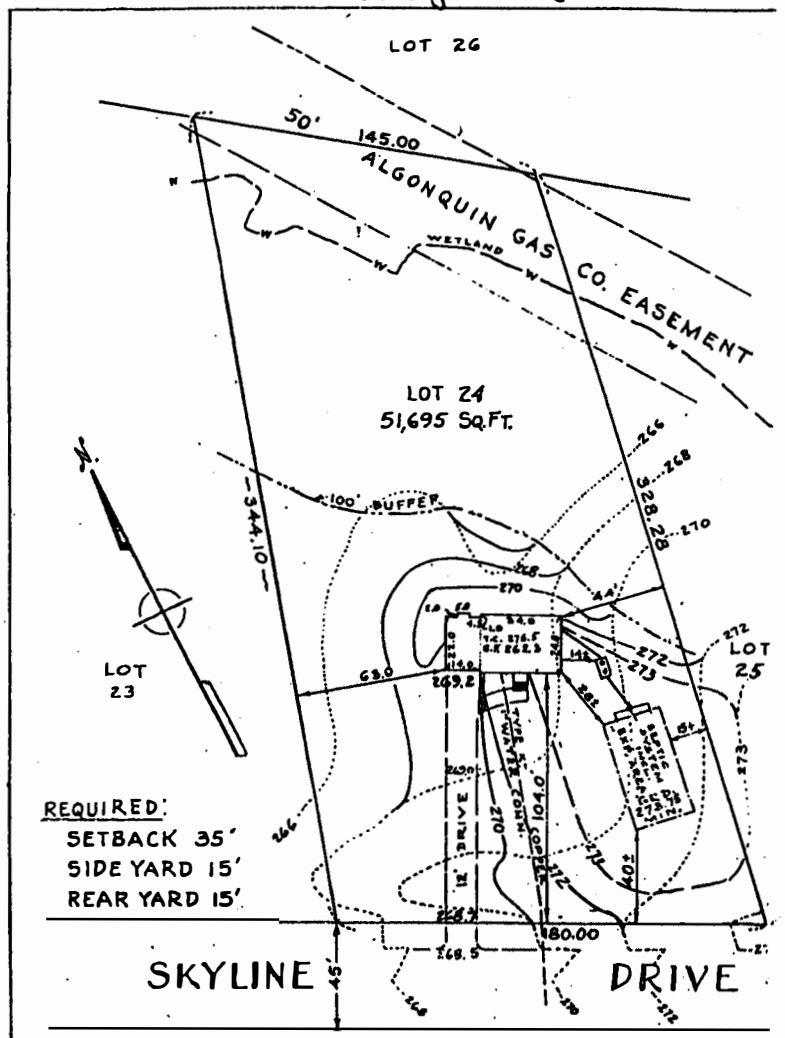
Paul I. Levinson

WHI
45-W

G3



Greenburg - 13 Skyline Dr.

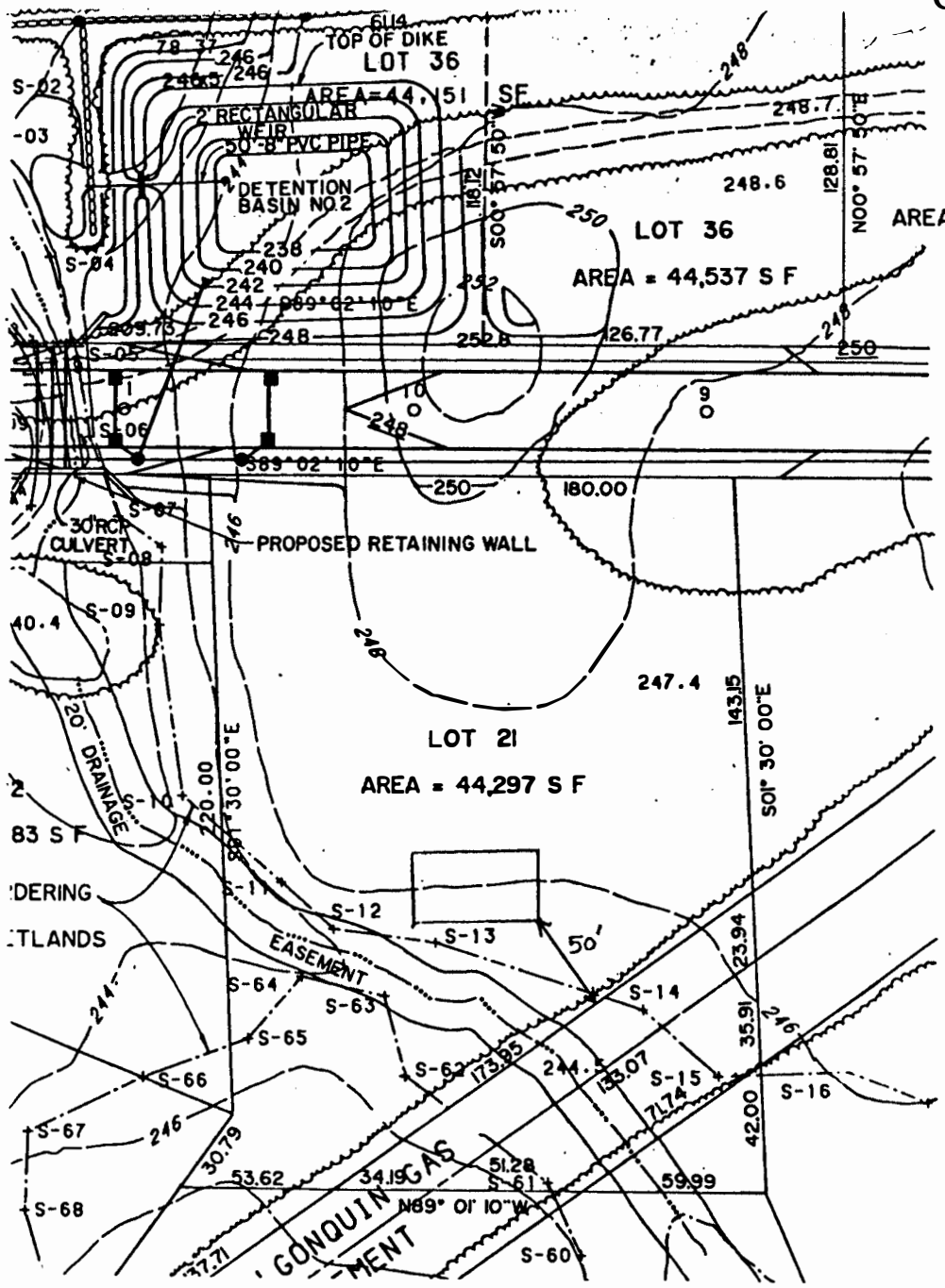


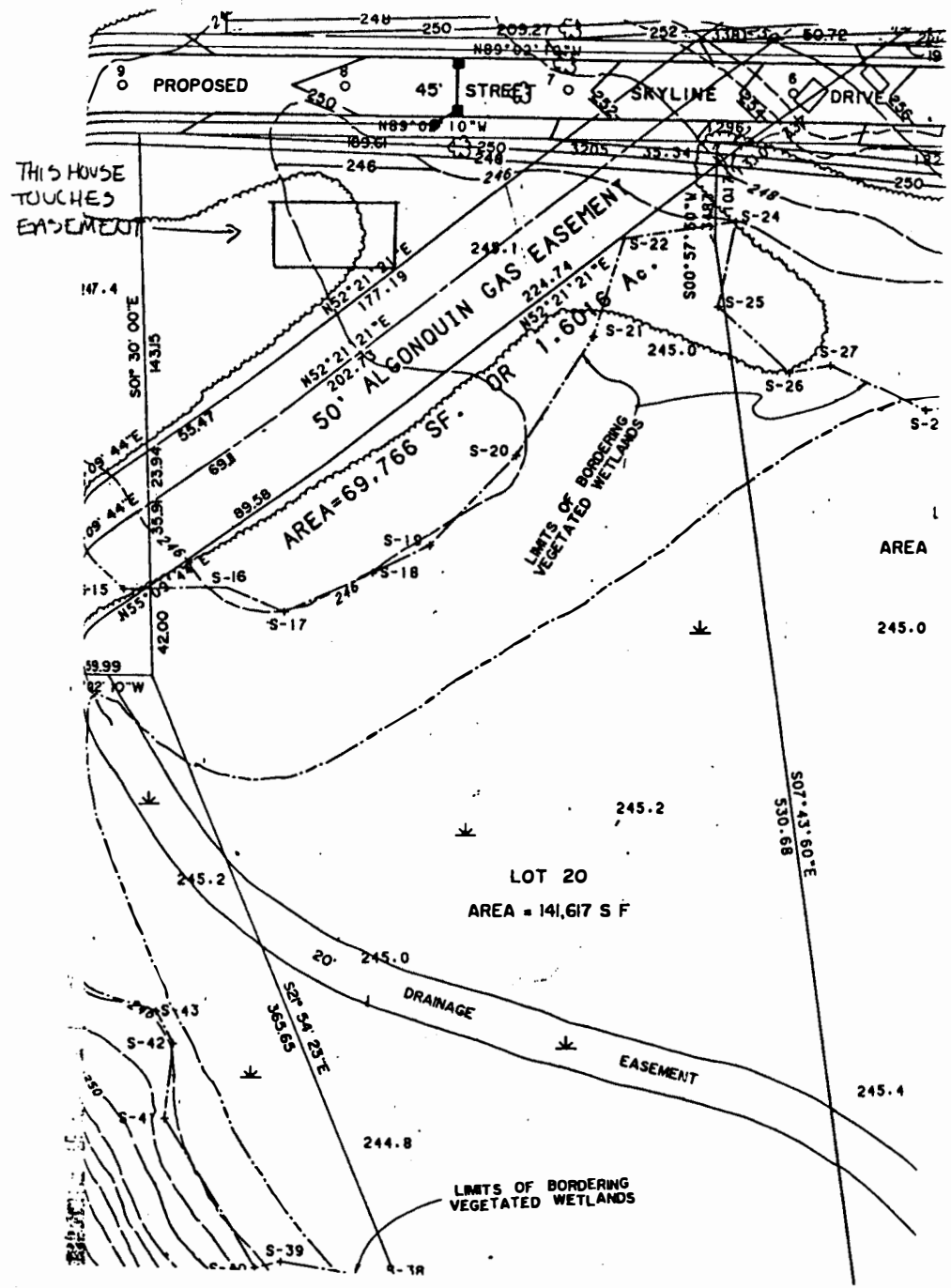
SEE SEPTIC SYSTEM PLAN DTD. 12.27.88, REV. 1.23.89

# 793	BUILDING PERMIT PLOT PLAN
	LOT 24, SKYLINE DR., MEDWAY, MA
	OWNER: MICHAEL GREENBURG ET AL.
Scale: 1"=40'	EAST COAST ENGINEERING, INC.
Date: 3.22.89	3 Church St., Medway, MA 02053

ALEXANDER V. ZALESKI No 10332 REGISTERED PROFESSIONAL ENGINEER

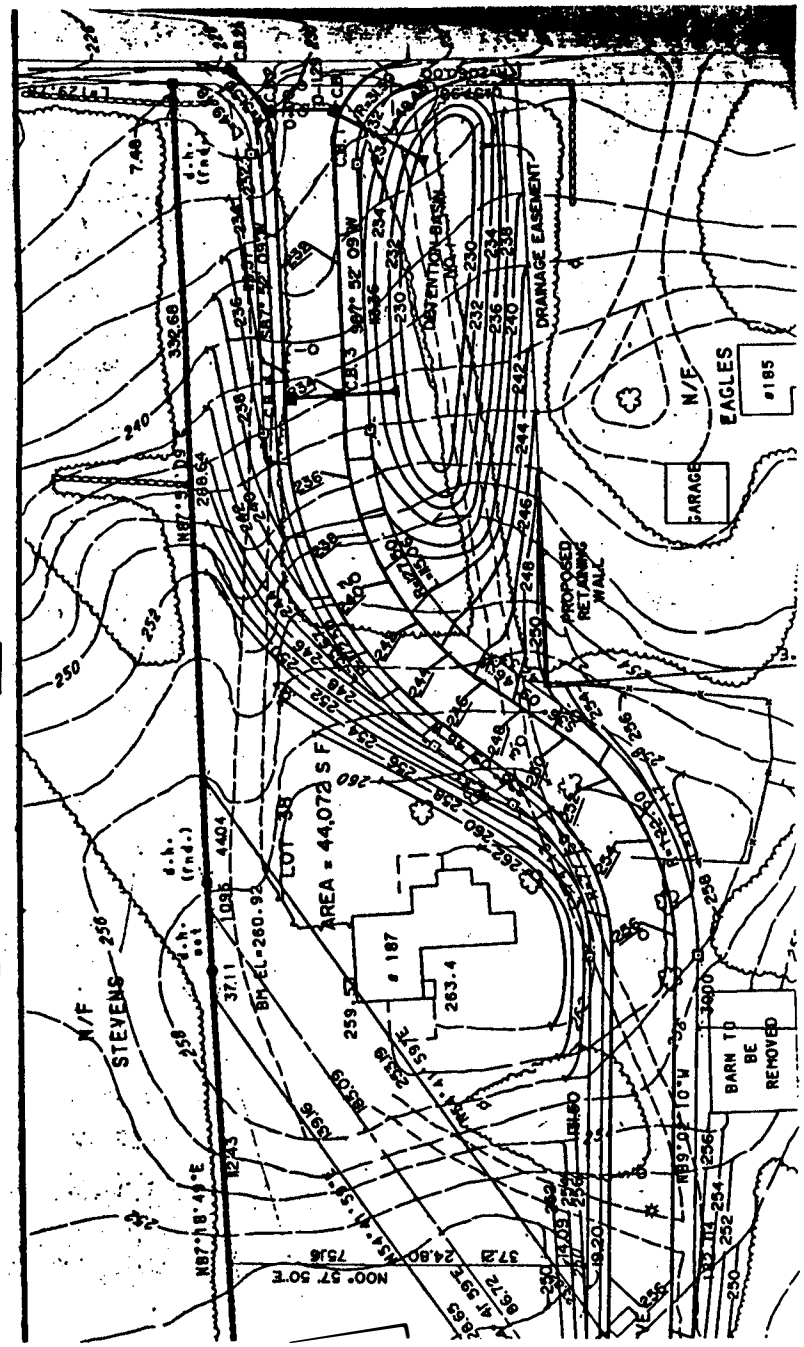
G3

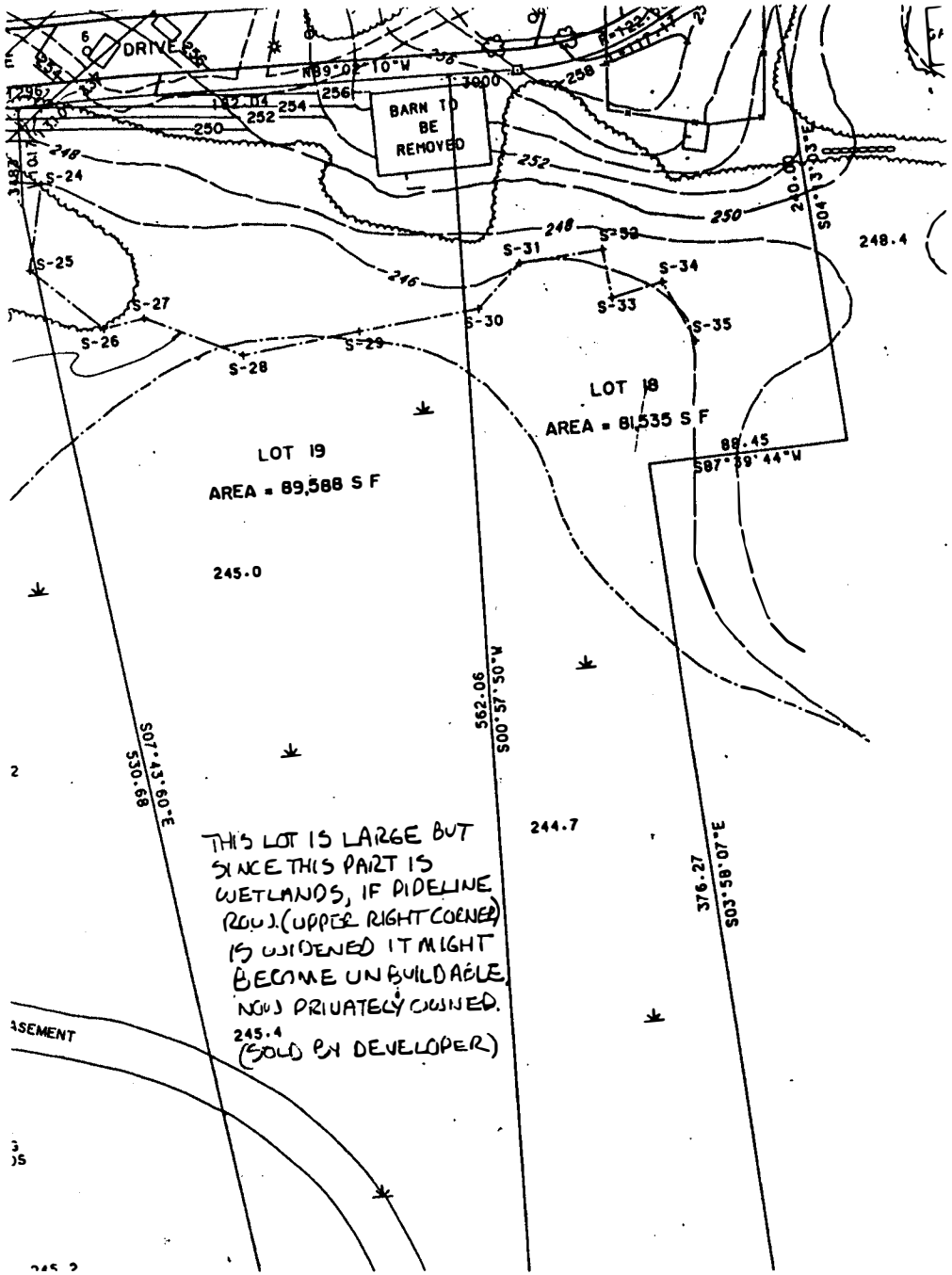

TOP OF DIKE
LOT 36
AREA=44,51 SF
2' RECTANGULAR WEIR
50' 8" PVC PIPE
DETENTION BASIN NO.2
LOT 36
AREA = 44,537 S F
S89°02'10"E
PROPOSED RETAINING WALL
30" RCP CULVERT
LOT 21
AREA = 44,297 S F
20' DRAINAGE
EASEMENT
50'
N89° 01' 10"W
S01° 30' 00"E
S00° 57' 50"W
N00° 57' 50"E


PROPOSED
45' STREET
SKYLINE
DRIVE
THIS HOUSE TOUCHES EASEMENT
AREA =
50' ALGONQUIN GAS EASEMENT
AREA=69,766 SF. OR 1.6016 Ac.
LIMITS OF BORDERING VEGETATED WETLANDS
LOT 20
AREA = 141,617 S F
20' DRAINAGE EASEMENT
S07°43'50"E
S01° 30' 00"E
S00°57'50"W

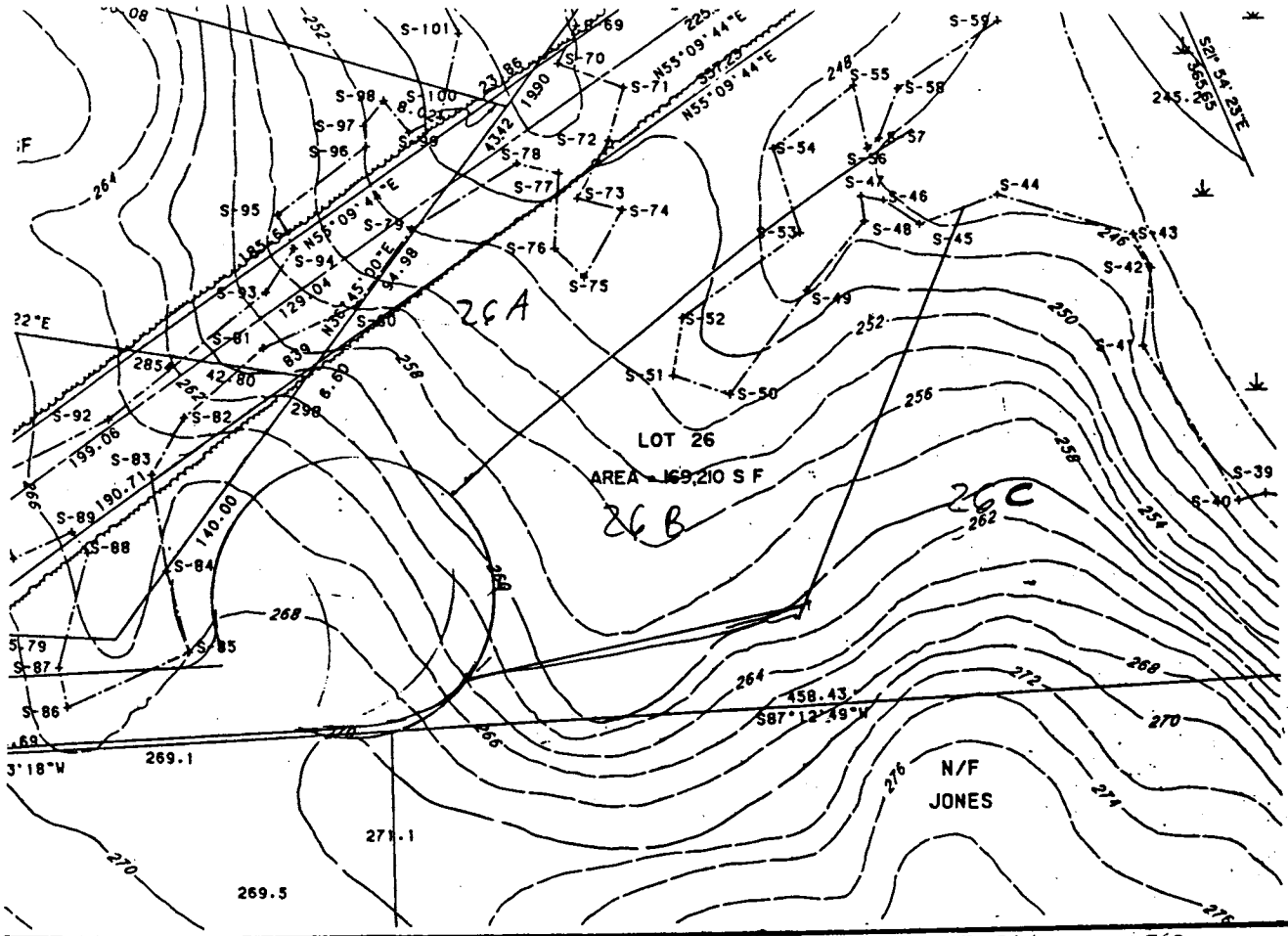
G3

LOT 38 - HOUSE IS ON THE ROW



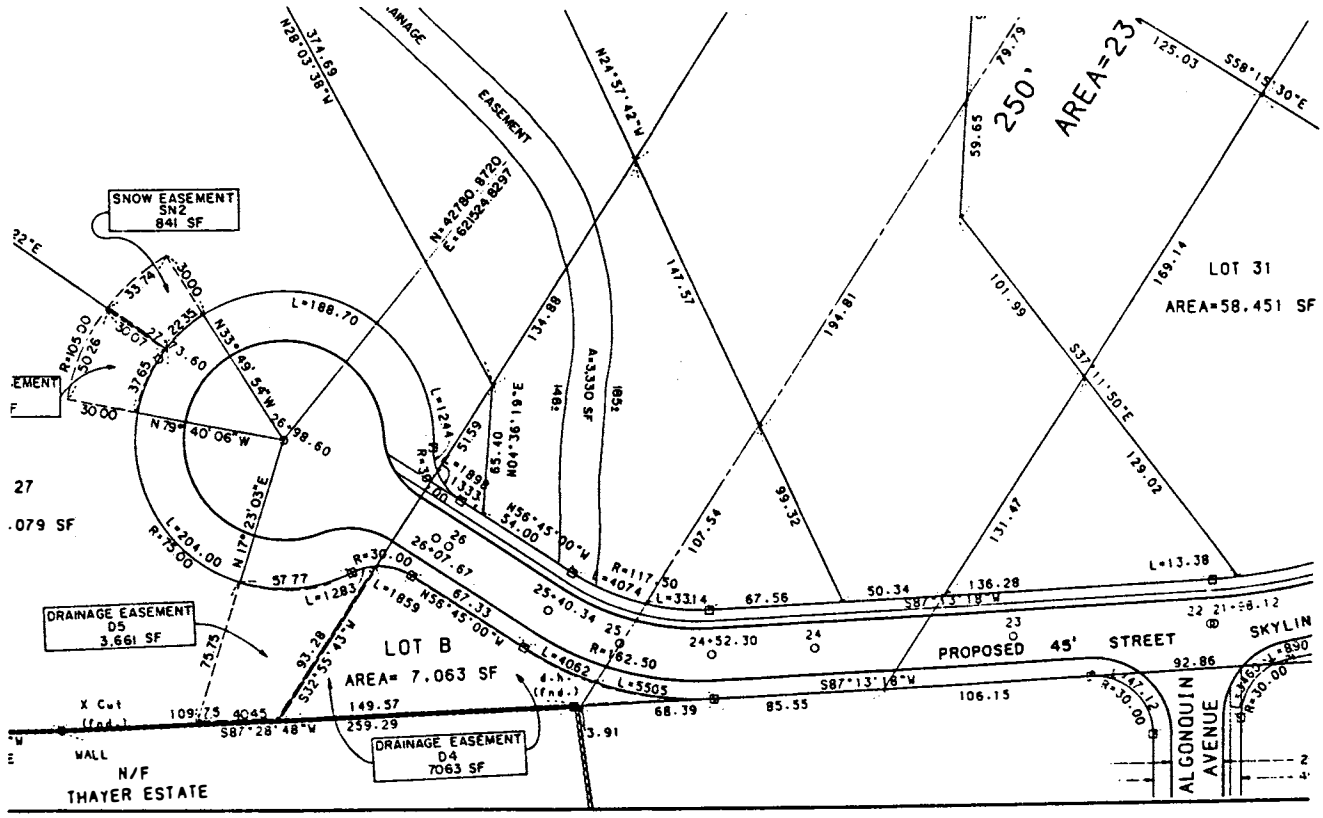


THIS LOT IS LARGE BUT SINCE THIS PART IS WETLANDS, IF PIPELINE ROW (UPPER RIGHT CORNER) IS WIDENED IT MIGHT BECOME UNBUILDABLE. NOW PRIVATELY OWNED. (SOLD BY DEVELOPER)



G3

DEVELOPER STILL OWNS THESE LOTS (PART OF LOT 26) BUT 26A WILL BECOME UNBUILDABLE IF EASEMENT WIDENED



G4

GREAT LAKES GAS TRANSMISSION COMPANY'S
COMMENTS ON
DRAFT ENVIRONMENTAL IMPACT STATEMENT

NIAGARA IMPORT POINT PROJECT

LAW OFFICES
ROSS MARSH FOSTER MYERS & QUIGGLE
888 SIXTEENTH STREET, N. W.
WASHINGTON, D. C. 20006
(202) 822-8888
(202) 775-8330 (TELECOPIER)

4550 MONTGOMERY AVENUE
SUITE 950-N
BETHESDA, MARYLAND 20814
(301) 656-5700

324 N. FAIRFAX STREET
ALEXANDRIA, VIRGINIA 22314
(703) 683-7448

JAMES D. McKINNEY, JR.

April 30, 1990

Ms. Lois D. Cashell
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Tennessee Gas Pipeline Company, et al.,
Docket Nos. CP88-171-001, et al.
(Niagara Import Point Project)

Great Lakes Gas Transmission Company
Docket No. CP89-892-000

Dear Ms. Cashell:

Pursuant to the Commission's notice of availability of draft environmental impact statement issued March 16, 1990, in the referenced proceedings relating to the Niagara Import Project including the Great Lakes Gas Transmission Company ("Great Lakes") Docket No. CP89-892-000, Great Lakes submits herewith its Comments.

In addition to a copy of the enclosed Comments being filed with the Secretary's office, an additional copy has been given directly to the Commission's Environmental Analysis Staff and another copy is being furnished directly to the Commission Staff's consultants in these proceedings.

Please contact Great Lakes if there are any questions concerning the Comments submitted herewith.

Very truly yours,
GREAT LAKES GAS TRANSMISSION COMPANY

By James D. McKinney, Jr.
James D. McKinney, Jr.
Its Attorney

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Tennessee Gas Pipeline Company	)Docket Nos.	CP88-171-001
Great Lakes Gas Transmission Company	)	CP89-892-000
Algonquin Gas Transmission Company	)	CP88-187-001
CNG Transmission Corporation and Texas Eastern Transmission Corporation	)	CP88-195-002
CNG Transmission Corporation	)	CP89-712-000
Texas Eastern Transmission Corporation	)	CP89-711-000
Transcontinental Gas Pipe Line Corporation	) and	CP89-7-001 CP89-710-000
National Fuel Gas Supply Corporation and Penn-York Energy Corporation	)	CP88-194-001

GREAT LAKES GAS TRANSMISSION COMPANY'S
COMMENTS REGARDING
DRAFT ENVIRONMENTAL IMPACT STATEMENT
NIAGARA IMPORT POINT PROJECT

I.

INTRODUCTION

Great Lakes Gas Transmission Company (Great Lakes) hereby submits its comments on the Draft Environmental Impact Statement (DEIS) issued by the staff of the Federal Energy Regulatory Commission (Commission or FERC) on March 16, 1990, for the Niagara Import Point (NIP) Project. The DEIS is a comprehensive analysis of the environmental consequences of the proposed project, and

Great Lakes strongly supports its fundamental conclusion: that construction and operation of the natural gas pipeline facilities proposed by Great Lakes and the other NIP participants will have a limited environmental impact and will be environmentally acceptable. Great Lakes, however, disagrees with a number of the mitigation measures and construction procedures proposed in the DEIS and hereby submits its proposed changes to certain parts of the DEIS. Great Lakes is also commenting on items that need clarification or revision, and is proposing alternatives and revisions that comply with the intent of the DEIS.

Great Lakes has a history of environmental awareness that has often preceded and surpassed environmental programs required by regulatory agencies. This environmental progressiveness has enabled Great Lakes to develop construction and operational methodologies based on practical experience, which enhances our comments to this DEIS. Great Lakes believes that its comments to the DEIS accomplish the same objectives as those of FERC in minimizing environmental impact.

Great Lakes' environmental position is illustrated by the following brief summary of environmental programs it has implemented.

ENVIRONMENTAL INVENTORY

Beginning as early as 1974, Great Lakes commenced an Environmental Inventory of its entire facility corridor. This

survey collected broad-based environmental information designed to enable Great Lakes to prepare FERC applications for future looping projects.

1979 ARCHAEOLOGICAL SURVEY

In 1979, Great Lakes commissioned a cultural resource inventory of its existing right-of-way. This survey yielded valuable information helpful in determining not only the impacts of expansion projects pending at that time, but data on historic finds previously unknown.

CONSTRUCTION ENVIRONMENTAL INSPECTORS

To monitor compliance with state and Federal permits, Great Lakes assigned two (2) professional environmental inspectors to each spread during its 1989-1990 construction project. Great Lakes has committed to assign a minimum of two (2) environmental inspectors per spread for the NIP Project to provide liaison between Great Lakes and regulatory agencies, interpret permit stipulations, and recommend mitigative measures in environmentally sensitive areas. The cost for environmental inspection totaled $1.5 million for the 1989-1990 construction season. This figure will escalate to approximately $3.7 million for the NIP Project.

SENSITIVE SPECIES SURVEYS

Great Lakes has devoted extensive resources to the examination

of sensitive and unique habitats for the NIP Project. Survey strategies and mitigative plans have been designed to limit adverse impacts on threatened, endangered and special concern species. This undertaking is estimated to cost Great Lakes $250,000.

1989/1990 ARCHAEOLOGICAL SURVEYS

In 1989, Great Lakes commenced archaeological studies for previously unstudied areas along its pipeline route. Great Lakes chose to examine all proposed areas that would be affected by construction, rather than waiting for site-specific direction by the respective State Historic Preservation Officers. The scope and cost of this undertaking, well over $1 million, exemplifies Great Lakes' commitment to setting the standard as a leader in the industry.

II.

EXECUTIVE SUMMARY

Great Lakes has reviewed the NIP Project DEIS and agrees with FERC's primary conclusion that "construction and operation of the proposed facilities would have a limited adverse environmental impact and would be an environmentally acceptable action." We further concur that this DEIS satisfies the requirements of the National Environmental Policy Act (NEPA) and FERC's implementing regulations under Chapter I, Title 18, Code of Federal Regulations (CFR), Part 380.

Great Lakes also recognizes that FERC's approval of this project is predicated on adoption of recommended mitigative measures to reduce the environmental impact. Great Lakes appreciates the enormous task undertaken by the FERC staff in addressing the various facilities proposed by each applicant in the project, the diversity of geographic locations involved, and the multitude of environmental factors evaluated, culminating in a succinct and concise DEIS. However, Great Lakes is concerned that there are several areas where FERC's review procedures and recommendations complicate the construction feasibility and escalate the project cost to the point of diminishing returns for environmental protection.

These issues are summarized below:

1. From Great Lakes' experience, it appears that conflicts and delays can arise in areas where certain parts of a project are reviewed by the Commission and also by state and other Federal regulatory agencies. This situation could be resolved if the Commission would accept the recommendations and stipulations of other state or Federal agencies that have thoroughly reviewed the project and have local expertise. For example, a cultural resource survey plan was submitted in December 1989 by Great Lakes to the three (3) State Historic Preservation Officers (SHPOs) and FERC for review and approval. SHPOs have indicated their acceptance of this detailed plan; however, FERC has not formally responded to the plan and has been reluctant to meet with representatives of Great Lakes to discuss how the concerns of all interested parties can best be addressed.

2. The effect of construction time windows poses the most significant problem for Great Lakes with respect to its ability to physically and economically construct its portion of the project. Great Lakes has compiled all recommended construction time windows from FERC and the various state agencies with respect to: wildlife concerns, water/wetland crossings, agricultural lands, and other seasonal concerns. The result of this compilation is tablized in Attachment I.

G4

1

G4-1 FERC staff does, in fact, recognize the applicable project review programs conducted by the Federal and state agencies. These agencies are important sources of information upon which we rely in our analyses. FERC, however, must comply with all the requirements of the National Environmental Policy Act, and its implementing regulations. As lead agency, this responsibility cannot be delegated to other agencies.

The example you cite appears to be the result of some confusion. FERC has provided assistance to Great Lakes' archeological consultants.

2

G4-2 We recognize that construction time windows might present certain logistical problems for the applicant. However, we feel that time windows/seasonal restrictions on construction activities are an important device for minimizing significant environmental impact. We do not take these restrictions lightly or apply them inadvisably.

In most cases, our recommendations allow for further reconsideration/modification based upon review of detailed resource information, which has not yet been filed by the applicant. Our recommendations are based upon the best information available to us at the time of our analysis.

The spreadsheet tables compiled by Great Lakes represent these restrictions as worst case scenarios. There also appear to be additional restrictions included in the table for which Great Lakes has not provided any supporting reference.

From a practical point of view, the construction time windows are not as restrictive as Great Lakes suggests. For example, the restriction referenced as "birds" assumes that active eagle and osprey nesting sites occur in all areas where we have recommended field surveys in consultation with FWS and state resource agencies. Also, the numerous references to "river" restrictions appear to be overstated. Normally, river crossings are constructed by a special crew separate from the overland construction spread. Therefore, river crossing time windows would not upset the "continuous assembly-line fashion" of the pipeline construction.

As seen in these tables, adherence to every construction window requirement would preclude Great Lakes from constructing its portion of the project in a continuous assembly-line fashion. A typical move-around required for avoiding one time window area is estimated at $200,000. The additional costs required to comply with all of these recommended windows cannot be as easily quantified, and it is doubtful whether the project could be completed in obligations with its customers.

3. The FERC has not fully considered the economic implications of some of its recommended measures. Great Lakes estimates that environmental mitigation measures recommended by FERC and included in the certificates for Great Lakes' 1989 construction projects increased the overall cost of the projects up to 20 percent. More stringent recommended measures proposed for the NIP Project will further escalate construction costs. For example, the recommendation involving installation of pipe in wetlands from prefabricated equipment mats as opposed to utilizing timber log corduroy roads would increase the overall cost of this project by an estimated $12 million. This seems to be an especially burdensome requirement when one of the FERC's cooperating federal agencies, the U.S. Forest Service, has expressed an interest in selling timber to Great Lakes for this purpose.

G4

2 Great Lakes has not pointed out any specific location, nor presented any supportable analyses for our review, demonstrating that the available construction time window would seriously impede construction of the facilities. We maintain that, with proper planning and coordination, these restrictions can be adhered to and would cause minimal interference with the project while providing an adequate level of environmental protection.

3 G4-3 We cannot fully respond to this comment without knowing how much money, if any, Great Lakes has budgeted for environmental impact mitigation. If no funds were allocated for environmental protection, then it would appear that the original cost estimates were too low.

Thank you for your estimates of increased project costs associated with our recommended measures. It would be helpful in future projects if appropriate mitigative measures and their associated costs are included in the original application. The issue of timber purchase from the National Forest has been handled in response to G4-47.

G4

Throughout our detailed comments, we have attempted to inform FERC of the increased project costs associated with their recommended measures wherever the costs can be objectively quantified. 3

4. Great Lakes is concerned that the failure to obtain timely approval of FERC-requested reports, surveys and other data will cause costly project delays. Standby time charges for an entire construction spread can approach $300,000 per day for delays attributable to the company. 4

G4-4 FERC staff will exercise due diligence in its reviews and approvals of reports, surveys, and other required preconstruction submittals. However, Great Lakes must understand that our review cannot begin until Great Lakes files the required surveys and reports.

5. Much of the information requested in the DEIS, i.e., site specific construction details, is not available when the project is first planned and the application is submitted. This places an additional burden on all applicants to produce detailed information (such as extra work spaces, storage yards, and access roads plus associated environmental reviews of these areas) at a stage in the project when this information is not yet known. 5

G4-5 The detailed information requested is essential to permit us to adequately and accurately assess the impact of the project on cultural resources and endangered and threatened species, as well as on aesthetic values and land use.

6. Great Lakes is concerned that the failure of other project applicants to submit required data for nonjurisdictional facilities being served by the NIP Project could delay Great Lakes' portion of the project. To that end, Great Lakes requests that issuance of its FERC certificate be independent 6

G4-6 We presume Great Lakes' concern is directed to our DEIS recommendation 4, which requires jurisdictional applicants to defer natural gas deliveries until they have certified that all necessary nonjurisidictional facility permits have been obtained. This recommendation, if adopted by the Commission, would not prevent any applicant from constructing jurisdictional facilities and only would prohibit operation of the facilities directly related to the final delivery of natural gas to the nonjurisdictional facility for which permit certification had not been completed. Issuance of an independent or consolidated order is a Commission decision beyond the scope of this EIS.

of other participants.

7. Great Lakes suggests that in the future a technical conference with the FERC staff and other interested parties would be advantageous in order to obtain clarification or negotiate solutions to problems caused by recommendations contained in the DEIS.

In conclusion, Great Lakes is hopeful that the detailed comments presented herein, some of which have previously been addressed in formal and informal data requests already filed at the Commission, are seriously evaluated by FERC prior to the issuance of the Final Environmental Impact Statement and the certificate of public convenience and necessity. We expect that the other project participants are expressing similar concerns, and we stand ready to assist the FERC staff, as the need may arise, to discuss the content of our comments.

G4

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G4-7 Thank you for your suggestion. We believe that our procedures and our recommendations permit sufficient opportunity to address these problems. Also, as Great Lakes is aware, we were reviewing its request for a technical conference concerning the NIP DEIS when Great Lakes decided to withdraw its request.

III.

FORMAT OF COMMENTS

Great Lakes' comments on the DEIS are presented in a manner that parallels FERC's DEIS format where many issues are discussed more than once. For example, an issue that is discussed in section 4 may be restated as a FERC Recommended Measure (recommendation) in section 7. For this reason, Great Lakes has formatted its DEIS Comments by focusing on the FERC recommendations listed in section 7. Great Lakes' comments also address issues discussed in sections 1 through 6 that are not specifically restated as a recommendation, and these appear as comments in the particular section from which they originate. This format prevents redundancy and at the same time addresses most of Great Lakes' concerns.

G4

IV.

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DEIS, Section 1.3, Purpose and Scope of the Statement
Pg 1-6

COMMENT

Great Lakes acknowledges FERC is the principle authority in the preparation of the Environmental Impact Statement (EIS). Great Lakes realizes that the U.S. Forest Service (FS), U.S. Fish and Wildlife Service (FWS), and the U.S. Department of Energy (DOE) are cooperating Federal agencies for the project. Comments and concerns received from the various Bureaus and Advisors of the State Departments of Natural Resources (DNR), were incorporated into the document. State Historic Preservation Offices (SHPO) and the Bureau of Indian Affairs (BIA) were also involved.

Great Lakes believes that where FERC is the lead agency in preparing the EIS, the overall environmental review process would be expedited in areas where aspects of the project are reviewed by state and other federal regulatory agencies. The state or other Federal agency review and permitting process is as thorough and sometimes exceeds FERC's review, since these agencies have local expertise directly related to the project area. Great Lakes suggests that FERC should recognize those state and other Federal agencies have adequate review programs and should rely more on those reviews. This approach would reduce delay in the review process and expedite the principle purpose of the EIS. 8

G4-8 See Response G4-1.

G4

DEIS, Section 1.4, Scope of Non-jurisdictional Facility Analysis
Pg 1-6

COMMENT

Great Lakes understands the July 27, 1988 Order Establishing Guidelines For The Submission of Required Data and FERC's interpretation that an applicant must provide cultural resource and threatened and endangered species surveys for non-jurisdictional facilities. Unlike other NIP Project applicants, Great Lakes' proposed project does not interconnect with any non-jurisdictional facilities. Therefore, Great Lakes is concerned about unnecessary delays if the cultural resources and threatened and endangered species review of the non-jurisdictional facilities begins to delay Great Lakes' construction schedule. Thus, Great Lakes requests that the Commission issue to it a certificate of public convenience and necessity independent from other NIP applicants whose facilities are an integral part of non-jurisdictional facilities.

9

G4-9 Please see response to comment G4-6.

G4

DEIS, Section 2.1.1., Great Lakes Proposed Facilities
Pg 2-1, ¶2

"Note to Reader: Great Lakes informally indicated to the staff that the diameter of its proposed Loop 1 may increase and that the length of the loop may decrease. The discussion in the FEIS will be modified to reflect the change, should Great Lakes formally modify its proposal."

COMMENT

In Great Lakes' March 2, 1990 filing in response to informal staff Data Request (page 105), Great Lakes proposed to increase the diameter of Loop #1 pipe from 36" to 42". This increase would result in a reduction of 1.0 miles of the total length of the loop segment. The revised mileposts for the proposed loop #1 are:

Loop #1 M.P. 59.5 - M.P. 64.1

G4-10 Comment noted. If a formal filing is made to modify the proposal, the only change would be an associated reduction in the environmental impact of the 1 mile of pipeline that would no longer be needed. However, until a formal filing is made we will continue to assess the impact of the 36-inch-diameter pipe. Please note that in Docket No. CP89-1898-000, Great Lakes indicated in its system map that the modification would be made to Loop 1. Therefore, Great Lakes' assertion that the modification was accomplished as a result of an informal data request is incorrect.

10

DEIS, Section 2.3.1, Pipeline Construction Procedures
Pg 2-30, ¶5

"Final erosion and sedimentation control structures (i.e., interceptor dikes, trench plugs, silt fences, and erosion control matting) would be installed during the final grading."

COMMENT

Great Lakes agrees that final erosion and sedimentation structures will be installed during the final grading. However, trench plugs are not installed after backfilling. They are installed primarily on steep slopes immediately after trenching to prevent rainwater from eroding the open trench. Great Lakes' Soil Erosion and Sediment Control Plan includes criteria for trench plug installation. 11

G4-11 Comment noted. The word trench plugs has been deleted from the sentence in section 2.3.1.

DEIS, Section 2.3.1, Pipeline Construction Procedures
pg 2-31, ¶ 1

"Test water would not be discharged directly into a stream or natural water source."

COMMENT

Great Lakes maintains that discharging hydrostatic test water directly into a water source should be allowed. Appendix D, Section III of the DEIS does not mention a requirement for on-land discharge of hydrostatic test water for new pipeline facilities. Similarly, during the discharge permit review process, DNRs from Minnesota, Michigan and Wisconsin examined hydrostatic test plans for each proposed test. During the review process for Great Lakes 1989 construction, the DNRs allowed the discharge of hydrostatic test water directly into a water source.

Great Lakes will only be testing new pipe, and therefore, any residue that accumulates in existing facilities will not be present. Prior to hydrostatic testing, the new pipe is washed to remove soil material and debris that accumulated in the pipe during the construction process. The wash water amounts to approximately 1 percent of the total volume used for hydrostatically testing the pipe. The wash water is discharged on land using a filtration structure to remove sediment.

FERC's recommendation that hydrostatic test water not be discharged directly into a stream or natural water source would result in

12

G4-12 The statement noted in section 2.3.1 was incorrect and has been removed. Hydrostatic test waters may be discharged into surface waters, provided our recommendations in appendix D are followed by the applicant.

increased erosion and sedimentation in most areas. Discharge water tends to be low in suspended solids because of the washing process described above. If the water is discharged into an upland dewatering structure, it must flow over land, normally to the stream from which it was appropriated. Because of the large volume of water being discharged, erosion would most likely occur and sediment would be transported to the receiving waters. Less environmental damage will occur if the test water is discharged directly into the receiving water using an energy-dissipation device that will direct the flow away from the banks or bottom of the stream.

On-land discharge of test water is appropriate where approaches to the receiving water are nearly flat and vegetation is dense, i.e., where wetlands occur at the margins of the stream. Great Lakes proposes to consult with its environmental inspectors to determine the discharge method that would result in the least amount of erosion and sedimentation.

G4

12

G4

DEIS, Section 2.7, Permits and Approvals
pg 2-37, Table 2.7-1, Line 5

"Environmental Permits for the Proposed NIP Project"

COMMENT

Great Lakes contends that the proposed loops of the TCPL-2 project will not cross U.S. National Park Service land; therefore, a special use permit is not required from the Park Service.

As stated in Great Lakes' response (January, 1990, page 168) to FERC'S Formal Data Request on the NIP Project, the proposed pipeline loop will not pass within the boundaries of the Dead Stream Swamp National Natural Landmark.

13

G4-13 Comment accepted; see revised table 2.7-1.

G4

DEIS, Section 3.4, Route Variations
pg 3-9, ¶1

"We have asked Great Lakes to consider increasing the diameter of its proposed loop from 36 inches to 42 inches in order to decrease the length of looping required."

COMMENT

As stated in Great Lakes' follow-up response (March 1990, page 105) to FERC's Data Request, Great Lakes' proposed project will nearly complete the looping of Great Lakes' 36 inch mainline pipe system. The near completion of the second line (loopline) will be advantageous to Great Lakes due to increased security of the pipeline system and the increased ability to electronically inspect the pipeline without discontinuities that a multiple diameter pipeline would cause.

14

G4-14 Comment noted.

DEIS, Section 4.1.1.2, Mineral Resources
pg 4-3, Table 4.1.1-2

"Mining Operations Near Pipeline Facilities"

COMMENT

Great Lakes contends that 5 of the 6 active gravel/sand pits listed in Table 4.1.1-2 are inactive, based on surveys and discussions with landowners. The following sites are inactive: mileposts 236.8, 391.5, 706.8, 714.9, and 936.0.

The only remaining active site is located at milepost 331.2 and is 1,100 feet from Great Lakes' proposed pipeline.

Great Lakes has negotiated right-of-way easements that will adequately accommodate the installation of additional pipeline(s) at all of the above mentioned locations. The right-of-way widths at these sites vary between 75 feet to 125 feet.

Any route realignments around these pits will be filed with the Secretary of the Commission for review and approval by the Director of OPPR prior to construction.

15

G4-15 Comment noted. Table 4.1.1-2 has been revised accordingly.

G4

DEIS, Section 4.1.3.1, Groundwater
pg 4-15, ¶3

> "The State of Michigan Safe Drinking Water Act (Act 399 P.A. 1976) specifies a standard isolation radius of 200 feet around public wellheads from potential or existing sources of contamination such as septic tanks, dry wells, or seepage pits."

COMMENT

Great Lakes is aware of the State of Michigan's Safe Drinking Act (Act 399 P.A. 1976). It is noted (DEIS Table 4.1.3-1, page 4-13) that the nearest public water supply well along the proposed route is 0.6 miles, (3200 feet).

See the comment to Section 7, Recommended Measure 10 for additional information regarding construction impacts on aquifers.

16

G4-16 Comment noted.

DEIS, Section 4.1.3.2, Surface Waters
Pg 4-16, ¶4

"The proposed pipeline loops would cross 160 perennial water bodies - 19 in Minnesota, 32 in Wisconsin, and 109 in Michigan. Fifteen of the crossings would be greater than 100 feet in width."

COMMENT

Great Lakes has performed extensive field surveys to identify all perennial streams crossed by the proposed loops. The following is the state-by-state distribution of perennial streams which are to be crossed:

- 18 in Minnesota
- 21 in Wisconsin
- 1 on the Wisconsin/Michigan border
- 93 in Michigan

133 total

The differences in the number of perennial water bodies listed in the DEIS and Great Lakes' response could be the result of: (1) map interpretations versus field investigations; (2) the fact that several streams indicated as perennial on USGS maps were found to be dry upon field investigation; and (3) FERC has listed the Mississippi River three times, when Great Lakes considers this a single crossing because it will be constructed as a single unit.

17

G4-17 Our listing of perennial streams was based on USGS map investigations. We understand that seasonal conditions and site-specific investigations may result in a listing that varies from our determination. FERC recognizes that streams that were listed as perennial could be intermittent during the construction period. The differences that exist between FERC's and Great Lakes' perennial stream listings would not change our analysis of the potential impact of the proposed project on water quality. This analysis concludes that impact on water quality would only be temporary. We have reviewed Great Lakes' perennial stream listings and have made changes to our list where USGS maps indicate intermittent streams are crossed. Please see revised text and table 4.1.3-6.

The following tables are based on Great Lakes' information which correspond to Table 4.1.3-5, Table 4.1.3-6 and Table 4.1.3-7 found on pages 4-21 through 4-28 of the DEIS.

G4

17

TABLE 4.1.3-5

Summary of Water Purity Classes Crossed by the Proposed NIP Project

	State Water Quality Classification	Number of Crossings	% of Total Crossing
Minnesota Streams:	A	14	78
	B	1	5
	C	3	17
	TOTAL	18	
Wisconsin Streams:	WWF	3	14
	WWFI	2	4
	CWF	3	13
	CWFI	2	9
	CWFII	5	23
	CWFIII	3	14
	CWFI-S	1	5
	CWFII-S	1	5
	CWFIII-S	2	9
	CWFI-M	1	4
	TOTAL	22	
Michigan Streams:	WWFI	9	10
	WWFII	31	33
	WWFI-S	2	2
	WWFII-S	1	1
	CWFI	15	16
	CWFII	26	28
	CWFI-S	2	2
	CWFII-S	5	5
	CWFII-M	1	1
	CWFII-MS	2	2
	TOTAL	94	

Table 4.1.3-6

TCPL-2 PROJECT

PERENNIAL STREAMS IN MINNESOTA

Page 1 of 1

Milepost	Name	Location	Quad Map	County	Pwt. No.	Trout	Fishery Classification	State Water Quality Classification
56.0	Middle River*	SE Sec. 31, T157N, R4W	Newfolden	Marshall	201-PD-6021		WWF	B
112.0	Creek	NW Sec. 4, T149N, R38W	Gully	Clearwater	***		WWF	
113.5	Lost River	SE Sec. 3, T149N, R38W	Clearbrook	Clearwater	202-PD-6061		WWF	B
114.8	Silver Creek	SE Sec. 11, T149N, R38W	Clearbrook	Clearwater	202-PD-6035		R1	B
22.3	Creek	SW Sec. 3, T148N, R37W	Leonard	Clearwater	***		WWF	
123.4	Ruffy Brook	NE Sec. 13, T148N, R37W	Leonard	Clearwater	202-PD-6034		WWF	B
123.6	Creek (Judicial Ditch #5)**	NE Sec. 13, T148N, R37W	Leonard	Clearwater	202-PD-6111		WWF	B
130.2	Clearwater River	NW Sec. 35, T148N, R36W	Solway	Clearwater	202-PD-6015	Yes	CWF-S	C
185.6	Creek	SW Sec. 36, T145N, R28W	Bena	Cass	203-PD-6102		R1	B
189.3	Creek (Nushka Lake)	NE Sec. 33, T145N, R27W	Nushka Lake	Cass	***		R1	B
190.7	Creek	SW Sec. 35, T145N, R27W	Nushka Lake	Cass	***		WWF	B
191.8	Creek	SW Sec. 36, T145N, R27W	Nushka Lake	Cass	***	Yes	WWF	B
196.0	Mississippi River and 2 Oxbows	NW Sec. 3, T144N, R26W	Ball Club	Cass/Itasca	203-PD-6009	Yes	WWF	B,OR
199.5	Ball Club River	SE Sec. 31, T145N, R25W	Ball Club	Itasca	203-PD-6011		WWF	B
211.6	Blackwater Creek	NE Sec. 4, T55N, R26W	Cohasset West	Itasca	204-PD-6026		WWF	C
213.5	Bass Brook	NW Sec. 11, T55N, R26W	Cohasset East	Itasca	204-PD-6027		WWF	B
234.0	Swan River*	SE Sec. 33, T54N, R23W	Jacobson	Itasca	204-PD-6103		WWF	C
237.9	Bruce Creek****	NW Sec. 13, T53N, R23W	Swan River	Itasca	204-PD-6105		CWF	B

* Will be revised due to reroute
** May not require DNR Permit; GLGTC Duluth will be handling this crossing (Red Lake Watershed District)
*** Drawing preparation underway
**** Will be bored as part of adjacent State Hwy. 65 crossing

KNB 4/26/90

TCPL-2 PROJECT

PERENNIAL STREAMS IN WISCONSIN

Milepost	Name	Location	Quad Map	County	Pwr. Sp.	Trout	Fishery Classification	State Water Quality Classification
317.4	Middle River	SE Sec. 25, T48N, R12W	Poplar	Douglas	205-PD-6101		UWF	
318.0	Poplar River*	SW Sec. 30, T48N, R11W	Poplar	Douglas	205-PD-6103	Yes	CWF III-S	
319.1	Lake Creek	SE Sec. 29, T48N, R11W	Poplar	Douglas	205-PD-6105		CWF II	
328.0	Bois Brule River	NW Sec. 23, T48N, R10W	Oulu	Douglas	205-PD-6124	Yes	CWF I,M	OR
329.5	Trask Creek	SE Sec. 29, T48N, R10W	Brule	Douglas	205-PD-6125	Yes	CWF	
330.0	Fish Creek	SW Sec. 19, T48N, R9W	Brule	Bayfield	205-PD-6126	Yes	CWF	
334.0	Muskeg Creek	SW Sec. 26, T48N, R8W	Iron Lake	Bayfield	205-PD-6132	Yes	CWF II	
336.6	Iron River	SE Sec. 30, T48N, R8W	Iron Lake	Bayfield	205-PD-6135	Yes	CWF I-S	
336.8	Creek	NE Sec. 31, T48N, R8W	Iron Lake	Bayfield	205-PD-6136	Yes	CWF I	
337.9	De Champe Creek	NE Sec. 32, T48N, R8W	Iron Lake	Bayfield	205-PD-6138	Yes	CWF-I	
342.0	Creek	SE Sec. 36, T48N, R8W	Mart Lake	Bayfield	205-PD-6140	Yes	CWF	
83.6	Spoon Creek	SE Sec. 35, T47N, R1W	Oronto Bay	Iron	206-PD-6101	Yes	CWF III	
384.0	Creek	SW Sec. 36, T47N, R1W	Oronto Bay	Iron	206-PD-6102	Yes	CWF III	
388.6	Boomer Creek	NE Sec. 3, T46N, R1E	Iron Belt	Iron	206-PD-6104	Yes	CWF II-S	
389.8	Fourche Creek	NE Sec. 2, T46N, R1E	Iron Belt	Iron	206-PD-6105	Yes	CWF III-S	
391.8	Flood Creek	NE Sec. 6, T46N, R2E	Iron Belt	Iron	206-PD-6108	Yes	CWF II	
391.9	Creek	NE Sec. 6, T46N, R2E	Iron Belt	Iron	***	Yes	CWF II	
392.2	W. Fork Montreal River	NW Sec. 5, T46N, R2E	Iron Belt	Iron	206-PD-6110	Yes	CWF III	
393.7	Creek	NE Sec. 4, T46N, R2E	Ironwood	Iron	***		UWF	

* Will be revised due to reroute
*** Drawing preparation underway

5867/KWB/TCPL-2

KWB 4/26/90

Table 4.1.3-6

G4

TCPL-2 PROJECT

PERENNIAL STREAMS IN WISCONSIN

Milepost	Name	Location	Quad Map	County	Pwr. Sp.	Trout	Fishery Classification	State Water Quality Classification
394.3	Creek	NW Sec. 3, T46N, R2E	Ironwood	Iron	206-PD-6114		UWF	
395.1	Creek	NE Sec. 3, T46N, R2E	Ironwood	Iron	***	Yes	CWF II	
395.2	Montreal River	NE Sec. 3, T46N, R2E	Ironwood	Iron, WI	206-PD-6113		CWF II	
		SW Sec. 5, T47N, R47W		Gogebic, MI				

*** Drawing preparation underway

5867/KWB/TCPL-2

KWB 4/26/90

Table 4.1.3-6

TCPL-2 PROJECT

PERENNIAL STREAMS IN MICHIGAN

DNR Dist.	Milepost	Name	Location	Quad Map	County	Dwg. No.	Trout	Fishery Classification	State Water Quality Classification
1	395.2	Montreal River	NE Sec. 3, T46N, R2E SW Sec. 5, T47N, R47W	Ironwood	Iron, WI/ Gogebic, MI	206-PD-6113		WWF I	
1	397.0	Welch Creek	SE Sec. 4, T47N, R47W	N. Ironwood	Gogebic	206-PD-6115	YES	CWF II	
1	399.6	Siemens Creek	NW Sec. 1, T47N, R47W	Bessemer	Gogebic	206-PD-6117	YES	CWF I	
1	401.6	Creek	SW Sec. 5, T47N, R46W	Bessemer	Gogebic	206-PD-6118	YES	CWF I	
1	401.9	Powder Mill Creek	SE Sec. 5, T47N, R46W	Bessemer	Gogebic	206-PD-6119	YES	CWF I	
1	403.3	Kallander Creek	SE Sec. 3, T47N, R46W	Bessemer	Gogebic	206-PD-6120	YES	CWF II	
	406.1	Black River	SE Sec. 1, T47N, R46W	Wakefield	Gogebic	206-PD-6122	YES	CWF II-S	
1	409.3	Planter Creek	NE Sec. 4, T47N, R45W	Wakefield	Gogebic	206-PD-6125	YES	CWF II	
1	412.3	Jackson Creek	SW Sec. 12, T47N, R45W	Wakefield	Gogebic	206-PD-6126	YES	CWF I-S	
1	412.5	Alvard Creek	SE Sec. 12, T47N, R45W	Wakefield, NE	Gogebic	206-PD-6127	YES	CWF II	
1	434.3	Tenderfoot Creek	SW Sec. 31, T46N, R41W	Thayer	Gogebic	207-PD-6101		WWF II	
1	435.6	Grosbeck Creek	NW Sec. 5, T45N, R41W	Thayer	Gogebic	207-PD-6103	YES	CWF II	
1	438.5	Cisco Br. Ontonagon R.	SE Sec. 10, T45N, R41W	Thayer	Gogebic	207-PD-6105		CWF II	
1	441.5	Creek	SW Sec. 18, T45N, R40W	Beaton	Gogebic	207-PD-6111	YES	CWF I	
1	444.0	Middle Br. Ontonagon R.	SE Sec. 21, T45N, R40W	Beaton	Gogebic	207-PD-6113	YES	CWF II-S	
1	446.6	Zigzag Creek*	NE Sec. 25, T45N, R40W	Beaton	Gogebic	207-PD-6114	YES	CWF II	
1	447.2	Henderson Creek*	NW Sec. 30, T45N, R39W	Watersmeet	Gogebic	207-PD-6115	YES	CWF II	
1	448.0	Creek*	NE Sec. 30, T45N, R39W	Watersmeet	Gogebic	207-PD-6116	YES	CWF II	
1	450.8	Creek	NW Sec. 34, T45N, R39W	Watersmeet	Gogebic	207-PD-6119	YES	CWF II	
1	450.9	Duck Creek	NW Sec. 34, T45N, R39W	Watersmeet	Gogebic	207-PD-6119	YES	CWF II	
	455.4	Cedar Creek	SW Sec. 5, T44N, R38W	Imp Lake	Gogebic	207-PD-6120	YES	CWF II	
1	455.9	Cedar Creek	SE Sec. 5, T44N, R38W	Imp Lake	Gogebic	207-PD-6121	YES	CWF II	
1	456.7	Imp Creek	NE Sec. 9, T44N, R38W	Imp Lake	Gogebic	207-PD-6123	YES	CWF II	
2	460.9	So. Br. Paint River	NW Sec. 19, T44N, R37W	Golden Lake	Iron	207-PD-6124	YES	CWF I	
2	466.3	Cooks Run	NE Sec. 2, T43N, R37W	Golden Lake	Iron	207-PD-6125	YES	CWF I	
2	469.3	McRae Creek	NE Sec. 5, T43N, R36W	Beechwood	Iron	207-PD-6126		WWF II	
2	472.4	Creek	NE Sec. 11, T43N, R36W	Beechwood	Iron	207-PD-6129	YES	CWF II	
2	474.5	No. Br. Iron River	SE Sec. 7, T43N, R35W	Gibbs City	Iron	207-PD-6131	YES	CWF I	

* Will be revised due to reroute
NOTE: 450.8/450.9 crossings appear on one drawing

5867/KWB/TCPL-2

KWB 4/26/90

Table 4.1.3-6

G4

TCPL-2 PROJECT

PERENNIAL STREAMS IN MICHIGAN

DNR DIST.	APPROX. MILEPOST	NAME	LOCATION	QUAD MAP	COUNTY	Dwg. No	Trout	Fishery Classification	State Water Classificatic
2	528.2	No. Br. Ford River	SW SEC. 26, T43N,R27W	ALFRED	DICKINSON	208-PD-6104	YES	CWF I-S	
3	534.4	Creek	SE SEC.2, T42N, R26W	NORTHLAND	MARQUETTE	208-PD-6105		WWF II	
3	537.8	Creek	SW SEC.9, T42N, R25W	WATSON	MARQUETTE	208-PD-6108	YES	CWF II	
3	538.4	Hunters Brook	NE SEC. 9, T42N, R25W	WATSON	MARQUETTE	208-PD-6109	YES	CWF II	
3	547.0	Escanaba River	SE SEC.26, T42N, R25W	WATSON	MARQUETTE	208-PD-6111	YES	CWF I-S	
3	548.8	Squaw Creek	NW SEC.31, T42N, R23W	CORNELL	DELTA	208-PD-6112	YES	CWF II-2	
3	550.1	Indian Creek	NE SEC. 32, T42N, R23W	CORNELL	DELTA	208-PD-6113		WWF II	
3	553.5	Days River	NE SEC.2, T41N, R23W	CORNELL	DELTA	208-PD-6114		WWF II-S	
3	558.0	Tacoosh River	NW SEC.10, T41N, R22W	PERKINS	DELTA	208-PD-6115	YES	CWF II,M	
3	575.3	Sturgeon River	NE SEC.20, T41N, R19W	ST. JACQUES	DELTA	209-PD-6101	YES	CWF II,M-S	
3	581.9	Fishdam River	SW SEC.21, T41N, R18W	GARDEN CORNERS	DELTA	209-PD-6102	YES	CWF II,M-S	
3	584.7	Spring Creek	NE SEC. 26, T41N, R18W	GARDEN CORNERS	DELTA	209-PD-6103		WWF II	
4	591.6	Dufour Creek	NE SEC.24, T41N, R17W	MANISTIQUE W.	SCHOOLCRAFT	209-PD-6104	YES	CWF I	
4	592.0	Dufour Creek	NW SEC. 19, T41N, R16W	MANISTIQUE W.	SCHOOLCRAFT	209-PD-6105	YES	CWF I	
4	592.5	Dufour Creek	NE SEC. 19, T41N, R16W	MANISTIQUE W.	SCHOOLCRAFT	209-PD-6106	YES	CWF I	
4	593.0	Dufour Creek	NW SEC.20, T41N, R17W	MANISTIQUE W.	SCHOOLCRAFT	209-PD-6107	YES	CWF I	
4	598.5	Indian River	NW SEC.1, T41N, R16W	MANISTIQUE E.	SCHOOLCRAFT	209-PD-6108		WWF I-S	
4	599.3	Manistique River	SW SEC.31, T42N, R15W	MANISTIQUE E.	SCHOOLCRAFT	209-PD-6109		WWF I-S	
4	606.6	Merwin Creek	SE SEC.18, T42N, R14W	MERWIN LAKE	SCHOOLCRAFT	209-PD-6112		WWF II	
4	612.7	Litte Bear Creek	NW SEC.6, T42N, R13W	SLAMEY PARK	SCHOOLCRAFT	209-PD-6113	YES	CWF II	
4	651.6	Creek	SE SEC.31, T43N, R7W	EPOUFETTE	MACKINAC	209-PD-6101	YES	CWF II	
4	652.1	Paquin Creek	SW SEC.32, T43N, R7W	EPOUFETTE	MACKINAC	209-PD-6102	YES	CWF II	
4	657.0	Cut River	SW SEC.7, T42N, R6W	BREVORT	MACKINAC	209-PD-6103	YES	CWF II	

Table 4.1.3-6

TCPL-2 PROJECT

PERENNIAL STREAMS IN MICHIGAN

DNR DIST.	APPROX. MILEPOST	NAME	LOCATION	QUAD MAP	COUNTY	Dwg. No	Trout	Fishery Classification	State Water Classificatior
4	677.4	Moran River	NW SEC.11, T40N, R4W	MORAN	MACKINAC	209-PD-6111		WF II	
5	693.3	Carp Lake River	NE SEC. 21, T38N, R4W	LEVERING	EMMET	210-PD-6114	YES	CWF II-S	
5	695.8	Certon Creek	SE SEC.33, T38N, R4W	LEVERING	EMMET	210-PD-6123		WF I	
5	696.5	Creek	NE SEC.4, T37N, R4W	LEVERING	EMMET	210-PD-6115		WF I	
5	697.2	Creek	NE SEC.10, T37N, R4W	PELLSTON	EMMET	210-PD-6124		WFI	
5	697.3	Creek	NE SEC.10, T37N, R4W	PELLSTON	EMMET	210-PD-6125		WF I	
5	698.2	Van Creek	NE SEC.15, T37N, R4W	PELLSTON	EMMET	210-PD-6116		WF II	
5	703.4	E. Br. Maple River*	NW SEC.11, T36N, R4W	PELLSTON	EMMET	210-PD-6117	YES	CWF II	
5	705.2	Maple River	SW SEC.14, T36N, R2W	PELLSTON	EMMET	210-PD-6118	YES	CWF I	
5	707.6	Creek	NW SEC.35, T36N, R4W	ALANSON	EMMET	210-PD-6119	YES	CWF II	
5	707.9	Crooked River	SE SEC.35, T36N, R4W	ALANSON	EMMET	210-PD-6120		WF I	
5	713.5	Cedar Creek	SE SEC.25, T35N, R4W	BURT LAKE	EMMET	210-PD-6121	YES	CWF I	
7	750.0	Menistee River	SW SEC.30, T29N, R4W	FREDERIC	OTSEGO	211-PD-6103	YES	CWF I	
6	779.8	Dead Stream	NW SEC. 28, T24N, R5W	ADDIS CREEK	MISSAUKEE	211-PD-6104	YES	CWFII	
6	781.1	Addis Creek	SE SEC.33, T24N, R5W	ADDIS CREEK	MISSAUKEE	211-PD-6105	YES	CWF II	
6	783.6	Meymarsh Creek	SE SEC. 16, T23N, R5W	ADDIS CREEK	MISSAUKEE	211-PD-6106		WF II	
6	786.4	West Br. Muskegon R.	SE SEC.28, T23N, R5W	MERRITT	MISSAUKEE	211-PD-6107		WF II	

Table 4.1.3-6

G4

TCPL-2 PROJECT

PERENNIAL STREAMS IN MICHIGAN

DNR Dist.	Milepost	Name	Location	Quad Map	County	Dwg. No.	Trout	Fishery Classification	State Water Quality Classification
6	792.1	Butterfield Creek	NE Sec. 29, T22N, R5W	Merritt	Missaukee	211-PD-6108	YES	CWF II	
7	800.0	Cranberry Creek	NE Sec. 6, T20N, R5W	Hoddersville	Clare	211-PD-6109		WWF I	
7	803.1	Muskegon River	NE Sec. 19, T20N, R5W	Prescle Creek	Clare	211-PD-6110		WWF I	
7	807.5	Green Creek	NE Sec. 7, T19N, R5W	Prescle Creek	Clare	211-PD-6111		WWF II	
7	814.0	Shingle Creek	SW Sec. 7, T18N, R5W	Lake George	Clare	211-PD-6114		WWF II	
7	815.1	McCray Drain	SE Sec. 18, T18N, R5W	Lake George	Clare	211-PD-6112		WWF II	
8	851.9	Little Salt Creek	NE Sec. 16, T13N, R2W	Pleasant Valley	Midland	212-PD-6103		WWF II	
8	854.8	Pine River	NW Sec. 25, T13N, R2W	St. Louis	Midland	212-PD-6107		WWF II	
8	855.6	Bush Creek	SE Sec. 25, T13N, R2W	Breckenridge	Midland	212-PD-6108		WWF II	
8	857.2	Sucker Creek	SE Sec. 31, T13N, R1W	Breckenridge	Midland	212-PD-6112			No Fishery
	871.3	Beaver Creek	SW Sec. 20, T11N, R2E	Lakefield	Saginaw	212-PD-6134		WWF II	
8	875.5	Bad River	SW Sec. 2, T10N, R2E	St. Charles	Saginaw	212-PD-6140		WWF II	
	877.4	South Fork Bad River	NE Sec. 13, T10N, R2E	St. Charles	Saginaw	212-PD-6142		WWF II	
8	879.9	Pickarel Creek	NE Sec. 20, T10N, R3E	St. Charles	Saginaw	212-PD-6147		WWF II	
8	881.5	Shiawassee River	NW Sec. 22, T10N, R3E	Alicia	Saginaw	212-PD-6149		WWF II	
8	882.2	Bear Creek	NW Sec. 23, T10N, R3E	Alicia	Saginaw	212-PD-6150		WWF II	
8	886.4	Fairchild Creek	SW Sec. 21, T10N, R4E	Alicia	Saginaw	212-PD-6159		WWF II	
8	886.9	Misteguay Creek	SE Sec. 21, T10N, R4E	Bridgeport	Saginaw	212-PD-6160		WWF II	
8	890.9	Pattee Creek	NE Sec. 30, T10N, R5E	Montrose	Saginaw	212-PD-6168		WWF II	
	893.4	Flint River	NW Sec. 27, T10N, R5E	Birch Run South	Saginaw	212-PD-6173		WWF II	
8	894.5	Fine Run	SW Sec. 26, T10N, R5E	Birch Run South	Saginaw	212-PD-6175		WWF II	
8	897.0	Silver Creek	SE Sec. 30, T10N, R6E	Birch Run South	Saginaw	212-PD-6183		WWF II	
11	935.7	N. Br. Belle River	NE Sec. 23, T7N, R11E	Attica	Lapeer	213-PD-6113		WWF II	
11	939.3	Belle River	NE Sec. 32, T7N, R12E	Almont	Lapeer	213-PD-6118		WWF II	

Table 4.1.3-6

Table 4.1.3-7

GREAT LAKES GAS TRANSMISSION COMPANY

TCPL-2 PROJECT

STREAMS OVER 100' WIDE (BANK TO BANK)

Milepost	Name	Bank to Bank Width
125.4	Ruffy Brook	171'
130.2	Clearwater River	366'
199.5	Ball Club River	324'
196.0	Mississippi River	5200'
213.5	Bass Brook	149'
234.0	Swan River	107'*
317.5	Middle River	150'
328.0	Bois Brule River	109'
330.0	Fish Creek	161'
406.1	Black River	103'
547.0	Escanaba River	271'
598.5	Indian River	209'
599.3	Manistique River	363'
693.3	Carp Lake River	113'
703.4	East Branch Maple River	300'*
707.9	Crooked River	171'
783.6	Haymarsh Creek	117'
786.4	West Branch Muskegon River	132'
803.1	Muskegon River	101'
854.8	Pine River	107'
881.5	Shiawassee River	270'
882.2	Bear Creek	275'
886.4	Fairchild Creek	106'
886.9	Misteguay Creek	151'
893.4	Flint River	211'

* Will be revised due to reroute

KWB:gg
April 5, 1990

DEIS, Section 4.1.4.1, Fishery Resources
Pg 4-31, ¶3

"Great Lake's pipeline facilities would cross 154 surface waters located in Minnesota (19), Wisconsin (21), and Michigan (114)."

COMMENT

The 154 surface waters in this section do not agree with the 160 perennial water bodies in Section 4.1.3.2 (DEIS, page 4-16, ¶4). Great Lakes contends that there are 133 perennial stream crossings for the reasons expressed in the previous response.

G4

18

G4-18 See Response G4-17. It should be noted, however, that the final determination regarding the identification of perennial streams as it pertains to stream crossing construction procedures would be made by the state. The data in table 4.1.3-6 are presented strictly for analysis of potential impact on water quality and fisheries resources.

DEIS, Section 4.1.4.1, Fishery Resources
Pg. 4-32, Table 4.1.4-2

"Fisheries Resources of Special Concern Crossed by the Proposed NIP Project."

COMMENT

Great Lakes questions the apparent discrepancies between Table 4.1.4-2 (DEIS pg. 4-32) and the streams described in Section 4.1.4.1 The table includes 21 streams characterized as fisheries resources of special concern. Streams discussed in section 4.1.4.1 do not correspond to the table.

G4

19

G4-19 Comment noted. Cedar Creek (MP 713.5) has been replaced on table 4.1.4-2 by the Brevoort River (MP 669.2). No other discrepancies were found. All text in section 4.1.4.1 was determined to be complete. Wisconsin DNR has requested the insertion of Muskeg Creek as an additional fishery of special concern.

G4

DEIS, Section 4.1.5.1.1, Fish
Pg 4-40, Table 4.1.5-1

"Federal and State-Listed Species that Potentially Exist in the Vicinity of the Proposed NIP Project"

COMMENT

Great Lakes is aware of an additional species that should be included in this table. The wood turtle (Clemmys insculpta), is a threatened species in Wisconsin, and has the status of a special concern in the state of Michigan. A wood turtle survey is included as part of the Survey of Vertebrates and Evaluation of Wetlands Along a Natural Gas Pipeline in the Hiawatha, Ottawa, Chequamegon, and Chippewa National Forests, a plan produced for Great Lakes and discussed in Section 7, Recommended Measure #26.

Potential wood turtle habitat exists at 14 stream crossings in the Hiawatha and Ottawa National Forests where loops 9, 11, and 12 are proposed. No potential habitat was found within the Chequamegon National Forest where loop 7 is proposed. Potential wood turtle habitat will be surveyed, and mitigation measures taken to preserve this species.

20

G4-20 Thank you for your comment. Sections 4.1.5.1, 5.1.5.2, and table 4.1.5.1 have been modified to indicate the potential presence of the wood turtle along proposed Loops 9, 11, and 12.

DEIS, Section 4.1.7, Wetlands
Pg 4-46, ¶6

"The location and cover type of each wetland crossed is listed in table E-1 in appendix E."

COMMENT

Based on additional National Wetland Inventory (NWI) map information that has become available since the initial filing, the wetland crossing tables have been revised and can be found in Appendix E.

G4

21

G4-21 Submittal of additional wetland data is noted. We have carefully reviewed your revised wetland data and compared it against our table E-1 in appendix E. Many inconsistencies were noted between the two data sets. Because Great Lakes failed to plot the proposed loops on the wetland maps, we plotted the pipe on the maps. Therefore, many of these inconsistencies could be attributed to the fact that Great Lakes and FERC each used a set of wetland maps with the proposed centerline independently drawn on each set. This resulted in a slight difference in the milepost location indicators between the two sets of wetland maps. In other instances, there were differences in judgment as to whether or not to include a wetland when the centerline just touched its border.

Great Lakes' table includes approximately 9.5 miles of additional wetland crossings that do not appear in table E-1 of the DEIS. Approximately 4.8 miles resulted from Great Lakes' review of additional wetland maps for Loops 14 and 15, which were not provided to the staff, to develop table E-1.

Both table E-1 in the DEIS and Great Lakes' submitted wetland table are based on review of a map resource only. For this reason some discrepancies should be expected, and the unaccounted for difference of 4.7 miles of wetland crossed, over a total distance of 460 miles, is not significant. Both tables provide a close approximation of the length of wetlands crossed.

To ensure a more accurate measure of wetlands crossed, and to define wetland boundaries within which special construction measures must be used, we have recommended that all wetlands be delineated using the Unified Federal Methodology. This delineation must be completed prior to construction.

G4

DEIS, Section 4.1.9.1.1 Pipeline Facilities
Pg 4-66, ¶2

"No residential developments in the planning or permitting process have been identified along the proposed pipeline loops."

COMMENT

Great Lakes' proposed pipeline will traverse one residential development, the Pencil Lake Subdivision between milepost 744 and 745. Presently, there are few houses constructed within the subdivision, with only one house located within 50 feet of the proposed pipeline.

Great Lakes is presently negotiating right-of-way easement to construct an additional pipeline through this area and does not anticipate required route variation.

22

G4-22 Section 4.1.9.1.1 has been revised to incorporate this information.

DEIS, Section 4.1.9.1.2, Aboveground Facilities
Pg 4-70, ¶1.

"Great Lakes proposes aerodynamic replacement for 12 of its existing compressor stations. There would be no impact on existing land use."

COMMENT

In addition to the aerodynamic replacements planned there will be some additional aboveground facilities associated with Great Lakes' project; however, these facilities will be contained within the right-of-way, minimizing land use impacts.

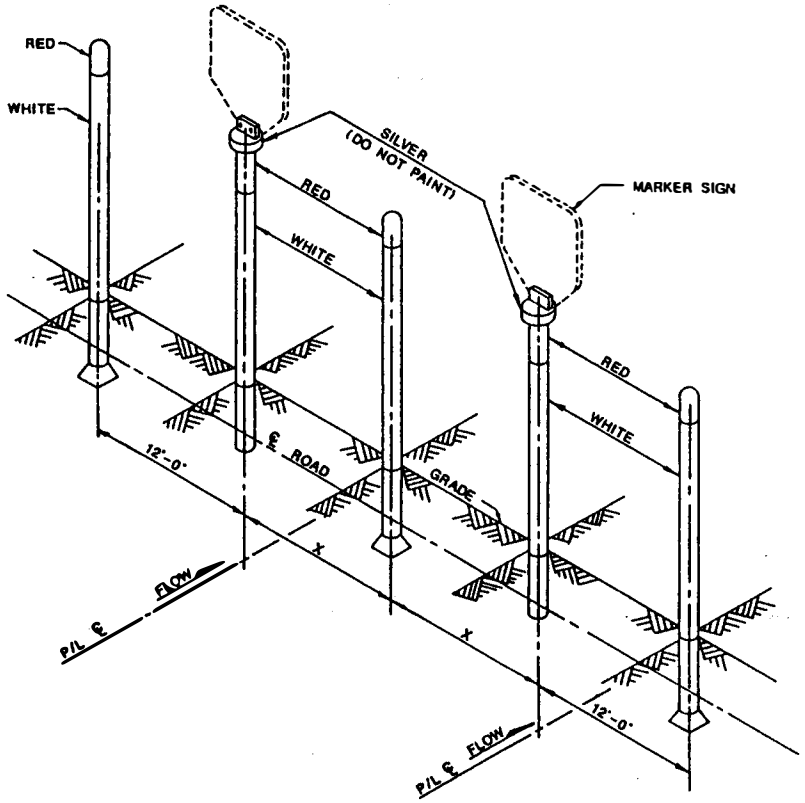
At mainline valve locations, these fenced sites will be enlarged from a typical size of 15' x 20' to approximately 43' x 50' to accommodate an additional loopline valve. As shown on the attached sketch, the valve operator is the only visible aboveground portion of the mainline valve.

In addition, road/railroad crossings, and other intersecting rights-of-way will be marked with signs. Cathodic protection test stations will be installed at selected locations, usually at road crossings, and aerial markers will be installed as needed. Sketches of these items are also attached.

G4

23

G4-23 Section 4.1.9.1.2 has been revised to incorporate this information.



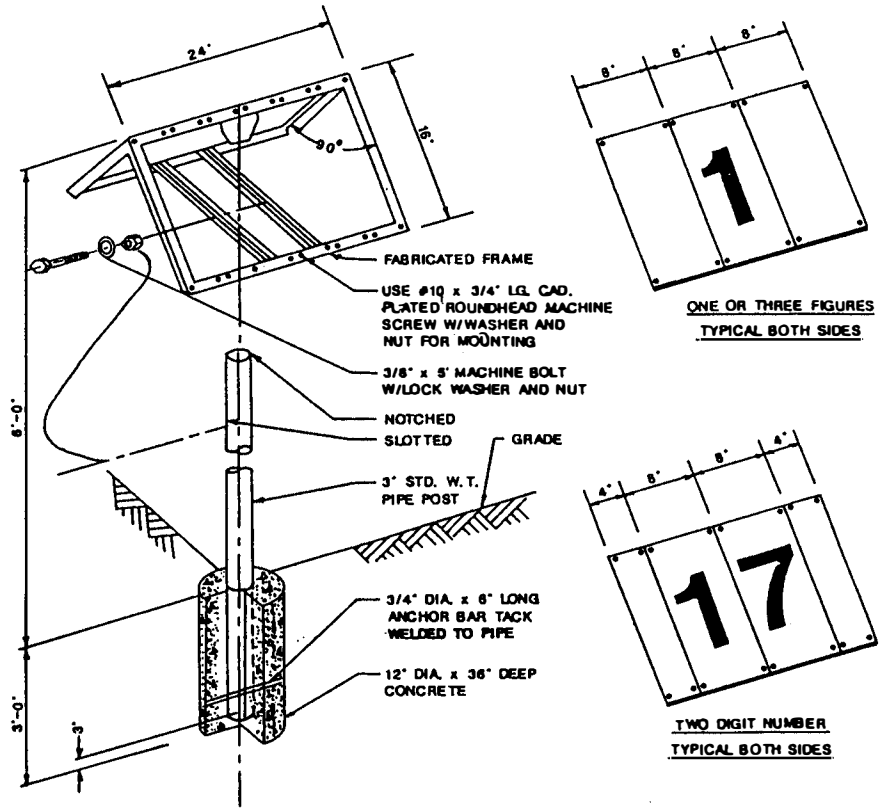
VENT OR GROUND MARKER DUAL LINES

NOTES :

1. POSTS BETWEEN VENTS OR GROUND MARKERS TO BE EQUALLY SPACED, (X-X).
2. COAT BELOW GRADE PIPE WITH ROSCOTE 612XM OR EQUAL AND PAINT ABOVE GROUND PIPE AS SPECIFIED.
3. MOUNT "GAS PIPELINE" MARKER SIGN ONLY ON POST LOCATED NEAREST THE PIPELINES.

WILLBROS BUTLER ENGINEERS, INC. PREPARED FOR GREAT LAKES GAS TRANSMISSION COMPANY	PIPELINE GROUND MARKERS			
	Dwn JWG	Date 4-17-89	Ckd GRS	App FJK
	Job 5790	Dwg No 200-SC-1017B		Rev 3

REDRAWN



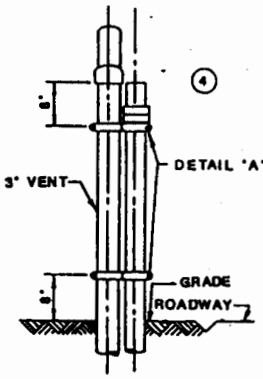
ISOMETRIC VIEW

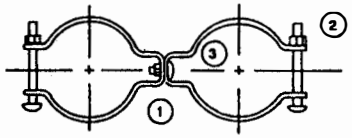
NOTES :

1. ALL MATERIAL EXCEPT CONCRETE SHALL BE FURNISHED AND FABRICATED BY COMPANY.
2. CONTRACTOR SHALL ASSEMBLE AND INSTALL AT LOCATIONS DESIGNATED BY COMPANY.
3. LOCATE ADJACENT TO FENCE IS POSSIBLE AND 2'-6" TO THE RIGHT (LOOKING IN THE DIRECTION OF FLOW) OF THE CARRIER PIPE.
4. PIPE ABOVE GROUND SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIFICATION.

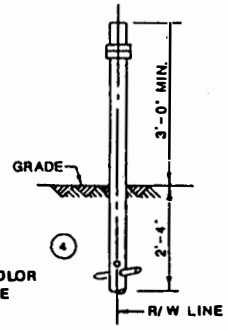
WILLBROS BUTLER ENGINEERS, INC. PREPARED FOR GREAT LAKES GAS TRANSMISSION COMPANY	PIPELINE AERIAL MARKERS			
	Dwn M.D.P.	Date 5-3-89	Ckd G.R.S.	App FJK
	Job 5790	Dwg No 200-SC-1016		Rev 2

REDRAWN

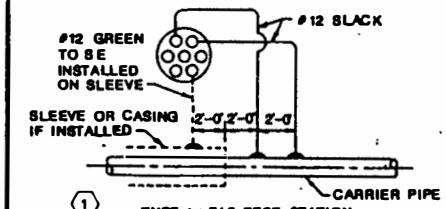




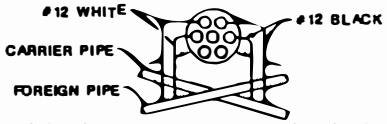
ITEM	DESCRIPTION OF MATERIAL
1.	MINERALLAC CONDUIT NO. 7 HANGER.
2.	1/8" x 3" MACHINE SCREW, STEEL RD. HD. C/W HEX NUT.
3.	1/8" x 1/2" MACHINE SCREW, STEEL RD. HD. C/W SQ. NUT
4.	TEST STATION, COTT "BIG FINK" COLOR RED: CONDUIT 3"x 8". COLOR WHITE



TYPICAL TEST LEAD STATION



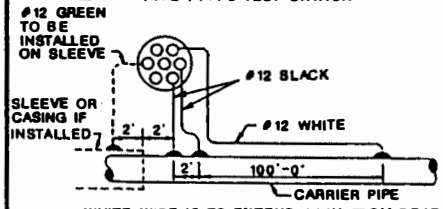
1 TYPE 1 : P/S TEST STATION



IF CROSSING IS WITHIN 500' OF A FENCE INSTALL COMPANY TEST LEADS AT FENCE AND BRING FOREIGN PIPELINE TEST LEADS TO FENCE.

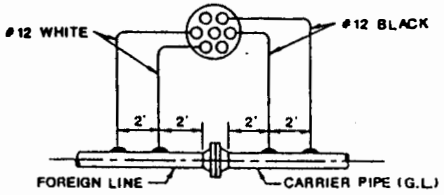
OMIT TEST STATION IF MORE THAN 500' FROM FENCE.

2 TYPE 2 : FOREIGN PIPELINE CROSSINGS



WHITE WIRE IS TO EXTEND AWAY FROM ROAD. IF THERE IS NO ROAD, WHITE WIRE IS TO EXTEND DOWNSTREAM.

3 TYPE 3 : I.R. DROP TEST LEAD INSTALLATION



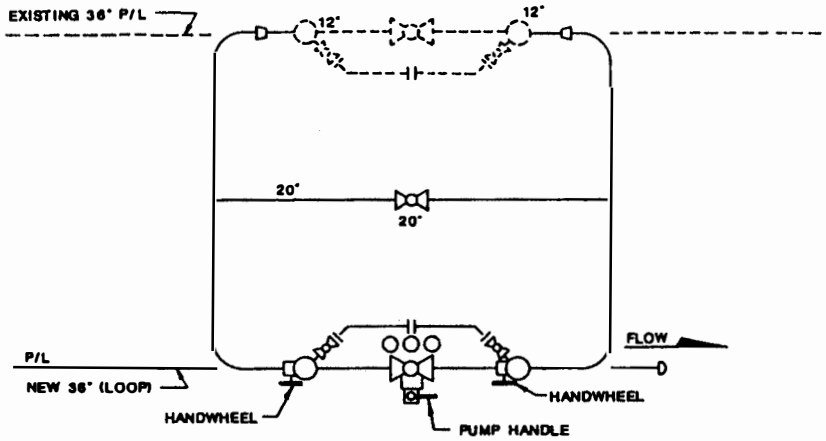
4 TYPE 4 : BURIED INSULATING FLANGES

TYPICAL TYPES OF TEST LEADS

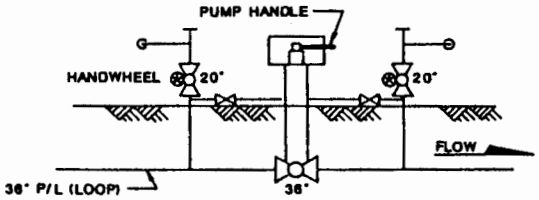
SHEET 1 OF 2

WILLBROS BUTLER ENGINEERS, INC. PREPARED FOR GREAT LAKES GAS TRANSMISSION COMPANY	TYPICAL CATHODIC PROTECTION TEST STATIONS			
	Dwn JWG	Date 4-17-89	Ckd GRS	App FJK
	Job 5790	Dwg No 200-SC-1007		Rev 5

REDRAWN



PLAN



ELEVATION

LEGEND

EXISTING - - - - -

NEW ———

WILLBROS BUTLER ENGINEERS, INC. PREPARED FOR GREAT LAKES GAS TRANSMISSION COMPANY	HANDWHEEL & OPERATOR PUMP ORIENTATION FOR TYPICAL MLV INSTALLATION			
	Dwn JWG	Date 4-17-89	Ckd GRS	App FJK
	Job 5790	Dwg No 200-SC-1022		Rev 1

REDRAWN

DEIS, Section 4.1.9.2, Recreation and Public Interest Areas
Pg 4-73 to 4-75, Table 4.1.9-3

"Recreation and Public Interest Areas Crossed by or Adjacent to the Proposed NIP Project Pipelines."

COMMENT

Great Lakes has revised the crossing lengths and names of forest areas on Table 4.1.9-3 and is providing the following corrected table. In addition, many of the State Forests have been reclassified as forest areas, as reflected in the revised table.

G4

24

G4-24 Although we recognize that many of the state forests are classified into forest areas for management purposes, we provided the state forest name for easy identification since these names appear on most maps. The forest areas, on the other hand, may be subject to changes in name as evidenced by the differences between forest area names presented in your environmental report and as presented on your "revised table 4.1.9-3." Your other comments on table 4.1.9-3 have been reviewed and incorporated, where appropriate.

G4

REVISED TABLE 4.1.9-3
Recreation and Public Interest Areas
Crossed by or Adjacent to the Proposed NIP Project Pipelines

Pipeline Segment/ State	County	Approx. Milepost	Length of Crossing*	Description
GREAT LAKES				
Minnesota				
Loop 1				None
Loop 2				None
Loop 3	Clearwater	130.2-130.6	0.3	Clearwater County land
Loop 4	Cass	182.7-196.0	8.6	Chippewa National Forest
	Cass/Itasca	182.2-201.0	6.4	State of Minnesota land
	Cass/Itasca	196.0	5200'	Mississippi River
	Itasca	196.5-200.3	0.7	Leech Lake Indian Reservation
Loop 5	Itasca	209.8-212.1	0.4	State of Minnesota land
Loop 6	Itasca	228.5-240.2	2.4	State of Minnesota land
	Itasca	238.7-238.8	0.1	Savanna State Forest
Wisconsin				
Loop 7	Douglas	327.9	109'	Bois Brule River - fishing, canoeing
	Douglas	327.3-327.4	0.1	Brule River State Forest
	Douglas	327.8-328.6	0.6	State of Wisconsin land
	Bayfield	338.0-341.0	2.7	Bayfield County land
	Bayfield	341.0-344.3	2.7	Chequamegon National Forest
Loop 8	Iron	379.6-394.7	2.1	Iron County land
Michigan				
Loop 8	Gogebic	397.8-398.0	0.2	School District of Ironwood Township
	Gogebic	409.1-409.3	0.3	City of Wakefield
	Gogebic	410.3-415.2	1.4	Ottawa National Forest
	Gogebic	406.1	10.3'	Black River (potential candidate national inv.)
Loop 9	Gogebic	433.7-474.3	24.7	Ottawa National Forest
	Gogebic	438.5	64'	Cisco Branch - Ontonagon River (potential candidate state/national inv.)
	Gogebic	444.0	19'	Middle Branch - Ontonagon River (potential candidate state/national inv.)
	Iron	460.8	75'	South Branch - Paint River (potential candidate state/national inv.)
	Iron	466.2-466.5	0.4	Iron County land
	Iron	474.0-474.3	0.3	Federal Government
Loop 10	Dickinson	524.3-527.9	2.2	Gwinn Forest Area
	Dickinson	528.2	44'	North Branch - Ford River (potential candidate state inv.)
	Marquette	536.6-538.7	0.5	Norway Forest Area
	Marquette	547.0	271'	Escanaba River (potential candidate state inv.)
	Delta	552.4-554.0	1.0	Escanaba State Forest
	Delta	558.8-560.3	1.5	Escanaba State Forest
Loop 11	Delta	575.2-585.5	9.0	Hiawatha National Forest
	Delta	575.3	89'	Sturgeon River (potential candidate national inv.)
	Schoolcraft	588.8-591.9	3.0	Shingleton Forest Area
	Schoolcraft	593.7-594.3	0.9	State of Michigan
	Schoolcraft	594.5-595.7	1.2	Manistique River
	Schoolcraft	598.5	209'	Indian River (potential candidate state/national inv.)
	Schoolcraft	599.2-600.9	1.6	Shingleton Forest Area

REVISED TABLE 4.1.9-3
Recreation and Public Interest Areas
Crossed by or Adjacent to the Proposed NIP Project Pipelines

Pipeline Segment/ State	County	Approx. Milepost	Length of Crossing*	Description
Loop 12	Mackinac	649.7-663.8	8.7	Naubinway Forest Area
	Mackinac	663.8-678.0	11.3	Hiawatha National Forest
	Mackinac	677.9-678.0	0	
Loop 13	Emmet	686.2-701.2	5.6	Indian River Forest Area
	Emmet	699.5-701.7	1.7	University of Michigan land
	Emmet	702.7-703.2	0.5	Emmet County land
	Emmet	707.8-708.0	0.3	State of Michigan land
Loop 14	Otsego	746.1-751.2	4.5	Gaylord Forest Area
	Otsego	750.0	72'	Manistee River (potential candidate state/national inv.)
	Crawford	751.1-752.8	1.7	Ruscommon Forest Area
Loop 15	Missaukee	776.5-799.8	9.3	Kalkaska Forest Area
	Clare	803.2	101'	Muskegon River (potential candidate state inv.)
	Clare	799.8-806.7	5.9	Kalkaska and Gladwin Forest Areas
	Clare	811.5-812.6	0.7	Lincoln Gun Club
Loop 16	Midland	854.8	107'	Pine River (potential candidate state inv.)
	Midland	855.6-855.8	0.2	State of Michigan land
	Saginaw	881.5	270'	Shiawassee River (potential candidate state inv.)
Loop 17	Lapeer	937.9-938.1	0.2	Michigan Dept. of Transportation land

*Actual crossing lengths are shown in miles except river and trail crossings which are shown in feet.

G4

DEIS, Section 5.1.2.1, General Construction and Operational Impact
Pg 5-7, ¶2

"Another method is to plow the damaged area with a "winged" plow that lifts and loosens soil without turning it over. Significant improvements in productivity have been reported following the use of such a device. The use of a similar tool, called the "paraplow", can also be used to restore damaged soil."

COMMENT

Great Lakes proposes to reduce the effects of subsoil compaction by using a deep chisel plow or subsoiler. Refer to Great Lakes' comment in Appendix C, IV.C.

25

G4-25 Your comment is noted; however, we feel that a paraplow type device provides the most acceptable means of reducing the effects of subsoil compaction.

DEIS, Section 5.1.2.1, General Construction and Operational Impact
Pg. 5-7, ¶5

"Tile damage due to vehicle movement or trenching can be repaired by probing the tile to determine if misalignment or breakage has occurred and replacing the damaged sections."

COMMENT

Probing should be required only where visual inspection is not practical. Refer to Great Lakes' comment in Appendix C, III.B.

26

G4-26 Much of the right-of-way that would support construction traffic would not be excavated to a point in which subsurface drainage systems can be confidently visually inspected. Use of sewer rods and pipe snakes to inspect these drainage systems will cause minimal disturbance and is required as specified in appendix C.

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg 5-8, ¶5

"On slopes greater than 5 percent, our plan requires temporary slope breakers, terraces, or diversion ditches shall be constructed at the end of each working day."

COMMENT

Temporary slope breakers shall be repaired at the end of each working day unless winter weather makes the possibility for runoff

27

G4-27 We feel that the requirement for temporary slope breakers at the end of each day should not significantly increase construction time and that the benefit of controlling runoff from unanticipated rainfalls outweighs any impact from an increase in land disturbance in constructing the breakers. Refer also to comment response G4-33.

events minimal. Refer to Great Lakes' comment in Appendix C, III.C.

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-8, ¶6

"Permanent runoff diversions on all slopes greater than 5 percent would be constructed according to the following specifications:"

Slope (%)	Spacing (ft)
5-10	150
11-15	100
16-30	75
>30	50

COMMENT

Past construction experience has demonstrated that the spacing Great Lakes proposes in its Soil Erosion and Sediment Control Plan will adequately control soil erosion in upland areas. Refer to Great Lakes' comment in Appendix C, IV.E.

28

G4-28 The details specified for permanent runoff diversions by Great Lakes are nearly identical to ours. Only where slopes range from 16 - 20% gradient do discrepancies arise within the two sets of specifications. We maintain that a closer spacing in the 16 - 20% slope range of permanent runoff diversions is warranted.

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-8, ¶7

"Our plan requires construction of trench breakers such that the bottom of one breaker is at the same elevation as the top of the next breaker downslope."

COMMENT

Past construction experience has shown that Great Lakes' proposed trench breaker spacing in this Soil Erosion and Sediment Control Plan is sufficient to prevent erosion in the trench. Refer to Great Lakes comment in Appendix C, III.F.

29

G4-29 We maintain that the trench breaker spacing detailed in appendix C is appropriate to ensure proper and effective protection.

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-9, ¶3

"None of the applicants responded to the following vegetation strip spacing requirements."

Slope (%)	Vegetation Strip Req'd (ft)
< 5	25
5-15	50
16-30	75
>30	100

COMMENT

Because of the intensity of activity which often occurs at road crossings, whether bored or open cut, it would be very difficult to leave a strip of undisturbed vegetation at all crossings. As proposed in Great Lakes Soil Erosion and Sediment Control Plan, temporary silt fences will be used at the base of slopes adjacent to road crossings where vegetation has been disturbed within the distances specified above.

30

G4-30 The proposed application of silt fences is consistent with section III-E of appendix C.

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-9 ¶ 4

"All of the project applicants have agreed to segregate topsoil in cropland either as a company policy or at the landowner's request. However, not all of the applicants have agreed to the same in residential areas."

COMMENT

Great Lakes assumes residential areas to be lawns, gardens, and playgrounds, and will segregate topsoil in these areas if requested by landowners.

31

G4-31 Comment noted. The applicants have the responsibility of asking landowners whether topsoil stripping/segregation measures are to be applied.

G4

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-9 ¶ 5

"Where soils are shallow to bedrock or have stony subsoil, 8 inches of topsoil stripping is recommended."

COMMENT

Great Lakes agrees to topsoil segregate where soils are shallow to bedrock or have a stony subsoil. Because the topsoil depth may vary from site to site, Great Lakes proposes to consult with environmental inspectors to determine the depth of topsoil that should be segregated. Eight inches of topsoil will be segregated in areas that are shallow to bedrock or have a stony subsoil where the actual topsoil depth is 8 inches or more.

32

G4-32 Comment accepted. This is consistent with appendix C.

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-11 ¶2

"We recommend that to avoid compaction and rutting of soil in agricultural and residential areas, construction be avoided during the wettest time of the year (April 15 to May 31 for Great Lakes Loops 1 through 14 and April 1 to May 15 for the remaining project areas).

COMMENT

Great Lakes has retained environmental inspectors that will provide expertise as to the date construction activity can occur in the spring with minimal soil compaction.

33

G4-33 Comment noted. FERC can waive specific requirements of the Erosion Control, Revegetation, and Maintenance Plan upon specific and detailed requests in the event of extenuating circumstances, such as abnormally dry spring conditions.

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-11 ¶ 3

"Our plan requires that a "green manure" crop such as alfalfa

34

G4-34 Great Lakes' proposal to use deep chisel plows and subsoilers to reduce subsoil compaction is not consistent with the recommended measures contained in appendix C.

G4

be grown or paraplowing (or use of a similar "winged" plow) of severely rutted portions of the right-of-way be used for restoration."

COMMENT

Great Lakes proposes to reduce the effects of subsoil compaction by using a deep chisel plow or subsoiler. Refer to Great Lakes' comment in Appendix C, IV. C.

34

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-12 ¶4

"Our plan requires that all drainage systems be probed with a sewer rod or pipe snake to determine if damage has occurred. All tiles damaged during construction shall be repaired to their original or better condition. Detailed records of drainage system repairs should be kept and given to the landowner for future reference."

COMMENT

Probing should be required only where visual inspections are not practical. Refer to Great Lakes' comment in Appendix C, III. B.

35

G4-35 See Response G4-26.

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-12 ¶7

"Great Lakes concurs that peat depth should be determined because stability of the existing pipe is dependent on peat depth. Great Lakes agrees to perform soil tests when the ground thaws. Results would be forwarded to the Chippewa National Forest and a construction schedule would be developed."

36

G4-36 Great Lakes' proposal appears to adequately fulfill the Forest Services' construction planning recommendations.

COMMENT

Great Lakes will conduct studies on peat depth in the Chippewa National Forest where additional right-of-way may be required to maintain the stability of the existing pipe during construction of the loop. 36

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-13 ¶ 2

> "Our plan requires that any area that is disturbed between October 15 and May 1 or where bare soil is left unstabilized by vegetation should be treated as a winter construction problem and mulched with 3 tons per acre of hay or straw or the equivalent. 37

COMMENT

As stated in Appendix C.V.D.1 only slopes in excess of 8 percent should be mulched.

G4-37 Thank you for your comment.

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-13 ¶ 2

> "The mulch should be anchored with a mulch anchoring tool or a liquid mulch binder." 38

COMMENT

A farm disk set as straight as possible will anchor the mulch without excessively covering the mulch with soil. Refer to Great Lakes' comment in Appendix C, V.D.2.

G4-38 Appendix C, section V(D)(1-5), contains our recommended mulching specifications. As noted previously, applicants may file for approval of deviations.

G4

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-13 ¶ 5

"Most of the applicants have proposed fertilizer and liming amounts to prepare the seedbed, although there is some variation. Our plan requires that 2 tons per acre lime and 200 pounds per acre 10-20-20 fertilizer be used to prepare the seedbed."

COMMENT

Great Lakes proposes to apply finely ground limestone according to results of field soil tests. Fertilizer will be applied at 300 pounds per acre of 10-20-20 fertilizer. Refer to Great Lakes comments in Appendix C, V.A.1. and C, V.A.2.

39

G4-39 Our plan is intended to provide a minimum degree of protection. Applicants can file deviations with the Commission for review and approval by the Director of OPPR.

DEIS, Section 5.1.2.2, Erosion Control, Revegetation, and Maintenance Requirements
Pg. 5-13 ¶ 6

"Our plan requires that final cleanup and permanent erosion control measures be completed within 10 days after the trench is backfilled, weather and soil conditions permitting."

COMMENT

Great Lakes proposes that final cleanup and permanent erosion control measures be completed within 10 days after final grading of the right-of-way occurs. Refer to Great Lakes' comment in Appendix C, V.A.6.

40

G4-40 Final cleanup and permanent erosion control measures are to be completed within 10 days after the trench is backfilled. Keying final cleanup to final grading could result in areas remaining disturbed for extended periods of time.

DEIS, Section 5.1.3.1.1, General Construction and Operational Impact
Pg. 5-14 ¶6

"All water produced from trench dewatering activities would be discharged in an upland area to allow siltation prior to its return to the aquifer. In this way dewatering during the proposed pipeline construction generally would have minimal impact on local groundwater levels."

41

G4-41 FERC recognizes that upland areas may not occur in all areas where trench dewatering is necessary. In these areas, it would be acceptable to dewater into a suitable filtration device provided no silt-laden waters are permitted to flow into any perennial stream or river.

COMMENT

Trench dewatering is sometimes necessary in locations where there is no adjacent upland area. A strawbale/silt fence filtration sump will be employed to remove sediment. Great Lakes concurs that dewatering activities will have a minimal effect on local groundwater levels, primarily because the trench would intercept only the uppermost portion of surficial aquifers.

41

DEIS, Section 5.1.3.2.1, General Construction and Operational Impact
Pg. 5-18 ¶ 3

> "We believe that refueling greater than 100 feet from a surface water can be accomplished at most crossing locations. In situations where this requirement is technically infeasible, our recommendation allows the applicants to request an exemption on a site-specific basis."

COMMENT

In DEIS Section 5.1.7.2, page 5-55 ¶ 5, FERC accepted Great Lakes' proposal to use sealed containers no larger than 5 gallons to refuel portable construction equipment within 100 feet of wetland boundaries. Great Lakes maintains that the same logic should be applied to refueling small equipment near streams and rivers.

42

G4-42 We have reviewed this comment and agree that it is reasonable to refuel small equipment, such as pumps or generators, that are kept in continuous operation within 100 feet of a stream or river, provided fuel containers no larger than 5 gallons are used.

DEIS, Section 5.1.3.2.1, General Construction and Operational Impact
Pg. 5-19 ¶ 4

> "Pipe installation at minor stream crossings containing cold water or significant warm water fisheries (less than 10 feet wide and 2 feet average depth) would be accomplished by a "dry crossing" technique. This technique involves routing the stream flow through a flume pipe prior to excavation."

43

G4-43 As discussed in section 7.3, each applicant has the opportunity to identify site-specific situations where relief from a particular procedure could be requested from FERC. It is assumed most of these situations would be identified by the applicant during preparation of construction specifications and site-specific construction drawings.

COMMENT

Great Lakes maintains that fluming may not be possible for all streams. Refer to Great Lakes' comments on DEIS, Appendix D, I.D.5.b.

43

DEIS, Section 5.1.3.2.1, General Construction and Operational Impact
Pg. 5-19 ¶ 5

> "Great Lakes has proposed the installation of sheet piling on both sides of a proposed trench to support trench walls during excavation in minor and major stream and rivers where unstable soils exist. FERC does not believe this procedure is necessary at minor stream crossings which would be constructed in a dewatered streambed as specified in our Procedures for fluming minor streams. We believe the installation and removal of sheet piling in major streams and rivers would create additional turbidity and sedimentation, except in site-specific cases which have been approved by the FERC."

COMMENT

Great Lakes proposes to use sheet piling where fluming is not feasible or where the stability of the existing pipe could be jeopardized by construction. Past experience with sheet piling indicates that only a minor amount of turbidity is produced during installation and removal. However, sheet piling greatly reduces the amount of stream turbidity during the trenching process. Refer to Great Lakes' comment on DEIS, Appendix D, I.D.5.b.

44

G4-44 Comment noted. The use of sheet piling would require site-specific exemption from the requirements of appendix D.

DEIS Section 5.1.7.1, General Construction and Operational Impact
Pg. 5-54 ¶ 4

> "Trees greater than 15 feet high and located within 15 feet of the proposed pipeline would be selectively hand cut, which would maintain forested wetlands over the pipeline in a scrub-shrub stage."

45

G4-45 We feel that Great Lakes has not provided justification of the need to clear within 20 feet rather than 15 feet of the pipeline loop.

COMMENT

Great Lakes proposes to cut trees with a height of 15 feet located within 20 feet of either the existing mainline or loopline. Refer to Great Lakes' comment on DEIS, Appendix D, II.G.1. This comment also applies to DEIS, Section 5.17, page 5-59, ¶ 3.

45

DEIS, Section 5.1.7.2, Construction and Mitigation Procedures
Pg. 5-56 ¶ 2

> "Because of the potential for large amounts of sediment to enter surrounding undisturbed wetland areas, we feel that sediment filter devices should be used around all spoil piles and at the edges of the right-of-way within all wetlands areas, regardless of site conditions."

COMMENT

Great Lakes proposes to use silt fence in areas of open water and concentrated flow to reduce siltation of wetlands. Refer to DEIS, Appendix D, II.B.1.

46

G4-46 Comment noted. Our experience with construction through wetland areas has shown us that large volumes of saturated soils, regardless of where they are placed (ie. slope, flat area, next to trench, in designated spoil areas), will discharge large volumes of silt-laden waters. If standing or flowing waters are present, silt barriers must be utilized to prevent seepage of silt-laden water into nonconstruction areas. In seasonal wetlands during dry conditions, or under other site conditions where absolutely no standing or flowing water is present in or immediately adjacent to the right-of-way, then silt barriers would not be required. Please note revised section 5.1.7.2 which clarifies our intention.

DEIS, Section 5.1.7.2, Construction and Mitigation Procedures
Pg. 5-58 ¶ 1

> "Great Lakes and Tennessee indicate that for some wetland crossings, there may not be enough timber on the right-of-way, and timber outside of the right-of-way may need to be cut with the landowner's permission. The Procedures require that in such cases, prefabricated pads be used."

COMMENT

Refer to Great Lakes' comment on DEIS, Appendix D, II.C.12.

47

G4-47 Section 7.3 has been modified to allow use of timber obtained from National Forests for wetland work pads. Since the Forest Service is subject to compliance with NEPA and other Federal environmental protection laws, adequate environmental review of the associated impact would be conducted. Harvesting of timber on private lands would not undergo similar review and should be prohibited.

DEIS, Section 5.1.10.2, Site-Specific Impact
Pg. 5-96 ¶ 5

> "Typically, construction of 30 miles of pipeline would require 5 months from clearing to final restoration. During winter construction, the total time may extend to 7 months. Great Lakes proposes to use six construction spreads."

COMMENT

Great Lakes cannot specify the number of construction spreads at this time, since construction schedules cannot be determined until the FERC certificate is issued.

G4

48

G4-48 Comment accepted; section 5.1.10.2 has been corrected.

DEIS, Section 6.1, Comparison of Proposed Action with Alternative Route Variations
Pg 6-1 through 6-11

Entire Section

COMMENT

Great Lakes recognizes FERC's responsibility to solicit comments from federal and state agencies to identify sensitive environmental areas of concern where route variations could reduce or avoid proposed construction impacts. Likewise, planning and permitting activities for the proposed project have required Great Lakes to consult with the Minnesota, Wisconsin, and Michigan Departments of Natural Resources; the Minnesota Environmental Quality Board; the U.S. Fish and Wildlife Service; the U.S. Forest Service; the Army Corps of Engineers; and the respective State Historic Preservation Offices.

During this process, Great Lakes has received comments that reflect the desire of the agencies to confine construction activities within or adjacent to previously cleared corridors. This approach would minimize the fragmentation of sensitive habitat areas. These agencies have expressed to Great Lakes, as they have to FERC, that construction techniques, mitigative measures, and appropriate construction timing provide more effective management of construction-related impacts than the creation of new pipeline rights-of-way. Nevertheless, Great Lakes realizes that under special circumstances, a route variation may be the optimum method

of reducing the environmental impact of construction. Consequently, Great Lakes has developed criteria for evaluating all potential re-routes which includes the following:

- SENSITIVE AREAS AND HABITATS: In compliance with FERC regulations, Great Lakes consults with the appropriate Federal, state, and local regulatory authorities to address their concerns regarding sensitive environmental and specially designated habitat areas.

- WETLAND PROTECTION: As cited by FERC in the DEIS, wetland areas are numerous and extensive along the route crossed by the proposed Great Lakes pipeline. Concerns expressed by regulatory agencies have required that Great Lakes spend considerable time revising FERC's wetland crossing procedures described in DEIS, Appendix D. As amended, this document can serve its intended purpose to provide effective management of construction-related impacts that minimize the temporary disturbance of, and prevent the destruction of, wetland resources.

- REGULATORY AUTHORITY PREFERENCE: As previously stated, Great Lakes has received comments from agencies having jurisdiction over the areas crossed by the proposed pipeline. According to these agencies, special construction techniques, mitigative measures, and

construction timing recommendations will adequately protect the local resources and will be stated in permit stipulations from the issuing agency.

- ENGINEERING CONSIDERATIONS: Site-specific engineering considerations are a common criteria that Great Lakes uses to evaluate possible route variations. If there are engineering constraints associated with the proposed looping route, Great Lakes will investigate the feasibility of a route variation. Engineering considerations that warrant initiating this detailed review are generally associated with desirable alignment improvements where a pipeline crosses features such as roads, railroads, unstable soils, streams, powerlines, or foreign pipelines.

- OPERATION, MAINTENANCE, AND SAFETY: In addition to being an environmental preference of regulatory agencies, installing pipelines in clearly recognizable corridors reduces the potential for third party damage, which is a factor in the safe operation and maintenance (OM) of pipeline facilities. Great Lakes has promoted the "corridor concept" on their looping projects in order to meet both environmental and OM concerns. Confining the mainline and all loops to a single corridor facilitates clear delineation between Great Lakes' corridor and

adjacent foreign pipeline corridors during weekly aerial inspections; promotes consistent right-of-way maintenance; allows for optimum valve placement to safely control gas flow; and simplifies corridor access in the event of an emergency.

- LANDOWNER RELATIONSHIPS: Great Lakes spends considerable time and effort to establish and maintain positive landowner relationships. Implicit in this objective is an attempt to minimize the number of landowners impacted by looping projects. Any route variations that require creating an additional corridor will increase the number of landowners adversely affected by the project, thus making it more difficult to maintain positive landowner relationships.

- COSTS: The average base cost of pipeline construction is estimated at $1.2 million per mile. At this rate, the additional cost of implementing FERC's recommended re-routes would total $1.64 million.

Great Lakes has reviewed the five (5) route variations recommended by FERC in the DEIS and has prepared comments to each one based on FERC's analysis factors (discussed on page 6-1 of the DEIS) and Great Lakes' route variation criteria (summarized in previous paragraphs of this text).

DEIS, Section 6.1.1, U.S. Route 59 Wetland Variation

COMMENT

Great Lakes has received no indication from any regulatory authority, aside from FERC, that variation of the proposed route from the existing pipeline corridor would be preferred. Because of its designation as a protected wetland, crossing of the wetland along the original route/existing corridor will require a special permit. Construction activity through this wetland may temporarily disturb flora and fauna, but will not destroy the hydrologic characteristics of the area or have long-term detrimental effects.

The recommended route extends along the western edge of an NWI-mapped wetland. Impacts to this wetland were not presented in the FERC analysis, suggesting that the route variation may not reduce wetland impacts to the extent implied.

The Route 59 route variation will result in the creation of a new 75-foot permanent right-of-way, which runs contrary to both the "corridor concept" preferred by (local) regulatory authorities and the safe operation and maintenance practices which are the responsibility of Great Lakes.

The 0.1 mile length increase associated with the Route 59 variation would result in an estimated added cost of $120,000 to the total cost of the proposed project.

G4

G4-49 To fulfill our requirement of examining practical wetland alternatives pursuant to NEPA and the Clean Water Act, we examined all wetland crossings proposed by this project. We took into careful consideration several factors before recommending wetland variations. However, based on further analysis, we have determined that the recommendation of this variation would not be environmentally preferable. See revised discussion in section 6.1.1.

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G4

Given the preference of (local) regulatory authorities, the protected waters permit program in Minnesota, and the impacts to the wetland affected by the re-route, Great Lakes does not concur that the reduced wetland impacts anticipated justifies implementation of this route variation.

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Great Lakes has proposed a minor pipeline reroute in this area since the initial filing. Based on engineering, operations, maintenance and safety considerations, the route has been shifted to the southwest and shortened approximately 23 feet near the crossing of Minnesota State Highway 59 and the Soo Railroad (see Appendix A).

DEIS, Section 6.1.2, New Solum Wetland Variation.

COMMENT

Great Lakes recognizes that the New Solum wetland variation of loops 1 and 2 would avoid a State-protected wetland and minimize the amount of new corridor in a State-designated wild land located in Marshall County, Minnesota. However, for the reasons presented in the discussion that follows, Great Lakes contends that the looping projects, as proposed, would not result in long-term environmental impacts to these areas and, therefore, does not concur with FERC's recommended route variation.

The wild land provides habitat for sharptail grouse and sandhill cranes. In Minnesota, the sharptail grouse is a game bird and not considered a sensitive species. The sandhill crane is of special concern, particularly when wetland breeding habitat is reduced.

Great Lakes contends that utilizing the revised Appendix D, Wetland Crossing Procedures, the temporary disturbance to the wild land will be minimal and that there will be no loss of wetland habitat should the proposed loops be installed adjacent to the existing pipeline.

When consulted, Minnesota Department of Natural Resources (MnDNR) personnel have expressed a preference for the current proposed route along the existing right-of-way, provided special wetland

G4

G4-50 Refer to Response G4-49.

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crossing mitigative measures be implemented during construction.

G4

In addition to the minimal environmental impact of the proposed route, Great Lakes is aware of landowner resistance to the New Solum wetland variation. A copy of the landowner's letter to FERC regarding this route variation is attached at the end of this comment section.

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GREAT LAKES GAS TRANSMISSION COMPANY
STA #2 THIEF RIVER FALLS, MINN.

FAX NUMBER (218) 449-4291

DATE: APRIL 27, 1990

TO: ALAN McNICHOL

FROM: STA# 2

NUMBER OF PAGES TO FOLLOW: 1

COMMENTS: ALAN, THIS IS A LETTER FROM PROPERTY OWNER MARSHALL NESS (TRACT No. 21-OAMA-73) EXPRESSING HIS CONCERNS ON THE LOOP LINE THAT WILL BE COMING INTO STA#2

To whom it may Concern at the F.E.R.C

This Letter is in regard to the Proposed pipeline Const. that will be taking Place on my property.

It seems to me that changing the route of the pipe doesnt make any sense. The existing right of way is no threa to wildlife, but changing it to go thru my woodlot would destroy more wildlife Habitat, my woods is a real sanctuary for deer and other upland game.

I sure don't want any of my woods destroyed when its that close to my Farmstead, I would lose a lot of wind protection and most likely reduce the value of my property.

Right now as I'm writing this there are two Deer eating grass in my back yard.

I hope you will give this Letter some consideration.

Thank You
Marshall Ness

DEIS, Section 6.1.3, Pine Lake Wetland Variation.

COMMENT

FERC is recommending that Great Lakes implement this route variation in order to avoid crossing a "mixed forested/scrub-shrub wetland area". However, FERC does not specify why this area should be avoided.

In order to evaluate the rationale for the route variation, Great Lakes has used the previously described criteria. The results are as follows:

- Great Lakes is unaware of any other agency except FERC that believes that avoiding this area warrants creating a new right-of-way. Standard wetland construction mitigation techniques will minimize temporary disturbances of, and prevent the destruction of, wetland resources.

- In compliance with FERC regulations, Great Lakes consulted with appropriate agencies regarding sensitive environmental areas. None of these agencies indicated that the Pine Lake Wetland area is an area of special environmental concern where construction should not be permitted.

- Although the route variation would utilize an existing road corridor, it would create an additional right-of-way that

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G4-51 Refer to Response G4-49. See revised discussion in section 6.1.3.

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would complicate right-of-way maintenance. This additional right-of-way would also adversely affect additional landowners, thus making it more difficult to maintain positive landowner relationships.

Using the base cost estimate of $1.2 million per mile of pipeline construction, this route variation would increase the overall cost of the project by approximately $250,000.

This route variation would also create an engineering concern and an environmental impact that would not be experienced under the proposed action. The recommended reroute would run parallel with a small stream for a short distance. Since the new line does not cross perpendicular to the stream, a flumed crossing would not be feasible. Consequently, extensive in-stream construction would be necessary, and substantial sedimentation could occur.

Based on Great Lakes' evaluation of this re-route, it does not concur with FERC's recommended re-route at the Pine Lake wetland.

DEIS, Section 6.1.4, Clearbrook Wetland Variation.

COMMENT

FERC is recommending this route variation for the purpose of avoiding a "2,500-foot section of forested wetland". Great Lakes is not aware of any special environmental characteristics of this wetland area, nor is Great Lakes aware of any local regulatory agencies that have expressed concern over this area.

It is Great Lakes's policy to strive for positive relationships with the landowners along the corridor. This route variation would make it difficult to reach this objective since the landowners affected by the route variation have not understood the logic of diverging from the existing corridor and constructing through their cultivated fields.

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G4-52 See revised discussion in section 6.1.4.

G4

DEIS, Section 6.1.10, McIntyre Lake Wetland Variation.

COMMENT

The Michigan DNR has not indicated to Great Lakes that mitigative measures more stringent than Appendix D, Wetland Crossing Procedures, are warranted for this loop section. As FERC is aware, it is the general preference of local regulatory authorities to restrict construction activities to areas adjacent to existing cleared rights-of-way. Because Lakehead Pipeline Company may not agree to allow Great Lakes share its existing right-of-way, the route variation proposed by FERC could result in acquiring, clearing, and maintaining 30 miles of new right-of-way, separate from Great Lakes' existing corridor.

The McIntyre Lake Wetland Variation, as recommended, would adversely affect the safety, integrity and operations of Great Lakes' pipeline system, as an existing mainline valve is located in this reroute section at milepost 610.8. For these reasons, Great Lakes cannot agree with this recommended variation.

Based on the estimated cost of pipeline construction and the potential valve modifications that would be required to implement this recommended re-route, additional costs would increase the total cost of the project by at least $600,000; $360,000 associated with the 0.3-mile extended length, and over $250,000 for valve modifications.

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G4-53 We have reevaluated the resources that would be affected by the proposed route and the route variation, including Great Lakes' concern regarding the additional block valve. We have determined that the overall benefit to wetland resources warrants recommendation of this variation. Since a new mainline value would be installed in this loop regardless of its location, we do not concur with Great Lakes' concern regarding this point.

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For the above described reasons, Great Lakes does not concur with the recommended route variation.

RECOMMENDED MEASURE 1

"The applicants shall adhere to the construction procedures and mitigative measures described in their respective applications and in their responses to the staff's data requests, except as otherwise modified by these certificate conditions."

COMMENT

Great Lakes intends to comply with all of its construction procedures and mitigative measures described in its application and in its responses to the staff's data requests. Some of the modifications to Great Lakes' procedures, mitigative measures, and responses (which are the subject of the FERC staff recommended measures) cannot be adhered to by Great Lakes. See the following responses for detailed comments to the Recommended Measures.

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G4-54 Since recommendation 1 is really the applicant's submission, no response is necessary. The following responses are our responses to Great Lakes' comment and objections to our recommendation. Where we agreed with Great Lakes' comment, we have revised our recommendation. Otherwise, our recommendation stands as written unless we have modified it based on other reviewers' comments and suggestions.

RECOMMENDED MEASURE 2

"The applicants shall submit aerial photography at a scale not smaller than 1:6,000 that identifies all staging areas, pipe storage yards, access roads, and other areas that would be used or disturbed. Any alteration to the mapped route or aboveground facility locations as shown on the 1:6,000 scale aerial photography filed with the Commission with their respective applications, other than the staff's recommended variations and minor field realignments per landowner needs and requirements, shall be clearly identified and must be filed with the Secretary of the Commission and approved by the Director of the Office of Pipeline and Producer Regulation (OPPR) prior to implementation.

Alterations requiring approval shall include all route changes resulting from implementation of cultural resource mitigation measures; endangered, threatened, or special-concern species mitigation measures; further route modifications that may be recommended by the state regulatory authorities; final alignments through ongoing and planned developments; and those agreed to for individual landowners that also affect adjacent properties."

COMMENT

During the comment period, Great Lakes has commenced field surveys to identify roads that contractors could utilize to gain access to the right-of-way from the existing public road network. Great Lakes has also conducted an investigation to locate potential contractor yard/warehouse sites during this period. Table 1 identifies the potential contractor yard/warehouse sites. The use of these sites will be subject to their availability for leasing and clearance for cultural resources.

Table 2 identifies new pipe storage yards proposed for this project. Existing pipe yards that were previously cleared for cultural resources, used during Great Lakes' 1989 construction projects, and proposed for this project are listed in Table 3.

G4

G4-55 The proposed use of USGS 7.5-minute series quad maps is inappropriate. Aerial photographs are the only way appropriate detail may be provided for all the access roads, contractor yard/warehouse sites, and pipe storage sites.

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Contractor yard/warehouse sites, access roads, and pipe storage sites will be shown on aerial photography (1:6,000 scale) for the proposed route as previously provided to FERC, if these sites fall within the limits of the aerial photography coverage. Great Lakes recommends that these sites be delineated on USGS topographic maps. The cost to provide aerial photography for areas not covered by existing photography is estimated at $41,000. Great Lakes cannot economically justify obtaining aerial photography for a site located miles away from the pipeline, not knowing whether the site may or may not be used. USGS maps should provide good reference for location. Archaeologists will review each site for cultural resources. State DNRs and the U.S. Fish and Wildlife Service will be consulted for threatened and endangered species reviews.

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The sites listed in Tables 1, 2, and 3 and the access roads will be provided on a combination of the 1:6,000 scale aerial photography and USGS topographic maps by June 1, 1990. Adequate time was not available during the comment period to transfer all of the field information onto maps.

TABLE 1

POSSIBLE CONTRACTOR YARD SITES
(Generally Listed from East to West)

No.	Site	County	Legal	Description
1	Port Huron	St. Clair	Sec 35, T5N, R16E	Highway 94 and Airport Drive - Industrial Park -lots of vacant areas
2	Imlay City-Option 1	Lapeer	Sec 5, T7N, R12E	4± acres graveled area @ Highway 53 and Weyer Road (northwest corner)
3	Imlay City-Option 2	Lapeer	Sec 16 or 17, T7N, R12E	2 sites east of Highway 53 and north of Morrice Parkway. Also possible space in fairgrounds.
4	Flint-Option 1	Genesee	Sec 5, T6N, R7E	Maple Street @ Healthsource Boulevard - 4± acres behind abandoned service station building -weedy area
5	Flint-Option 2	Genesee	Sec 20, T8N, R7E	±3¼ acres of Dort Road and Coldwater Street (near Marathon Terminal and Trailer Park)
6	Shields-No. 3 alternate to Saginaw options	Saginaw	Sec 26 or 27, T12N, R3E	400' x 400' area - Highway 46 at Van Warner Road on south side - east of church - across from Chevy dealer

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No.	Site	County	Legal	Description
7	Birch Run-No. 1 alternate to Saginaw options	Saginaw	Sec 21 or 28, T10N, R6E	Birch Run Road east of Highway 10-23-75 across from John Deere Building - 4± acres
8	Birch Run-No. 2 alternate to Saginaw options	Saginaw	Sec 21 or 28, T10N, R6E	Dixie Highway and Birch Run Road - race track parking lost - possibly could be used in off-season
9	Saginaw-Option 1	Saginaw	Sec 15, T11N, R5E	Highway 10-23-75 @ Dixie Highway 12± acres behind Elias Big Boy
10	Saginaw-Option 1A	Saginaw	Sec 31, T12N, R5E	Genesee Avenue and Farmer Street - across from electrical substation (west of Kessell Department Store)
11	Saginaw-Option 1B	Saginaw	Sec 21, T12N, R5E	East of Highway 10-23-75 and Highway 46 - ±3½ acres in Morley Industrial Park - many sites in this area (east & south of RR Spur)
12	St. Louis-alternate to Saginaw or Mount Pleasant	Gratiot	Sec 20, T17N, R2W	Abandoned movie theater, 8± acres, on Highway 27-46 west of St. Louis next to car dealer
13	Mt. Pleasant-Option 1 (Oil City)	Midland	Sec 7, T14N, R2W	Highway 20 @ Coleman Road, 6± acres, northwest corner, has been used previously for pipe storage

No.	Site	County	Legal	Description
14	Mt. Pleasant-Option 2 1 (Oil City)	Midland	Sec 8, T14N, R2w	Directly across Coleman Road from Option behind restaurant.
15	Mt. Pleasant-Option 3	Isabella	Sec 7, T14N, R3W	Abandoned drive-in theater, north side of Hwy. 20
16	Mt. Pleasant-Option 4	Isabella	Sec 7, T14N, R3W	Industrial Park site, north side of Hwy. 20
17	Clare-Option 1	Isabella	Sec 2, T16N, R4W	6± acres Clare Industrial Park adjacent to Highway 10 south of Clare
18	Clare-Option 2	Isabella	Sec 36, T17N, R4W	10 acres north of Trailer Sales Co. (Clarbella and Isabella Road)
19	Grayling-Option 1	Crawford	Sec 8, T26N, R3W	Northeast corner of Highway 72 and Madsen Road, east side of town - 20± acres
20	Grayling-Option 2	Crawford	Sec 17, T26N, R3W	Southeast corner of Highway 72 and Madsen Road, east side of town - 14½± acres in between bar and building
21	Gaylord-Option 1	Otsego	Sec 8, T30N, R3W	10± acres west of city airport, south of Van Tyle Road
22	Gaylord-Option 2	Otsego	Sec 5, T30N, R3W	8± acres south of Highway 32 and north of concrete plant

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No.	Site	County	Legal	Description
23	Petoskey	Emmet	Sec 8, T34N, R6W	9± acres - abandoned drive-in south of Highway 31, 3½ miles west of Petoskey
24	Pellston-Option 1	Emmet	Sec 3, T36N, R4W	In city limits of Pellston east of Melton Street and north of Mill Street, 12± acres
25	Pellston-Option 2	Emmet	Sec 3, T36N, R4W	Same as Option 1, but between Highway 31 and Melton Street, north of Mill Street - around old railroad buildings, ±5 acres
26	Pellston-Option 3	Emmet	Sec 3, T36N, R4W	On diagonal corner from Option 2, south of Mill Street and east of Highway 31
27	Cheboygan-Option 1	Cheboygan	Sec 5/6, T37N, R1W	Cheboygan County Fairgrounds - available except for 2 weeks in August, 12± acres available
28	Cheboygan-Option 2	Cheboygan	Sec 26, T38N, R2W	Immediately south of Cheboygan City/County Airport - north of Cheboygan Road
29	Cheboygan-Option 3	Cheboygan	Sec 7/18, T37N, R1W	Abandoned drive-in south of town on Highway 27 behind Dave's Party Store and Gas Station
30	St. Ignace-Option 1	Mackinac	Sec 13, T40N, R4W	12± acres in the southwest corner of triangular-shaped parcel located north of U.S. Highway 2 and between Pt. LaBarbe Road on west and S. Portage Road on east

No.	Site	County	Legal	Description
31	St. Ignace-Option 2	Mackinac	Sec 13, T40N, R4W	In same area as above - 5± acres in old gravel pit
32	St. Ignace-Option 3	Mackinac	Sec 1, T40N. R4W	County equipment storage yard area north side of Cheeseman Road
33	Manistique-Option 1	Schoolcraft	Sec 3, T41N, R15W	40 acre field immediately east of metal hangar at Schoolcraft County Airport, north of U.S. Highway 2
34	Manistique-Option 2	Schoolcraft	Sec 10, T41N, R15W	4 miles east of Manistique, south side of Highway 2 behind Treasure City Store
35	Manistique-Option 3	Schoolcraft	Sec 4, T41N, R15W	0.3 miles north of U.S. Highway 2 on River Road 443 - 50 acres on east side of this road
36	Escanaba-Option 1	Delta	Sec 14 & 23, T39N, R22W	±12 acres north of Penstar Building in Penstar Industrial Park - bounded on west by North 30th Street
37	Escanaba-Option 2	Delta	Sec 24, T39N, R22W	Abandoned drive-in at Dansworth Road and Highway 2/41
38	Escanaba-Option 3	Delta	Sec 13, T39N, R22W	Open field adjacent to Highway 2/41 between Ramada Inn and Hiawatha National Forest Building in Escanaba

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No.	Site	County	Legal	Description
39	Iron River, MI	Iron	Sec 26, T43N, R35W	In city of Iron River, 5+ acres, old contractor's warehouse, West Ross St. between W. 2nd Ave. and W. 3rd Ave.
40	Watersmeet	Gogebic	Sec 28, T45N, R39W	6 acres - old Chipping Mill site on north side of town
41	Ironwood-Option 1	Gogebic	Sec 23, T47N, R47W	5 acres Ironwood Industrial Park Lot #20 (adjacent to Lakehead Place)
42	Ironwood-Option 2	Gogebic	Sec 23, 23, T47N, R47W	5 or more acres, Ironwood Industrial Park - Lot #3
43	Ironwood-Option 3	Gogebic	Sec 23, T47N, R47W	5 or more acres, Ironwood Industrial Park - Lot #4
44	Ashland	Ashland	Sec 34&35, T48N, R4W	Abandoned drive-in theater 1 mile south of town on Highway 13 - used in 1989 by GLGTC contractor
45	Iron River, WI-Option 1	Bayfield	Sec 8, T47N, R8W	5 acres across from fire department, north side of U.S. Highway 2 on east side of town
46	Iron River, WI-Option 2	Bayfield	Sec 6, T47N, R8W	8 acres, ½ mile north of town on County Road A (southwest corner)

No.	Site	County	Legal	Description
47	Iron River, WI-Option 3	Bayfield	Sec 6, T47N, R8W	County fairgrounds, 7 acres - present warehouse site of 1989 GLGTC contractor
48	Superior	Douglas	Sec 34, T49N, R14W	10 acres at fairgrounds - south side of Superior (1989 site)
49	Grand Rapids-Option 1	Itasca	Sec 16, T55N, R25W	8 acres - Industrial Park II, 7th Ave. E., west side of 8th Street
50	Grand Rapids-Option 2	Itasca	Sec 16, T55N, R25W	10 acres - Industrial Park II, 7th Ave. E., east side of 8th Street
51	Grand Rapids-Option 3	Itasca	Sec 16, T55N, R25W	4 acres - 7th Ave. S.E. and 7th St. S.E. (northwest corner) - 1989 location
52	Bemidji-Option 1	Beltrami	Sec 22, T146N, R33W	10 acres - Bemidji Development Park - old Leonard Pipeline contractor warehouse
53	Bemidji-Option 2	Beltrami	Sec 35, T146N, R33W	Adjacent to KOA campground west of town on U.S. Highway 2 (6 acres)
54	Thief River Falls-Option 1	Pennington	Sec 12, T153N, R43W	5 acres - abandoned drive-in theater west side of Highway 59, south of town
55	Thief River Falls-Option 2	Pennington	Sec 2, T153N, R43W	8 acres directly across from Pamida Store and Pizza Hut south of town

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No.	Site	County	Legal	Description
56	Thief River Falls-Option 3	Pennington	Sec 2, T153N, R43W	5 acres directly across from Travel Host Motel south of town

TABLE 2

Proposed Pipeyards

Site Name	Mile Post	County/State	Acreage	Survey Date	Survey Results	Date to SHPO	SHPO Comments
Trail, MN (1)	105.0	Polk/MN	13-14	10/29/89 IMA	Disturbed Site	11/07/89	
Trail, MN (2)	105.0	Polk/Mn	7.5	10/29/89 IMA	Disturbed Site	11/07/89	
Swan River, MN	238.0	Itasca/MN	10-11	10/31/89 IMA	No Sites	11/07/89	
Superior, WI	302.7	Douglas/WI	10	11/07/89 IMA	No Sites	12/11/89	
Amasa, MI	490.0	Iron/MI	20	11/09/89 IMA	No Sites		
North Ironwood, MI (1)	398.0	Gogebic/MI	6	IMA			
North Ironwood, MI (2)	398.0	Gogebic/MI	40	IMA			
Bessemer, MI	402.7	Gogebic/MI	40	IMA			
Cheboygan, MI	696.0	Cheboygan/MI	20	GLR			
Hemlock, MI	876.5	Saginaw/MI	20	GLR			
Imlay City, MI	936.0	Lapeer/MI	20	GLR			

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Site Name	Mile Post	County/State	Acreage	Survey Date	Survey Results	Date to SHPO	SHPO Comments
Thompson, MI	592.0	Schoolcraft/MI	20	GLR			
Gladstone, MI	557.0	Delta/MI	20	GLR			

TABLE 3

Existing Pipeyards

Site Name	Mile Post	County/State	Acreage	Survey Date	Date to SHPO	SHPO Comments	Date of Approval
Rosby, MN	155.0	Hubbard/Mn	13-14		4/24/89	No Sites	6/12/89
Ashland, WI	363.0	Ashland/WI	11		4/24/89	No Sites	6/01/89
Floodwood , MI	510.2	Dickinson/MI	22	6/17/89	6/26/89	Site Found West Side (Fenced 8/14/89)	8/10/89
Gould City, MI	627.7	Mackinac/MI	19-20		4/24/89	No Sites	5/16/89
St. Louis, MI	864.0	Gratiot/MI	19-20		4/24/89	No Sites	5/16/89
Kalkaska, MI	757.0	Kalkaska/MI	19-20	6/15/89	6/26/89	No Further Arch. work	6/30/89
Rosebush, MI	835.0	Isabella/MI	27		6/27/89	No Sites	7/12/89

RECOMMENDED MEASURE 3

"The authorized pipeline routes and above-ground facility locations shall include all of the staff's recommended route variations and construction procedures identified on Tables 5.1.9-2, 5.1.9-3, and 7.2-1, of this DEIS. Where types "B" and "C" construction are specified on Table 5.1.9-3, the applicants shall file, prior to construction, detailed construction and right-of-way restoration plans with the Secretary of the Commission for review and approval by the Director of OPPR."

COMMENT

Great Lakes recognizes that the recommended measure encompasses three separate issues: (1) route variations in order to reduce the project's impact on wetlands; (2) route variations in order to mitigate the project's impact on residential areas; and (3) mitigative construction techniques to be used in residential areas. Great Lakes has thoroughly addressed FERC's proposed route variations in Section 6.0; therefore, this response will focus on residential construction techniques.

Great Lakes has studied the locations listed in Table 5.1.9-3 of the DEIS, and has found that there are residences within 100 feet of the pipeline on all the listed locations except at MP 599.4. This is the area of the Manistique River Crossing, and the adjacent property owners are the State of Michigan (Manistique River State Forest) and the Manistique Pulp and Paper Company. Examination of the aerial photography and survey notes revealed no residences in this area. Therefore, no special construction techniques will be necessary at MP 599.4.

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G4-56 Table 5.1.9-3 has been corrected to show a residence at MP 598.4. We agree there is no residence at MP 599.4.

RECOMMENDED MEASURE 4

"The applicants, with the exception of Tennessee for the OSP II Project, shall defer gas delivery to nonjurisdictional facilities until we have completed our review under Section 7 of the Endangered Species Act, as amended. No delivery shall occur until the Director of OPPR has informed each applicant that gas delivery may proceed."

COMMENT

Great Lakes has no nonjurisdictional facilities related to the proposed NIP Project (DEIS, section 2.1.9, page 2-13). Therefore, this recommended measure does not apply to Great Lakes' Project.

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G4-57 Comment accepted; DEIS recommendation 4 has been revised.

RECOMMENDED MEASURE 6

"To ensure compliance with Section 106 of the NHPA, the applicants shall adhere to the following:

a) Each applicant or nonjurisdictional facility sponsor consult with the appropriate SHPOs concerning the potential effect of project construction on cultural resources.

b) Utilizing SHPO input, the applicant or the nonjurisdictional facility sponsor should prepare work for our review and approval. All required final Phase 1 and Phase 2 cultural resources survey reports should be filed by the applicant.

c) Gas deliveries shall be deferred until we have reviewed and approved all Phase 1 and Phase 2 cultural resource survey reports and any required Phase 3 mitigation plans and reports; considered the comments of the appropriate SHPOs and ACHP; and the Director of OPPR has informed the applicant that gas delivery may begin."

COMMENT

a) There are no nonjurisdictional facilities related to the Great Lakes proposed pipeline project.

Great Lakes consulted the Minnesota, Wisconsin and Michigan SHPOs requesting comments on the potential effects of proposed construction on cultural resources. The Minnesota and Wisconsin SHPOs responded in January, 1989 concurring with Great Lakes that no known NRHP-listed properties would be affected by the proposed pipeline project (DEIS page 5-99, ¶2).

Since comments were not received from the Michigan SHPO (DEIS page 5-99, ¶2), Great Lakes' archaeological subconsultant has

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G4-58

A) As with all of the conditions, if all or part of it does not apply, the applicant need not address it. Because there are no nonjurisdictional facilities related to the Great Lakes portions of the project, this issue need not be addressed. Additionally, because Great Lakes has received comment from two SHPOs on potential effects and all three SHPOs approving the proposed Phase 1 and Phase 2 survey designs, it appears the initial consultation requirement has been met.

B) The phased review proposed by Great Lakes and its cultural resources consultants appears workable. FERC received a revised draft survey plan on March 27, 1990. This plan would be acceptable if formally filed by Great Lakes. The adequacy of the reporting requirements will be evaluated during the review of the TCPL-1 cultural resources report (filed on April 23, 1990). We believe such an approach will meet FERC's Section 106 responsibilities, and because the field survey that will produce these data is an integrated whole, such an approach should not result in segmenting the project.

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used the state files and compiled a list of known NRHP-listed properties that could potentially be affected by the proposed project.

b) In December 1989, Great Lakes submitted a project-specific survey plan entitled A Survey Design for Phased Cultural Resources Inventory of the Great Lakes Gas Transmission Company Corridor in MN, WI, and MI, for Phase 1 and Phase 2 field investigations of the proposed pipeline route. This phased plan has been approved by the respective SHPOs. The DEIS indicates that FERC has given approval of the plan (DEIS pg. 4-83, ¶2). However, recent discussions with FERC indicate that FERC has not accepted the review procedures explained in the plan since FERC has indicated that it requires reports on all field investigations prior to allowing construction. Based on these discussions, Great Lakes proposes a phased review in which each category of site would be submitted individually for approval. The categories are listed below in order of priority:

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1) Pipe storage yards (13 new yards)
2) Contractor yards (56 potential yards)
3) Phase I Report of the corridor survey, including access roads.
4) Any phase II reports and the report on the results of deep testing in Michigan's Saginaw Valley.
5) Any required Phase III mitigation plans and reports.

Field Work for the cultural resources study commenced on April 2, 1990, in accordance with the above plan.

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RECOMMENDED MEASURE 7

"The applicants shall certify that all necessary permits and approvals to construct and operate the nonjurisdictional facilities have been obtained prior to construction of the nonjurisdictional facilities."

COMMENT

There are no nonjurisdictional facilities associated with Great Lakes proposed project (DEIS section 2.1.9, page 2-13). This recommended measure does not apply to Great Lakes' project.

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G4-59 Comment accepted. DEIS recommendation 7 has been revised.

RECOMMENDED MEASURE 8

"The applicants shall implement the "Erosion Control, Revegetation, and Maintenance Plan" contained in appendix C for all disturbed areas and shall implement the "Stream and Wetland Construction and Mitigation Procedures" contained in appendix D when constructing across flowing streams, rivers and wetlands. Any deviation from these procedures must be reported to and approved by the Commission staff at least 2 weeks prior to implementation. Any deviation that the staff determines to be significant cannot be implemented without the prior written approval of the Director of OPPR."

COMMENT

Great Lakes has reviewed Appendices C and D of the DEIS and has commented on the effectiveness of both plans in mitigating adverse environmental impacts associated with construction. Great Lakes has included these comments in the appropriate sections. For those provisions that Great Lakes considers ineffective or inappropriate, Great Lakes has identified alternative provisions that could be implemented to provide an equal or greater level of erosion control and stream protection. These comments have also been filed in previous data responses.

Great Lakes intends to implement the final draft of the Erosion Control, Revegetation, and Maintenance Plan and the Stream and Wetland Construction and Mitigation Procedures, as closely as possible whenever constructing across flowing streams, rivers and wetlands. However, it should be recognized that it is not possible to develop a plan that will address every condition or situation that may arise in the field. The diversity of the climate,

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G4-60 Comment noted. Please refer to comment response G7-5 and G7-6.

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terrain, vegetation, land use, and soils may result in situations where adherence to the plan is neither feasible nor environmentally desirable. When this situation occurs, Great Lakes proposes to consult with its environmental inspectors to select alternative methods that will result in an equal or higher level of environmental protection. Great Lakes has developed a project-specific Soil Erosion and Sediment Control Plan which is included as Attachment 2.

Great Lakes does not agree that any deviation from the recommendations outlined in Appendices C and D should be reported to FERC two weeks prior to implementation. This stipulation should only apply to deviations which would result in a lower level of protection than would be the case if the recommendations in Appendices C and D were followed to the letter. Appendix C, ¶1, of the DEIS states that deviations that involve less protective measures would need written approval from FERC, but no mention is made of changes that would increase or at least not reduce environmental protection.

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It is virtually impossible to anticipate when minor adjustments to the recommended procedures will be needed. If construction is delayed while approval is pending, costs of the project will escalate rapidly. Costs for standby time for a typical construction crew can approach $30,000 per day. More importantly,

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delays will also place the right-of-way at increased environmental risk because various steps in the construction process will remain in a partially completed state.

A more desirable economic and environmental approach would be to allow minor alterations in Appendices C and D without prior approval from FERC. These changes would be made in consultation with environmental inspectors and state DNRs, where appropriate to provide a level of protection similar to that derived from the original procedures. This will expedite the construction process and reduce the total amount of time that the right-of-way is in an unstable condition. Timely completion of the various phases of construction must be considered when evaluating the overall level of environmental protection.

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RECOMMENDED MEASURE 9

"The applicants shall restrict stump removal to areas immediately over the trench and where grading is required. In areas where stump grubbing is required, the applicants shall remove and dispose of them in accordance with local requirements."

COMMENT

Except in wetland areas, the pipeline contractor will need to remove stumps from the working side of the right-of-way where tracked or rubber-tired vehicles will be operated. Damage to tires or tracked equipment could result from driving equipment over stumps. If stump removal is restricted, it could potentially cost up to $500,000 per spread in damaged equipment. Stumps will be removed and disposed of in accordance with local requirements.

Additionally, for Great Lakes to use prefabricated mats for construction in wetlands, all surface irregularities, such as tree stumps, must be removed and the ground surface leveled. According to the manufacturer, prefabricated equipment mats cannot be used in wetlands if stumps cannot be removed.

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G4-61 Thank you for your comment. The limitation of the removal of tree stumps to only over the trench line was recommended to reduce soils disturbance along the construction right-of-way and to eliminate disposal of numerous tree stumps by burying or by disposal in solid waste landfills.

However, we have reconsidered this recommendation and realize that limiting stump removal to the trench line area only could seriously affect the ability of the applicant to restore and maintain its right-of-way (i.e., reseeding and subsequent removal of vegetation). We also agree with the applicants' position on maintenance of construction equipment. Consequently, we have eliminated this recommendation. Disposal of stumps, trees, and brush would be the applicants' responsibility and would be done in accordance with the applicable laws and regulations.

61 DEIS recommendation 9 was deleted.

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RECOMMENDED MEASURE 10

"The applicants shall locate, prior to construction, all water supply springs and wells that may be affected by construction activities, document pre- and post-construction water quality and yield and, in the event water supplies are disturbed, supply a temporary source of water and be responsible for restoration or replacement of the water supply to its former condition."

COMMENT

Great Lakes is attentive to public concern regarding the impact of explosives on localized aquifers and groundwater supply systems. In areas where grade or trench blasting is necessary, water supply wells and springs located within 50 feet of the pipeline will be considered potentially affected by construction activities. This distance criterion is based on previous studies that indicate blast-produced fractures in bedrock typically extend only 1 to 2 yards from the blast hole (Siskind and Fumanti, 1974: Dowding, 1985). Beyond this distance the rock is undamaged. 62

Construction in areas of unconsolidated materials is believed to have even less of a potential impact on local groundwater sources. However, as a precaution, water supply wells and springs located within 50 feet of the pipeline will be considered potentially affected by construction activities.

G4-62 Comment noted.

RECOMMENDED MEASURE 12

"Prior to commencing pipeline construction, the applicants shall file with the Secretary of the Commission for review and approval by the Director of OPPR a spill prevention and containment plan specific to pre-identified equipment maintenance and storage areas. This plan shall detail specific measures that would be taken to clean up and dispose of any accidental discharge."

COMMENT

Great Lakes will prepare a spill prevention and containment plan specific to equipment and storage areas used for pipeline construction. The following topics will be addressed:

- Fuel tank filling
- Hydraulics System Leaks
- Storage of fuels
- Transport of fuels/oil
- Spill Containment

The plan will include a description of federal spill regulations, along with names, addresses, and phone numbers of responsible parties and individuals. Design and operation of the bulk storage, containment systems, drainage, and loading operations are proposed. This spill prevention plan will be submitted to FERC by June 1, 1990.

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G4-63 As indicated in our recommendation, the spill prevention and containment plan must provide methods not only for containment of spills but also the methods to clean up spilled materials and to dispose of the waste.

RECOMMENDED MEASURE 13

"To prevent compaction and rutting of soil in agricultural and residential areas, construction shall not be conducted during the wettest time of the year (April 15 to May 31 for Great Lakes Loops 1 through 14 and April 1 to May 15 for the remaining project areas)."

COMMENT

Great Lakes agrees with FERC's recommendation of not permitting construction during the wettest time of the year (DEIS page 5-6, ¶6). However, there is a disparity between the local weather conditions and local soil characteristics throughout the project area which can significantly vary the "wettest time of the year". Using a calendar period is not an appropriate basis for scheduling construction activity in agricultural and residential areas.

Arbitrary selection of dates when construction is not allowed is not an effective way to prevent soil compaction. Timely completion of the proposed project may not be achieved if the pipeline loop construction is unnessarily halted during these arbitrary periods. In addition, Great Lakes proposes to initiate spring restoration when soil conditions are sufficiently dry to support the relatively minor construction activity associated with restoration. This includes equipment which is used for final grading, applying seed, and fertilizer. The optimum time for planting would be missed if the soils are dry on or before the stated period and Great Lakes is not allowed to commence restoration. As a result, seeding would

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G4-64 Comment noted. Refer to comment response G4-33.

be delayed, causing poorly established vegetation which is more vulnerable to summer drought. Great Lakes has retained environmental inspectors experienced in construction and restoration techniques and familiar with the local soil conditions. They will provide expertise as to the dates construction activity should not occur in the spring to prevent extensive soil compaction and rutting.

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RECOMMENDED MEASURE 14

"All drain tiles damaged during construction shall be repaired to their original or better condition. The applicants shall replace damaged drain tile by properly aligning the replacement tile across the trench extending 1.5 to 2.0 feet into the trench wall. Tile replaced across the trench should be supported using a rigid conduit or trough. Backfill under the replaced tile should be compacted and sand filled to decrease infiltration."

COMMENT

Great Lakes' policy regarding construction on private lands is that all drain tiles damaged during construction shall be repaired to their original or better condition.

Damaged tile will be replaced by properly aligning the replacement tile across the trench, extending 1.5 to 2 feet into the trench wall. The new tile will be supported using a rigid conduit or trough (DEIS page 5-11, ¶5). Sand placed below the tile will not decrease infiltration, as recommended. Sand has a larger particle size and the void space is greater resulting in increased infiltration. The DEIS recommends backfill under the replaced tile should be compacted to decrease infiltration (DEIS page 5-12, ¶2). Sand is non-plastic and will not compact sufficiently to decrease infiltration. Great Lakes proposes to backfill with the originally excavated material wherever possible. The rigid conduit or trough will adequately support the new tile while the backfill is settling.

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G4-65 Comment noted. DEIS recommendation 14 has been modified.

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RECOMMENDED MEASURE 16

"The applicants shall not pile excavated rock along or adjacent to the existing rights-of-way."

COMMENT

Great Lakes agrees that it will not pile excavated rock along or adjacent to the existing rights-of-way except where landowners request this or in areas where off-road vehicle (ORV) use is being discouraged (DEIS page 4-77, ¶3; page 5-91, ¶6). If landowners are in agreement, Great Lakes will use large excavated rock and tree plantings in order to discourage ORV traffic on the ROW. These rocks (boulders) act as barriers when placed along the right-of-way.

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G4-66 DEIS recommendation 16 in section 7.3 has been revised to include "without the approval of the landowner."

RECOMMENDED MEASURE 20

"The applicants shall defer construction of any proposed facilities (and use of any staging or storage areas) until (a) the FERC staff and SHPOs have reviewed and approved all Phase 1 and Phase 2 cultural resource survey reports and Phase 3 mitigation plans and reports, if required, and have considered any comments of the respective SHPOs and ACHP; and (b) the Director of OPPR has informed the applicant that construction may begin. This condition does not pertain to Transco's 1.61-mile loop, new Compressor Station 205 or additional facilities at Compressor Station 515. This recommendation would not pertain to Transco's 1.61-mile Leidy Loop and its Compressor Stations 205 and 515."

COMMENT

Certain proposed pipe storage sites for the TCPL-2 project were used for pipe storage on the Great Lakes 1989 Looping Projects, and must be used again for pipe storage as early as June 15, 1990. Because these sites (Rosby, MN; Ashland, WI; Floodwood, MI; Gould City, MI; Kalkaska, MI; Rosebush, MI, St. Louis, MI) were reviewed and cleared for cultural resources in 1989, Great Lakes feels that their use should be allowed without further review and approval.

If sites requiring cultural resource approval cannot be cleared in a timely manner, it could cause delays in the construction of facilities. Standby time for a contractor could cost up to $100,000 per day for a complete spread.

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G4-67 We agree that those storage sites that were reviewed and approved for the Great Lakes 1989 Looping Project need not undergo repeated review and approval. Seven sites may be used again for TCPL-2.

RECOMMENDED MEASURE 26

"Great Lakes shall file copies of all surveys for endangered and threatened species within the National Forests, along with comments from the Forest Service and appropriate mitigation plans, with the Director of OPPR for review and approval prior to construction in the National Forests."

COMMENT

Great Lakes agrees to submit all threatened and endangered (T&E) species study plans and survey reports to the National Forest for review and comment. All reports, along with National Forest comments and appropriate mitigation plans, if required, will be forwarded to the Director of OPPR (DEIS pages 5-42, ¶5 4-40, Table 4.1.5-1). The following summary describes the work to date on study plans and field surveys for T&E species in the National Forests.

White Water Associates, Inc. (White Water), has prepared a study plan for Great Lakes titled Survey of Vertebrates and Evaluation of Wetlands Along a Natural Gas Pipeline in the Hiawatha, Ottawa, Chequamegon and Chippewa National Forests. This study plan presents the survey objectives and methodology for the winter survey of mammals and the spring survey of breeding migratory birds and wood turtle habitats (DEIS page 5-42, ¶4). The plan was reviewed and approved by all four National Forests affected by the proposed project. White Water has completed the survey for mammals. An interim report presenting mammal survey results and mitigative plans will be submitted to the four National Forests for

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G4-68 We are aware that these surveys are being conducted at the request of the Forest Service. We also feel that Great Lakes has done an outstanding job of responding to agency requests in a timely manner, and prior to our recommendations published in the DEIS. However, because of FERC's responsibility to ensure that the proposed project, if certificated, would not endanger any federally listed or proposed endangered or threatened species, we maintain that results of any field surveys for endangered and threatened species must be submitted to FERC prior to construction.

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review and comment by May 15, 1990, with an anticipated submittal to FERC by June 30, 1990. The survey for birds and turtles will commence in early May and an interim report presenting the results will be submitted to the National Forests by July 30, 1990, with an anticipated submittal to FERC by August 30, 1990.

Dr. Cindy Johnson-Groh, Botanical Consultant, has prepared a study plan for Great Lakes detailing objectives and methodologies for the spring and fall T&E plant species survey in the Chippewa and Chequamegon National Forests. The spring survey will commence in early June and an interim report presenting the results will be submitted to the National Forests by July 1, 1990, with an anticipated submittal to FERC by August 1, 1990. The fall survey will commence in August and an interim report will be submitted to the National Forests by mid-September, 1990 with an anticipated submittal to FERC by mid-October, 1990.

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Mr. Don Henson, Botanical Consultant, conducted the fall 1989 plant survey in the Ottawa and Hiawatha National Forests for Great Lakes. The survey results are presented in the report Results of the Fall 1989 Threatened and Endangered Plant Species of the Great Lakes Gas Transmission Company's Proposed 1990 and 1991 Loop Construction (TCPL-2) within the Boundaries of the Ottawa and Hiawatha National Forests. This report has been submitted to the National Forests for their review and comment. Great Lakes anticipates submitting

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the report, along with National Forest comments, to FERC by June 1, 1990.

Mr. Henson is developing a spring T&E plant follow-up survey of the Ottawa and Hiawatha National Forests which will be submitted to the two National Forests for review and comment. In addition, the study plan will include objectives and methodologies for the dwarf lake iris field survey (DEIS page 5-41, ¶5). The spring survey will commence in early June and an interim report presenting the results will be submitted to the National Forests by July 1, 1990, with an anticipated submittal to FERC by August 1, 1990. 68

RECOMMENDED MEASURE 27

"Great Lakes shall conduct a field survey of two eagle nesting areas located along Loop 10 in Marquette County, Michigan, and along Loop 12 in Mackinac County, Michigan, to determine the level of potential impact to nesting habitat. A report of this survey, including comments by the U.S. Fish and Wildlife Service and proposed plans for mitigation of potential impact, if appropriate, shall be submitted to the Secretary of the Commission for review and approval by the Director of OPPR prior to construction."

COMMENT

Great Lakes agrees to conduct a field survey of bald eagle nesting areas (DEIS page 5-43, ¶1). Mr. Thomas F. Weise, Michigan Department of Natural Resources (MI-DNR, 1989) identified a bald eagle nest approximately 1 mile north of Great Lakes Loop 10. Another bald eagle nest was identified approximately 0.5 mile southwest of Great Lakes Loop 12 (DEIS page 4-41, ¶1; 5-43, ¶1). Great Lakes will conduct a bird survey along the Great Lakes pipeline in the eagle nesting areas (See Comment, Recommended Measure 26). The results of the survey, including comments by the U.S. Fish and Wildlife Service, the National Forest Service, and the MI-DNR, and any proposed plans for mitigation for potential impact will be forwarded to the Secretary of the Commission for review and approval by the Director by August 30, 1990.

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G4-69 Thank you for your comment. We look forward to receiving the results of this survey.

RECOMMENDED MEASURE 28

"Great Lakes shall not conduct construction activities within 1 mile of active bald eagle nesting sites along Loop 4 in Itasca County, Minnesota; Loop 9 in Gogebic County, Michigan; Loop 11 in Delta County, Michigan; and Loop 14 in Otsego County, Michigan, between February 1, and August 1. Great Lakes shall also consult with the FWS prior to construction to verify the status of these nest sites. The FWS comments and the results of any required surveys shall be filed with the Secretary of the Commission for review and approval by the Director of OPPR prior to construction."

COMMENT

Great Lakes agrees that construction activities will take place within 1.0 mile of active bald eagle nesting sites between February 1 and August 1 (DEIS pages 4-41, ¶1; 5-43, ¶2).

Great Lakes believes that erroneous information has led to confusion in identifying some nesting sites. In written communication with Ms. Bonita Eliason, Minnesota Department of Natural Resources (MN-DNR, letter dated November 23, 1988), and verbal communication with Mr. John Mathison of the Chippewa National Forest, no bald eagle nesting sites were identified in the vicinity of Loop 4 in Itasca County, Minnesota. Ms. Eliason identified a nest site 800 feet south of Great Lakes proposed Loop 4 in Cass County, Minnesota (letter dated August 24, 1989). On April 12, 1990, Mr. Mathison indicated that this nest is active. The DEIS (Section 4.1.5.1.2, page 4-41, ¶1) indicates the location of this site, but references a source that Great Lakes believes does not exist. Great Lakes has no record of a D. Hendrickson with

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G4-70 Great Lakes has misunderstood or misstated the restriction. Construction shall not take place between February 1 and August 1 in these areas. Sections 5.1.5.2 and 7.3 and table 4.1.5-1 have been modified to clarify the location of known and potential nest sites. Great Lakes' intention to conduct surveys for active nest sites has been added to section 5.1.5.2.

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the MN-DNR. A letter from Mr. John Hendrickson of the Michigan DNR (MI-DNR, dated 8-19-89) does not reference bald eagle nest sites.

No nest sites are listed by Mr. Thomas Weise (MI-DNR 1989) within Gogebic County, Michigan. However, Mr. Weise did identify a nesting area in Iron County, Michigan near Loop 9 in the Ottawa National Forest.

In a letter from the U.S. Fish and Wildlife Service (FWS 1989), Mr. Gerald Lowry identified a bald eagle nesting area along Loop 11 in Delta County, Michigan.

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Mr. Weise indicated a nest location 1.0 mile east of Great Lakes pipeline Loop 14 in Otsego County, Michigan.

Great Lakes will conduct a bird survey prior to construction of the proposed pipeline. The survey will locate and confirm any active bald eagle nesting sites within 1.0 mile of the proposed construction. The results of this survey will be submitted to appropriate National Forest and DNR agencies for comment before being filed with the Secretary of the Commission.

RECOMMENDED MEASURE 29

"Great Lakes shall consult with the FWS to determine if any occupied habitat for the Kirtland's warbler occurs within 0.5 mile of any planned construction activity and shall file with the Secretary of the Commission for review and approval by the Director of OPPR the FWS comments prior to construction. Additionally, we recommend:

a. Pipeline construction shall be accomplished in such a manner that the management of essential habitat along the right-of-way through the use of prescribed burning is not precluded. This includes:

- burying the pipeline to a safe depth, and
- locating storage facilities outside of essential habitat

b. Construction crews shall gate and lock access roads if these roads promote increased activity that could disturb nesting birds."

COMMENT

The Kirtland's warbler nests in loose colonies in the north-central part of the lower peninsula of Michigan (DEIS page 4-41, ¶4). Approximately 6 miles of the Leota Kirtland's Warbler Management Unit are crossed by the proposed Loop 15 (DEIS page 5-43, ¶5). The U.S. Fish and Wildlife Service (FWS) maintains the area to attract the Kirtland's warbler.

It is Great Lakes' policy to cooperate with the FWS to minimize the impact to the Kirtland's warbler management area. Construction will be postponed within the management area if occupied Kirtland's warbler habitat is found within 0.5 mile of the pipeline during nesting season. Great Lakes has requested information from the FWS

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G4-71 Thank you for your comment.

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regarding the current status of Kirtland's warbler activity within the management area (letter dated April 11, 1990, attached). Great Lakes will forward this information to FERC when it becomes available.

Great Lakes' construction practices will not preclude the use of prescribed burning in managing this protected area. A letter dated October 13, 1988 from Michigan Department of Natural Resources (MI-DNR) Endangered Species Coordinator, Mr. Thomas Weise, stated that the top of the pipe must be placed at least three feet below ground surface to allow for the use of fire plows and planting equipment. Great Lakes' current policy is to bury all pipe at least three feet below the surface. 71

No explosive or flammable materials will be stored within the Kirtland's warbler management area. Gates across access roads within the management area will be installed at the request of landowners or the local MI-DNR.

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April 11, 1990

Fish and Wildlife Service
East Lansing Field Office
1405 S. Harrison Road, Room 302
East Lansing, MI 48823

RE: Great Lakes Gas Transmission Company
Looping Project within the
Kirtland's Warbler Management Area

Dr. Mr. Pacific:

Recently I contacted Mr. Dave Campbell of the Lansing Fish and Wildlife Service. We discussed comments which appear in the Niagara Import Point Project Draft Environmental Impact Statement concerning the Leota Kirtland's Warbler Management Area. Specifically, we addressed the recommendation that all construction will be prohibited within 0.5 mile of any occupied habitat. I asked Mr. Campbell if it was likely that the Kirtland's Warbler would nest within 0.5 mile of the pipeline in this management area and how would Great Lakes become aware of its presence, should this be the case.

Mr. Campbell informed me that the current status of this particular area may not be considered "active," and if the site is not active, it would be unlikely that the Kirtland's Warbler would nest there. Please send us current information on the status of the Leota Kirtland's Warbler Management Area within 0.5 mile of the proposed GLGT pipeline.

Also, we understand that spring surveys are conducted regularly to determine if the Kirtland's Warbler is nesting within any of the Kirtland's Warbler Management Areas. If the area surrounding the pipeline is considered "active", we would appreciate the results of the survey to ensure that the nesting birds will not be disturbed by pipeline construction.

Thank you for your continued assistance with this project. If you require further information, please call us at (612) 941-5600, ext. 313 or ext. 380.

Very truly yours,

BRAUN ENVIRONMENTAL LABORATORIES, INC.

Samuel W. Lundy
Environmental Impact Unit

Timothy L. Andersen
Project Manager
Environmental Impact Unit

SWL/TLA:abl9\Pacific.Apr

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RECOMMENDED MEASURE 30

"In consultation with the FWS and Michigan Department of Natural Resources (DNR), Great Lakes shall conduct a field survey for the presence of the dwarf lake iris along Loop 12. The results of this survey, and appropriate mitigation plans, shall be submitted to the FERC for review and approval by the Director of OPPR prior to construction. The survey results shall include survey dates and methods, exact area surveyed, and names and qualifications of those conducting the survey."

COMMENT

Great Lakes concurs with FERC that the protection of threatened and endangered plant species may be of concern during construction of loop 12 and will perform a field study for the dwarf lake iris (DEIS page 5-44, ¶3). Great Lakes has retained the services of Mr. Don Henson, Botanical Consultant. Mr. Henson will survey portions of Great Lakes' proposed project for the dwarf lake iris, a State of Michigan and Federally listed threatened species (DEIS page 5-44, ¶3; 4-40, Table 4.1.5-1).

The survey area will include portions of Loop 12 in Mackinac and Emmet Counties that have been identified as potential habitat by the Michigan Department of Natural Resources (MI-DNR, DEIS page 5-42, ¶3). Mr. Henson will conduct a survey between May 10 and June 10, 1990. Upon identification of the dwarf lake iris, site-specific maps will be prepared, photographs taken, and the area flagged.

The survey results will be forwarded to FERC as soon as they become

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G4-72 Thank you for your comment.

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available. The report will contain survey dates and methods, photographs of exact areas surveyed, and Mr. Henson's qualifications and recommendations (DEIS page 5-44, ¶3).

Mitigative measures proposed will be based on the conclusions of the report. Great Lakes will forward possible mitigative actions with the results of this survey to the appropriate state and Federal agencies. Any proposals will address the ability of threatened and endangered plants to re-establish a stable population after construction activities (DEIS page 5-42, ¶3).

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RECOMMENDED MEASURE 31

"Great Lakes, in consultation with the Minnesota DNR, shall conduct a survey of the sandhill crane habitat within the proposed project area to determine the need for further mitigation measures. If the state recommends route changes, or if Great Lakes proposes route changes as a result of this process, Great Lakes will file the changes with the FERC for review and approval by the Director of OPPR prior to construction."

COMMENT

Great Lakes contacted Ms. Bonita Eliason of the Minnesota Natural Heritage Program (MN-DNR) in response to FERC's concerns regarding the impact of proposed construction on sandhill crane habitat in Minnesota. Ms. Eliason stated that data on sandhill crane habitat is not complete and contains little specific locational information. Most of the information is based on isolated sightings. Mr. Steve Maxson, MN-DNR Wildlife Biologist, is currently conducting field investigations concerning the sandhill crane. Great Lakes will contact Mr. Maxson and discuss potential habitat impacts regarding the proposed project.

Based on recommendations from the MN-DNR, Great Lakes will survey selected sandhill crane habitats and develop appropriate mitigation measures. All plans will be reviewed and approved by MN-DNR. Great Lakes anticipates submitting a report of results to FERC by August 1, 1990.

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G4-73 Thank you for your comment.

RECOMMENDED MEASURE 33

"Great Lakes shall not construct within state-identified deer yards between December and March in order to reduce disturbance to wintering deer."

COMMENT

Great Lakes agrees that winter construction in deer wintering areas can potentially have a negative impact on the deer population. Great Lakes realizes that some Department of Natural Resources (DNR) officials have expressed concern about winter construction in traditional deer yarding areas. DNR officials, however, generally consider the overall impact of pipeline construction within deer yards to be minimal.

Deer yarding is primarily a function of snow depth and cold weather. Deer are not normally confined to areas providing thermal cover until the snow depth reaches or exceeds 1.5 feet and prolonged periods of cold weather occur. To restrict construction based purely on a calendar is unreasonable and Great Lakes objects to the broad restriction prohibiting construction from December through March.

During the October 1989 - March 1990 loop construction in the Upper Peninsula of Michigan, it was observed by DNR representatives (letter dated December 21, 1989) that the deer population was estimated to occupy 80% of the normal summer range by that date. No localized concentrations of deer were observed in Michigan's

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G4-74 Comment noted. We have reevaluated the need for a general time-of-year restriction and agree with Great Lakes that such a restriction would not be warranted. We also agree that equally effective mitigation can be developed, if required, for a specific site at a specific time of year by consulting with regional wildlife biologists. We have modified section 7.3 (DEIS recommendation 33) and section 5.1.4.2.2 by deleting the general time-of-year restriction and adding the requirement that Great Lakes consult with regional DNR personnel to develop appropriate mitigation, where required.

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Upper Peninsula during the remaining winter months of 1990.

Construction window restrictions severely limit available time for pipeline construction. Deer yarding areas are located primarily in forested wetlands. Mr. Roger Hack, Michigan DNR (MI-DNR), has suggested that construction within wetlands shall be limited to December 1 through March 1 and July 1 to August 15 (letter dated February 1, 1990). Construction restrictions for deer yards recommended in the DEIS (page 5-38, ¶6) are in conflict with the proposed MI-DNR construction windows for wetlands.

Construction in yarding areas does not invariably disturb or displace wintering deer. According to Mr. John Henderson and Mr. Richard Aartila, District Wildlife Biologists, MI-DNR, right-of-way clearing will temporarily increase food resource availability. Mr. Henderson stated that construction activity does not adversely affect deer. Mr. Aartila indicated that clearing provides winter woody browse and important early spring herbaceous browse.

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Mr. Jeff Wilson, Wisconsin DNR Wildlife Biologist, stated that deer are adaptable to construction activities and forest clearing can produce a positive effect by increasing browse availability. Mr. Wilson also indicated that if yarding stress does occur, it is normally delayed until late winter or early spring. Refer to the following letters for documentation.

It is Great Lakes' policy to cooperate with local DNR wildlife personnel to monitor deer activity during winter construction. Great Lakes, with the assistance of wildlife biologists, will develop mitigation plans if deer yarding occurs during winter construction.

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November 20, 1989

Jeff Wilson
Wildlife Division, Mercer Area
State of Wisconsin, Department of Natural Resources
P.O. Box 588
Mercer, WI 54547

Dear Mr. Wilson

This letter is to document your discussion on 10/13/89 with Julie Myhre concerning the pipeline construction by Great Lakes Gas Transmission Company (GLGTC) near Ashland.

We understood that construction after December 15th within the Bad River and Potato River deer yards would be acceptable to the DNR and would not cause stress on the white tail deer populations. Construction is expected to be completed in the area shortly after 1/01/89.

The type of seeding mixture proposed for restoration was also discused. We understood that the DNR approves of the formula with the exception of the Birdsfoot Trefoil as the latter does not provide a food source for the deer. Birdsfoot is not the major constituent in the mixture, but is provided for erosion control. We understood that the mixture would be acceptable to the DNR provided it did not contain large amounts of Birdsfoot Trefoil.

Please contact either of us if you have any questions regarding any of these matters.

Sincerely,

BRAUN ENVIRONMENTAL LABORATORIES, INC.

Julie Myhre

Julie Myhre, P.E.
Environmental Inspector, (715) 394-6120

Richard Skarie

Richard Skarie, PhD.
Environmental Field Supervisor

cc: Bill Regan, Jerry Kott, Chuck Payment, Noel Fielding, Glenn Phillips, Tommy Jones, Doug Bergstrom

NATURAL RESOURCES COMMISSION
THOMAS J. ANDERSON
MARLENE J. FLUHARTY
HENRY HAMMER
J. STEWART MYERS
DAVID O. CLECH
RAYMOND POUPORE

STATE OF MICHIGAN

JAMES J. BLANCHARD, Governor

DEPARTMENT OF NATURAL RESOURCES

DAVID F. HALES, Director

District 3 Headquarters
P. O. Box 495
Escanaba, Michigan 49829

July 11, 1989

Mr. Joseph Reinemann
Braun Environmental Laboratories
6800 South TH-169
P. O. Box 35108
Minneapolis, MN 55435

Dear Mr. Reinemann:

Regarding your request for information on significant habitat areas, I can offer the following observations.

There is general wildlife useage along the length of your pipeline through this District, including occasional use by threatened and endangered species. However, to our knowledge, none of these species nest or significantly feed along or near the line.

Almost all of the line does pass through deeryards. In fact the entire length of line, except possibly for the stretch from FFH-13 (S. 20, T41N, R19W) to the Fishdam River (S. 21, T41N, R18W), has moderate to heavy use by deer most winters. Even the above-mentioned stretch has some use by deer, especially during mild winters. Although the line has removed thermal cover for deer, it has provided some winter woody browse and early spring herbaceous browse.

Very truly yours,

Richard Aartila

Richard Aartila
Dist. Wildlife Biologist
906-786-2351

RA:cp

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

PHONE NO.

Box 154
Karlstad, MN 56732
July 17, 1989

FILE NO.

Celebrate MINNESOTA 1990

Braun Environmental Laboratories
6800 South TH-169
P.O. Box 35108
Minneapolis, MN 55435

RE: EG-080, TCPL-2 Pipeline Loops

Dear Mr. Reinemann:

Your request for information concerning the Marshall County portion of the Great Lakes Gas (Newfolden) loop project includes 2 work areas. My work area ends at CSAH 28. A response from Gordon Forester, Thief River Falls, is also enclosed for the area south of CSAR 28.

The only area of concern would be in the deer winter concentration area located in Sections 11, 14, 23 & 24 of West Valley Township. Construction of the pipeline loop should have little impact on this area. Long term adverse impacts will not occur if the project is completed in a neat and orderly manner, and the area is reseeded to vegetative cover.

Sincerely,

George Davis

George Davis

AN EQUAL OPPORTUNITY EMPLOYER

NATURAL RESOURCES COMMISSION
THOMAS J. ANDERSON
MARLENE J. FLUHARTY
KERRY KAMMER
O. STEWART MYERS
DAVID D. OLSON
RAYMOND POUPORE

STATE OF MICHIGAN

JAMES J. BLANCHARD, Governor
DEPARTMENT OF NATURAL RESOURCES

DAVID F. HALES, Director

Baraga District Office
P.O. Box 440
Baraga, Michigan 49908

July 19, 1989

Mr. Joseph C. Reineman
Environmental Technician
6800 So. TH-169
P.O. Box 35108
Minneapolis, Minnesota 55435

Dear Mr. Reineman:

Enclosed are maps showing general boundaries of deer yards in Gogebic County. Boundaries change depending on deer populations and winter severity. The last several years deer numbers have been increasing and now average 30 deer/sq. mile.

I can not assess construction impacts without knowing the extent of construction and timing. Generally, tree cutting during winter will attract deer. Machine noise associated with construction is not too bothersome to deer. If pipeline work is done in the existing right-of-way disturbance should be minimal.

I know of no eagle or osprey nests in the existing right-of-way.

I hope this sketchy information is useful. If you have additional questions please contact me.

Sincerely,

John Hendrickson
District Wildlife Biologist
906-353-6651

JH.gv

STATE OF
MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

Celebrate MINNESOTA 1990

PHONE NO.

FILE NO.

Gordon Forester
Area Wildlife Manager
123 Main Ave. North
Thief River Falls, Mn 56701
Phone 681-7790

28 July 1989

Braun Environmental Laboratories
6800 South TH 169
P.O. Box 35108
Minneapolis, MN 55435

Dear Mr. Reinemann:

Areas of concern for the pipeline loops in my work area would be the several protected wetlands that the loop will pass through. There is a considerable amount of wild land immediately to the north of the pumping station that has good numbers of Sharptail grouse and some Sandhill cranes. I have highlighted on the map the wetlands and the Protected Waters Inventory (PWI) number that identifies them. The project should have minimal impact on deer. Work in early spring may disturb displaying Sharptail grouse and Sandhill cranes. A permit will be required from the Departments Division of Waters to work in the wetlands. For permit requirments you can contact Mike Peloquin, Area Hydrologist, at this office.

Sincerely,

Gordon Forester

Gordon Forester AWM

AN EQUAL OPPORTUNITY EMPLOYER

RECOMMENDED MEASURE 34

"To avoid the resuspension of potentially contaminated sediments in the Pine River (MP 854.8) and the Shiawassee River (MP 881.5), Great Lakes shall submit to the Secretary of the Commission, along with comments from the appropriate state agencies, site-specific mitigation plans for review and approval by the Director of OPPR prior to construction."

COMMENT

The proposed pipeline crosses three (3) rivers with potentially contaminated sediments: the Pine River (Loop 16, MP 854.8), the Shiawassee River (Loop 16, MP 881.5), and the Flint River (Loop 16, MP 893.4) (March 1990 follow-up response to the December, 1989 FERC Data Request, DEIS 4-16, ¶5). These rivers drain the Saginaw River Basin into Lake Huron. Great Lakes disagrees with the need for testing of the sediments in these rivers (DEIS page 5-25, ¶2), based on new information obtained from the Michigan DNR.

Great Lakes' environmental consultant, Braun Environmental Laboratories, Inc. (Braun) contacted Dr. Elwin Evans, Aquatic Biologist, MI-DNR. Dr. Evans said that trenching at the three river sites would pose no contamination threats to the environment from resuspension of the sediments. The MI-DNR decision not to require site-specific mitigation plans is outlined and supported with evidence in a formalized letter to Braun dated April 10, 1990 and is attached to this comment.

G4

G4-75 FERC accepts the information provided by the MIDNR. We have deleted DEIS Recommendation 34. However, as a part of our recommended Stream and Wetland Construction and Mitigation Procedures (see appendix D), Great Lakes would be required to submit site-specific construction procedures to FERC for these rivers because they are greater than 100 feet wide at the crossing location.

75

G4

NATURAL RESOURCES COMMISSION
THOMAS J. ANDERSON
MARLENE J. FLUHARTY
GORDON E. GUYER
KERRY KAMMER
ELLWOOD A. MATTSON
O. STEWART MYERS
RAYMOND POUPORE

STATE OF MICHIGAN

JAMES J. BLANCHARD, Governor

DEPARTMENT OF NATURAL RESOURCES

STEVENS T. MASON BUILDING
P.O. BOX 30028
LANSING, MI 48909

DAVID F. HALES, Director

RECEIVED
APR 18 1990
BRAUN

April 10, 1990

Mr. John Downing
Braun Environmental Laboratories
P.O. Box 35108
Minneapolis, Minnesota 54435

Dear Mr. Downing:

Following our telephone conversation, I checked our reports and talked with staff biologists familiar with the river reaches of concern on the Pine, Flint and Shiawassee Rivers in Saginaw and Midland Counties. Sampling for sediment contaminants at the three proposed rivers is not required for the following reasons.

1. Flint River crossing, Saginaw County T10N R5E Section 27. Sediments in this area are primarily sand over a deep clay base. Sediment contamination has not been detected in this river reach.

2. Shiawassee River, Saginaw County T10N R3E Section 22. Sadiments in this river reach are primarily fine sand over a deep clay base. Some inorganic silts may also be encountered. Sediment contamination has not been detected in this river reach.

3. Pine River, Midland County T13N R2W Section 26. Sediments in this river reach are primarily sand and gravel with some inorganic silts. Sediments in this river reach had only trace levels of contaminants more than 10 years ago.

At these three proposed river crossings, ecologically significantly contamination would not be encountered even though some upstream river raaches have had highly contaminated sediments in the past. In the Pine River the contaminants are being buried by natural processes behind a dam. A similar situation exists in the Shiawassee River. Contaminated sediments in the Flint River were found almost 20 years ago near two wastewater treatment facilities well upstream of the proposed crossing and would not be creating a problem downstream at this time. In any case, the gravels, sands and clay would not retain significant concentration of contaminants.

R1029
3/89

Crossing these streams with a pipeline would not create a long term environmental impact requiring mitigation, as long as appropriate construction techniques are used to minimize bank erosion and sediment deposition in the river during and following construction. Erosion control techniques have been outlined as part of Michigan's Erosion and Sedimentation Control Act and a manual may be secured from the Land and Water Management Division when you apply for the required 346 permits.

If I can be of further assistance on this matter, feel free to contact me at 517-335-4182. If you have questions regarding the 346 permit or erosion control, call Les Thomas at 517-373-9244.

Sincerely,

Elwin Evans

Elwin E. Evans, Ph.D.
Aquatic Biologist
Great Lakes and Environmental
Assessment Section
Surface Water Quality Division

cc: Les Thomas, LWMD

RECOMMENDED MEASURE 35

"Because of the exceptional value of Trask Creek, Iron River, DeChamps Creek, Two Mile Creek, Middle Branch Ontonagon River, South Branch Paint River, and North Branch Iron River, Great Lakes shall implement the following additional construction procedures to supplement those presented in appendix D. In order to reduce the amount of suspended sediments introduced into the waters, all in-stream work (e.g., trenching, pipe installation, backfilling) shall be completed within one 24-hour period. This means all preparation activities (e.g., pipe bending, welding, coating, etc.) should be completed prior to initiating trenching. Excavation and backfilling shall be conducted with backhoes simultaneously from both streambanks, and no equipment shall be permitted in or across the stream."

COMMENT

Great Lakes expects that all of these stream crossings can be completed within 48 to 72 hours (with the possible exception of the South Branch of the Paint River). Permits issued by the DNRs for stream crossing construction in 1989 did not impose a 24 hour restriction to complete the crossing. DNRs allowed up to seven days for completion of in-stream work. In addition, attempting to complete stream crossings within one 24-hour period is risky, impractical and impossible in many cases, for the following reasons:

1. Attempting to operate heavy equipment under artificial lighting increases risk for accidents and spills.

2. The coarse-textured sandy soils in Wisconsin and Michigan do not allow in-stream trenching to be completed in an expedient manner. Trenches have to be cut with shallow sideslopes to protect against cave-ins, even in the smallest of streams. This requires extra time compared to construction in clay-type soils where trench walls tend to remain stable.

3. Rock may be present which could necessitate in-stream

G4

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G4-76 Comment noted. After review of in-stream construction procedures provided by MIDNR to Great Lakes for construction across streams and wetlands (see comment letter F9, Ottawa National Forest referenced letters) we have revised this recommendation to allow a maximum of 48 hours to complete "instream" construction. All construction activities associated with site preparation, pipe assembly, and site restoration are not included in this 48-hour construction window.

blasting, requiring a longer construction period. In addition, blasting is not allowed by state law during night time hours.

Great Lakes agrees to construct these crossings using excavation equipment operating from one or both streambanks if no rock is present. If consolidated rock is found, equipment must enter the stream to drill shot holes for blasting.

Great Lakes assumes that "no equipment shall be permitted in or across the stream" does not apply to the construction of temporary bridges for equipment passage at these crossings. The move-around distances shown in the following table reflect the extra distance construction equipment would have to travel along the right-of-way and existing roads, to reach the opposite side of the streams.

MILEPOST	STREAM	BANK TO BANK WIDTH	MOVE-AROUND DISTANCE	PROPOSED CONSTRUCTION METHOD
329.5	Trask Creek	8'	4.7 miles	FLUME
336.6	Iron River	29'	1.4 miles	FLUME
337.9	DeChamps Crk.	23'	3.4 miles	FLUME
441.2	Two Mile Crk. (Intermittent)	NA *	6.2 miles	FLUME **
444.0	Mid. Br. Ontonagon Rvr.	20'	5.5 miles	WET TRENCH
460.9	So. Br. Paint Rvr.	75'	6.1 miles	WET TRENCH

MILEPOST	STREAM	BANK TO BANK WIDTH	MOVE-AROUND DISTANCE	PROPOSED CONSTRUCTION METHOD
474.5	No. Br. Iron Rvr.	58'	2.5 miles	WET TRENCH

* Profile/width not available; intermittent streams were not profiled - width probably less than 10 '

** If water is present

The restriction of not allowing equipment to cross the river would not only affect river-crossing construction equipment, but all other construction crews and equipment as well. The additional cost associated with the move-around is estimated at $200,000 per crossing, as the construction equipment would need to be transported around the stream if no bridged-traffic crossings are allowed.

DEPARTMENT OF NATURAL RESOURCES

PERMIT

MP 510.8

Permit No. 88-2-72(a)
Date Issued 08-01-89
Extended
Revised
Expires 12-31-90

ISSUED TO

Great Lakes Gas Transmission Company
300 Bay Street
Petoskey, MI 49770

This permit is granted under provisions of:

- [x] The Inland Lakes and Streams Act, 1972 P.A. 346, as amended.
- [ ] The Great Lakes Submerged Lands Act, 1955 P.A. 247, as amend
- [ ] Flood Plain Regulatory Act, 1929 P.A. 245, as amended.
- [x] The Goemaere-Anderson Wetland Protection Act, 1979 P.A. 203.
- [ ]

Permitted Activity

Construct a 36" O.D. natural gas pipeline crossing by the "flume" method and construct an 83 foot long, temporary "Bailey" type bridge, place roadway approach fill, construct a temporary spoil storage area and earthen dikes.

Water Course Affected	County	Town	Range	Sect.	Sub. and Lot Number
N.Br. of W.Br. Sturgeon River	Dickinson	43N	30W	36	MP 510.8

Authority granted by this permit is subject to the following limitations:

A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
B. The permittee in exercising the authority granted by this permit shall not cause unlawful pollution as defined by Act No. 245 of the Public Acts of 1929, as amended.
C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
D. All work shall be completed in accordance with the plans and specifications submitted with the application and/or plans and specifications attached hereto.
E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work authorized herein.
F. It is made requirement of this permit that the permittee give notice to public utilities in accordance with Act 53 of the Public Acts of 1974, and comply with each of the requirements of that act.
G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits or complying with other state statutes.
H. This permit does not preclude or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
I. Permittee shall notify the Department of Natural Resources within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached, preaddressed post card to the office indicated thereon.
J. This permit shall not be assigned or transferred without the written approval of the Department of Natural Resources.
K. Failure to comply with conditions of the permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific State Act, Federal Act and/or Rule under which this permit is granted.
L. Work to be done under authority of this permit is further subject to the following special instructions and specifications:

Refer to the general conditions in permit 88-2-72 which are a part of this permit.

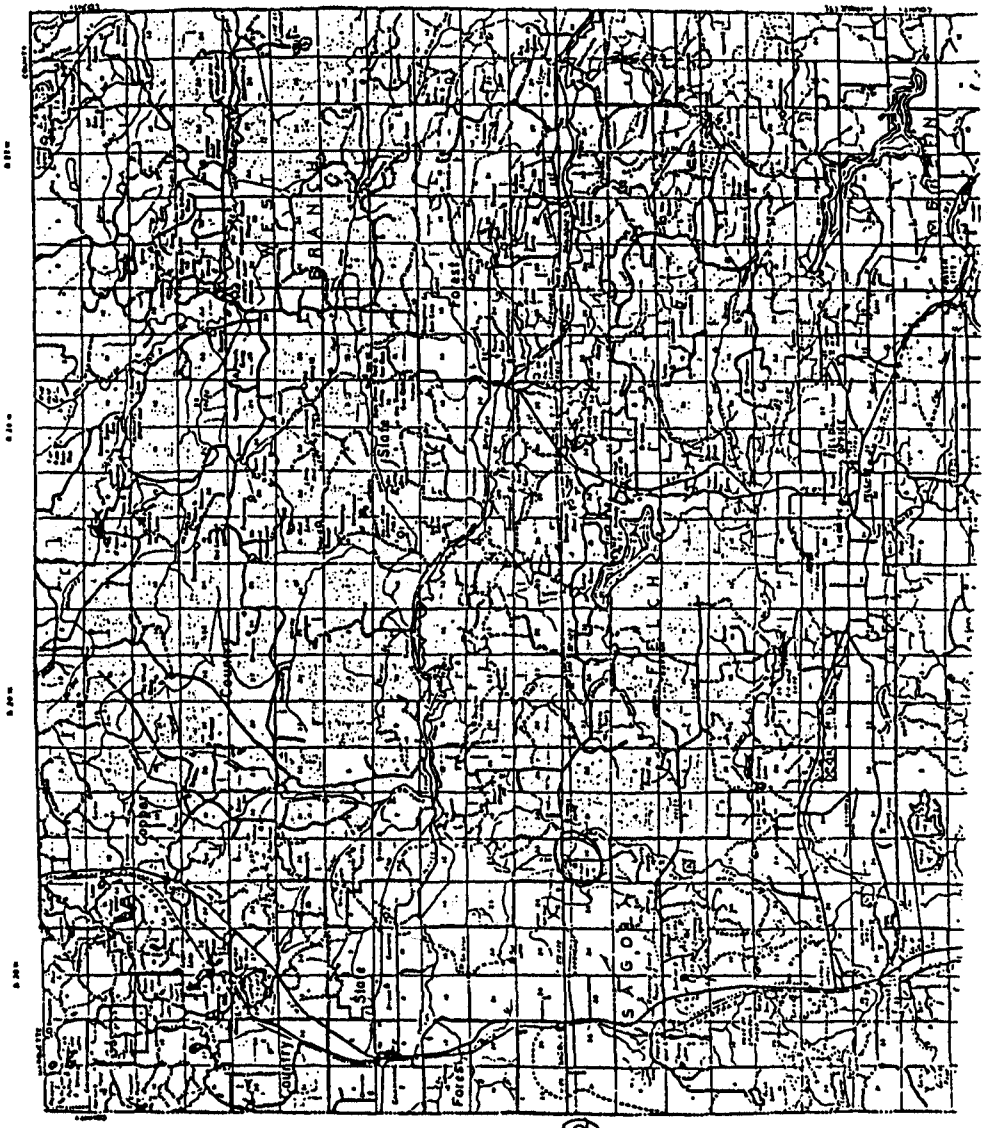
The "fluming" method of crossing shall be used.

The "flume" shall be of sufficient size to handle the stream flow.

David F. Hales
Director, Department of Natural Resources

By Claude A. Schmitt
Claude A. Schmitt
LAND & WATER MANAGEMENT DIVISION

cc: Division
District
CEA - Dickinson Co.
Braun Environmental

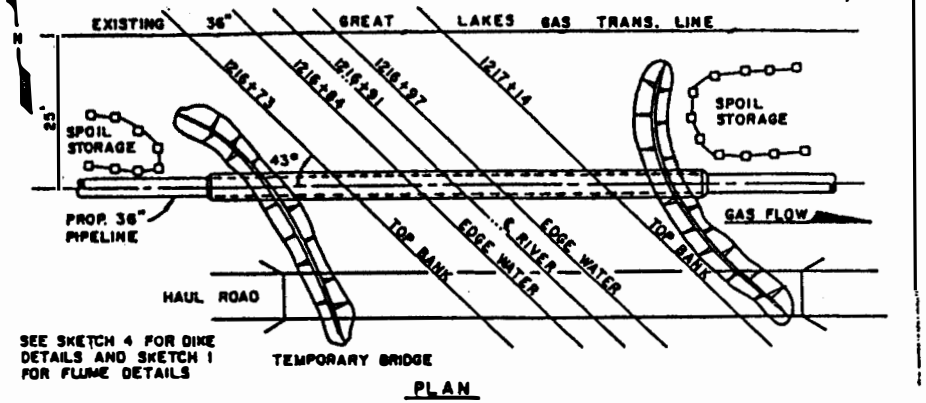


88-2-72(a)

G4

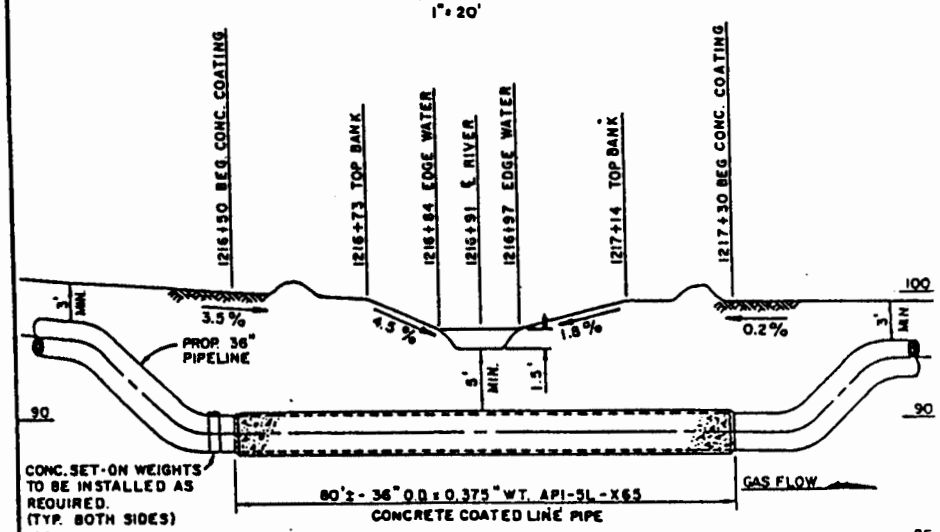
DICKINSON COUNTY, MICHIGAN
SECTION 36, T43 N-R30 W

88-2-72(2)



SEE SKETCH 4 FOR DIKE DETAILS AND SKETCH 1 FOR FLUME DETAILS

PLAN
1" = 20'



T.B.M.: STEEL PIN 100' LT. OF STA. 1215+36 ASSUMED ELEV. 100.00

PROFILE
HORIZ. 1" = 20'
VERT. 1" = 10'

ALIGN. BK. 49, PG. 22 & 23
PROFILE BK. 12, PG. 15

M.P. 510.8
ALIGNMENT SHEET: 208 PA 1097

WILLBROS BUTLER ENGINEERS, INC.
PREPARED FOR
GREAT LAKES
GAS TRANSMISSION COMPANY

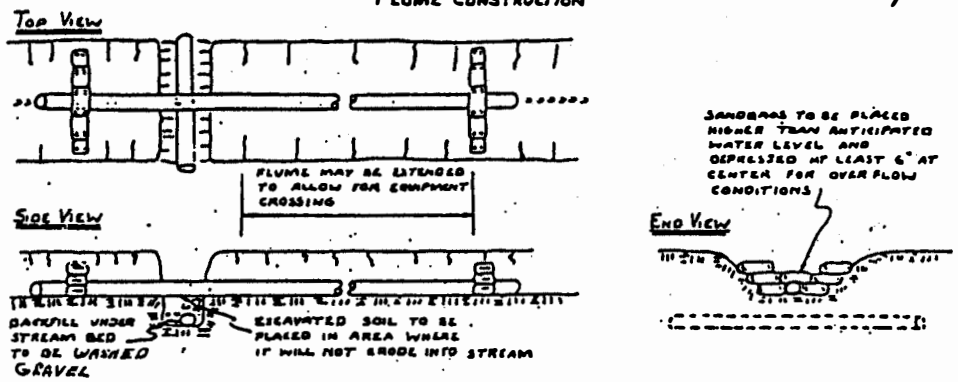
PROPOSED 36" NATURAL GAS LOOP LINE CROSSING
N. BRANCH OF W. BRANCH STURGEON RIVER
DICKINSON COUNTY, MICHIGAN

Dwn JWG	Date 1-4-89	Chd GS	App
Job 5793	Dwg No 208-PD-6117		Rev 1

7-61

STREAM CROSSING
FLUME CONSTRUCTION

88-2-72(2)



NOTES: CONTRACTOR TO NOTIFY DEPARTMENT WHEN CROSSING WILL BE MADE.

ONLY SANDBAGS WILL BE USED FOR DAMMING UNLESS OTHER MATERIALS HAS APPROVED BY THE DEPARTMENT

SANDBAGS TO BE FILLED NO MORE THAN 75% CAPACITY OF THE BAG TO ALLOW EFFECTIVE STACKING AND MOLDING OF BAGS AROUND FLUME

SEDIMENT CONTROL PRACTICES DOWNSTREAM OF FLUME MAY BE REQUIRED SUBJECT TO EXTENT OF STREAM DISTURBANCE CAUSED BY CONSTRUCTION

SEQUENCE OF CONSTRUCTION:

1. LAY FLUME ALONG BOTTOM OF STREAM
2. PLACE SANDBAGS AT UPPER END OF FLUME AND THEN AT LOWER END OF FLUME TO LOWER WATER LEVEL
3. DEWATER CROSSING AT DISCRETION OF CONTRACTOR DISCHARGE WATER TO LOCATION FOR SEDIMENT CONTROL
4. BEGIN TRENCHING AND PLACEMENT OF PIPE

SEQUENCE OF STABILIZATION:

1. BACKFILL TRENCH UNDER STREAM BED WITH NONERODIBLE MATERIAL
2. STABILIZED DISTURBED STREAM BANKS AND BED
3. REMOVE SANDBAGS
4. REMOVE FLUME WITHOUT DISTURBING BOTTOM OF STREAM

FOR ADDITIONAL INFORMATION ON STREAM CROSSINGS SEE CONSTRUCTION DETAILS SC-1 AND SC-1

LAND RESOURCE PROGRAMS DIVISION
LAND, LAKES AND STREAMS PROTECTION SECTION
BOX 30028
LANSING, MI 48909

STREAM CROSSING
FLUME CONSTRUCTION
1 OF 3 UNIT
DETAIL SC-1

7-62

RECOMMENDED MEASURE 36

"Because of the sensitivity and importance to the regional fishery of the Mississippi, Bois Brule, Maple Rivers, Welch, Seimens, Powder Mill, Planter and Henderson Creeks, and Cooks Run, Great Lakes shall file with the Secretary of the Commission a site-specific mitigation plan, together with comments on these stream crossings from the appropriate state agencies, for review and approval of the Director of OPPR prior to construction. The mitigation plan shall include the construction time period, amount of time required for instream construction, and restoration measures which would be used."

COMMENT

For FERC's documentation that it has fulfilled its NEPA obligations, Great Lakes will send to FERC the state DNR stream crossing permits and Great Lakes' site specific stream crossing mitigation plan to fulfill the above requirement. The above stream crossing plans will be filed with the commission by May 15, 1990.

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G4-77 Comment noted and accepted.

RECOMMENDED MEASURE 37

"Since the Tacoosh and Sturgeon Rivers contain spring and fall migratory runs of steelhead and salmon, Great Lakes shall restrict construction across these rivers to the low-flow summer months of July and August."

COMMENT

Great Lakes objects to this tight construction window for these two rivers.

As discussed in the introductory section to the response to the DEIS, construction time windows present a significant hardship to Great Lakes. Construction in streams is heavily dependent on the timing of the issuance of the FERC Certificate, state DNR permits, and contractual obligations to transport the required volumes of natural gas to customers.

The construction time windows table (Attachment 1) combines the various restrictions for wildlife, wetlands, fisheries, and other concerns dramatically illustrates the effect of these windows on the planned construction. Attempting to comply with all of these restrictions would require numerous skips, move-arounds, additional contractors, would needlessly prolong the construction period, and could increase the cost of the project by as much as $1.4 million.

Great Lakes will work with state DNRs to define mutually acceptable time windows. Great Lakes feels that the environmental mitigation

G4

78

G4-78 FERC appreciates Great Lakes concerns regarding the time restrictions that it must adhere to in order to construct a project of this magnitude while sufficiently protecting the natural resources of the region. We also recognize that these resources are extremely valuable to the people inhabiting these regions. The MIDNR has expressed serious concern to us regarding the protection of spawning areas and the well being of future year classes of steelhead and salmon in these rivers, as well as recruitment of these year classes into Lake Michigan. For these reasons, we stand by these construction windows. As noted in appendix D(I)(C-1), we have allowed the responsible state agencies to change these windows should they feel it too restrictive, or not restrictive enough.

measures (erosion and sedimentation control) and the construction techniques proposed will adequately protect streams from significant damage. In the unlikely event that significant stream degradation occurs, Great Lakes will cooperate with the DNR to develop remedial plans to restore stream habitats.

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RECOMMENDED MEASURE 38

"Great Lakes shall limit construction activities across the Brevoort River to the period between June 15 and September 1."

COMMENT

As previously mentioned, construction time windows present a significant hardship to Great Lakes. Similar to the concern raised in the comment to Recommended Measure 37, this tight construction time window restriction would necessitate separate mobilization which could increase the cost of the project by $.7 million. The timing of construction through streams depends on many factors, including; the issuance of the FERC Certificate, state DNR permits, and contractual obligations to transport natural gas to Great Lakes' customers.

Great Lakes will work closely with state DNRs concerning time windows to determine a reasonable construction schedule. Great Lakes feels that the proposed environmental mitigation measures and construction techniques will adequately protect the streams from significant damage.

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G4-79 Comment noted. Refer to the comments and responses G4-2 and G4-78. We stand by this recommendation.

RECOMMENDED MEASURE 39

"Great Lakes shall flume and dry-ditch the crossing of the Manistee River."

COMMENT

Great Lakes agrees that the Manistee River (Loop 14, MP 750.0) is one of the top quality trout streams in Michigan and that it contains significant areas of salmonid spawning habitat (DEIS page 4-33, ¶5). Great Lakes also concurs that the Manistee River provides high quality spawning habitat and recreational fishing for brown and brook trout (DEIS page 5-32, ¶5). However, Great Lakes disagrees with the recommendation that the crossing shall be a flumed type crossing.

According to the United States Department of Agriculture Soil Survey of Antrim County, Michigan (1978), the Manistee River crossing is located in an area characterized by Rubicon sand. This soil is a course-textured, non-plastic sand with a high permeability rate. According to this survey, the Rubicon series has a severe limitation for shallow excavations because the cutbanks cave into the trench. Additionally, the series has a severe limitation for construction of banks and levees due to seepage. Because of these unfavorable soil characteristics, there is a high potential for a flume failure at this location. A flume failure could result in a significant release of sediments downstream from the crossing site. Other nearby attempts to

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G4-80 Comment noted and accepted. Please see revised section 5.1.4.1.2 and revised section 7.3. DEIS recommendation 39 has been deleted.

G4

complete a bored crossing of this river have failed due to the poor soil conditions. It is Great Lakes intention to wet trench the Manistee River in the same manner as the river was successfully crossed at MP 763.96 during Great Lakes construction in early 1990.

During the 1989-1990 construction, the Manistee River was wet trenched using interlocking sheet piling to support the trench walls. This technique resulted in a narrow trench (compared to conventional wet trench methods) and minimal discharge of sediments during construction.

Mr. Joe Kutkuhn of the Upper Manistee River Association, and Mr. Fred Gottschalk of the MI-DNR, agreed that this crossing technique was extremely effective in reducing disturbance to the stream and resulted in a significant reduction in downstream sedimentation.

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RECOMMENDED MEASURE 41

"Great Lakes shall not clear any additional right-of-way vegetation between MPs 664 and 674.5 to protect a wooded dune and swale complex."

COMMENT

During the comment period, Great Lakes visually inspected the wooded dune and swale complex between mileposts 664.0 and 674.5. It was determined that additional right-of-way vegetation will have to be cleared through this area. The only means of eliminating additional right-of-way clearing would be by placing the loopline closer to the mainline. However, the sandy soils and wetlands in this area will not permit placing a new trench closer to the existing mainline without jeopardizing its stability. Adequate space (at least 25 feet) needs to be maintained between the mainline and the loopline to allow the ditch through this area to be excavated with relatively flat side slopes to prevent cave-ins. The safest way to install the loopline closer to the mainline would be to drive sheet piling next to the mainline and excavate the trench next to the sheet piling. Estimated cost to install such sheet piling over a 10-mile distance would be approximately $6 million, which Great Lakes considers prohibitive compared to the costs of additional clearing of right-of-way.

Great Lakes does recognize the sensitive nature and unique features of this wooded dune and swale complex. Various state of Michigan and federal regulations control activity in this area. Table 1

G4

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G4-81 Comment noted; please see revised section 7.3.

presents federal and state of Michigan management programs affecting this area.

Great Lakes is willing to explore feasible alternatives to clearing additional right-of-way vegetation in this wooded and swale complex. In an informal data request to Great Lakes (April 11, 1990), FERC suggested that Great Lakes explore the option of rerouting the loopline. As discussed in section 6.1 of the DEIS, route variations often do not reduce environmental impacts to an area because environmentally sensitive areas often span several miles in either direction of the proposed route. Great Lakes will consult with regulatory agencies to develop feasible alternatives.

The degree of legislation protecting this area restricts activities that may cause lasting environmental degradation. Great Lakes has addressed these regulations, is acquiring the necessary permits and will comply with all relevant regulations concerning this area.

G4

81

TABLE 1: Federal and State of Michigan Management Programs of the Wooded Dune and Swale Complex between MP 664 and MP 674.5

Regulatory Agent	Federal and/or State Regulations	Management Plan	Milepost (approx).
U.S. Forest Service	Hiawatha Nation Forest Land Resource Management Plan, 1986	Management Area 8.1 Candidate Research Natural Area	672.7 - 674.3
DNR - Michigan	Coastal Zone Management Act 1972	Great Lakes Submerged Land Act 247	Does not affect project
U.S. Forest Service	Hiawatha National Forest Land Resource Management Plan, 1986	Forest - wide standards and guidelines for Coastal Zone Areas	664.5 - 670.0
U.S. National Park Service	36 CFR, Part 62	National Natural Landmark Program	A site has not been designated
DNR-Michigan	Michigan Public Act 146 and 147; Shoreline Protection and Management Act	Critical Dune Areas	662-664 669.3-670
DNR-Michigan		Element Occurrence Records*	664.5-667.4 669.3-672.7 673.9-675.3

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* This is a database system, not a management plan.

G4

RECOMMENDED MEASURE 42

"Great Lakes shall submit to the FERC, for review and approval by the Director of OPPR prior to construction, a mitigation plan that identifies individual wetlands where winter construction would be conducted."

COMMENT

Great Lakes cannot submit the exact locations where winter construction will be used to construct through wetlands. Winter construction locations will depend on the date that Great Lakes secures the necessary permits and on the weather conditions necessary to prepare the wetlands for winter construction. Since winter construction involves the freezing of the construction side of the right-of-way in the wetland, so as to provide a continuous roadway, the pipeline can be installed in essentially the same manner as used in conventional upland fairweather construction. Mitigation techniques for wetlands are described in Great Lakes' Soil Erosion and Sediment Control Plan as filed with FERC in March, 1990.

Areas that Great Lakes has identified as potential sites for winter construction are:

A. Milepost 182.2-201.2 - 19.0 miles - Loop Section 4

B. Milepost 226.4-241.2 - 14.8 miles - Loop Section 6

82

G4-82 Comment noted and accepted. Please see revised section 5.1.7.2 and section 7.3. DEIS recommendation 42 has been deleted.

Wetland locations between these mileposts, can be found in Appendix E of these comments.

G4

82

RECOMMENDED MEASURE 43

"Great Lakes shall file with the Commission a mitigation plan that specifies the wetlands where existing corduroy roads would be used by construction equipment. The plan shall specify the location of the corduroy road, including its width, and the location of the existing pipeline and the proposed trench. These items shall be shown on a cross-sectional diagram that also indicates the existing cleared right-of-way width and any required temporary right-of-way. This plan shall be reviewed and approved by the Director of OPPR prior to construction."

COMMENT

Great Lakes agrees to use existing corduroy roads wherever possible as it is economically and environmentally advantageous to do so. However, Great Lakes does not agree to prepare and file the requested plan with FERC, as construction in wetlands is under the jurisdiction of other state and federal agencies (ie: state DNR and Corps of Engineers). FERC's review and approval of any such mitigation plan would constitute an unnecessary publication of regulatory functions.

Further, Great Lakes proposes to consult with state DNR and the Corps of Engineers with respect to the need to construct new corduroy roads. We respectfully request that FERC acquiesce in the DNR and Corps permitting and approval process.

G4

83

G4-83 Comment noted.

RECOMMENDED MEASURE 46

"For the construction across the 12 rivers that have been proposed for inclusion in Federal or state inventories of wild and scenic rivers, Great Lakes shall file a mitigation and restoration plan for the review and approval of the Director of OPPR prior to construction."

COMMENT

Great Lakes has prepared a site-specific plan for all perennial streams, which includes the rivers listed as potential candidates for national or state inventories of wild and scenic rivers, (DEIS page 4-77, ¶1) i.e., Black River (MP 406.1), Cisco Branch Ontonagon River (MP 438.5), Middle Branch Ontonagon River (MP 444.0), South Branch Paint River (MP 460.9), North Branch Ford River (MP 528.2), Escanaba River (MP 547.0), Sturgeon River (MP 575.3), Indian River (MP 598.5), Manistee River (MP 750.0), Muskegon River (MP 803.1), Pine River (MP 854.8), and Shiawassee River (MP 881.5). These mitigation and restoration plans address the concern for the preservation of those features for which the river was listed (i.e., recreation, fisheries, geologic formations) (DEIS page 5-92, ¶6).

A copy of the special instructions and stipulations found in the permit will be forwarded to FERC prior to construction.

G4

84

G4-84 Thank you for your comment.

RECOMMENDED MEASURE 47

"For the active sand pits located at MPs 391.5, 706.8, 714.9, and 936.0, and the active gravel pit at MP 236.8, Great Lakes shall contact the owner/operator of these mining operations regarding proposed pipeline encroachment and to negotiate suitable agreements to ensure that pipeline installation would not adversely affect future mining operations. Any route realignments shall be filed with the Secretary of the Commission for review and approval by the Director of OPPR prior to construction."

COMMENT

Great Lakes has negotiated a 75 foot width of the right-of-way near the gravel pit at MP 236.8. The gravel pit is currently inactive.

The right-of-way width near the sand/gravel pit at MP 391.5 is being negotiated at this time. The current status of the right-of-way is undefined, and Great Lakes intends to define a specific width of 75 feet prior to construction.

Great Lakes has previously negotiated a right-of-way easement at MP's 706.8, 714.9 and 936.0 to adequately accommodate the installation of additional pipelines. Currently, all three of these sand pits are inactive. No realignments around these gravel pits are anticipated.

G4

85

G4-85 FERC notes Great Lakes' response to DEIS recommendation 47 in section 7.3. The status of these commercial operations has been updated.

APPENDIX A

PIPELINE ROUTE/NONJURISDICTIONAL LOCATION MAPS

Great Lakes submitted oversized aerial photos showing their suggested route variations. Because of their size, they are not reprinted here.

APPENDIX C

EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN

Great Lakes provided a number of comments on our Recommended Erosion Control, Revegetation, and Maintenance Plan (appendix C). We have reviewed and discussed these comments in section 5.1.2 of the FEIS. Because of the volume of material, their comments on appendix C are not reprinted here.

APPENDIX D

STREAM AND WETLAND CONSTRUCTION AND MITIGATION PROCEDURES

Great Lakes provided a number of comments on our recommended Stream and Wetland Construction and Mitigation Procedures (appendix D). We have reviewed and discussed these comments in sections 5.1.3.2.1 and 5.1.7.2. Because of the volume of material, their comments on appendix D are not reprinted here.

APPENDIX E

WETLANDS CROSSED BY THE PROPOSED GREAT LAKES
NIP PROJECT FACILITIES

Great Lakes provided their revisions to our wetland crossing tables (see response to comment G4-21). Because of the volume of the material, it is not reprinted here.

APPENDIX G

EIS DISTRIBUTION LIST

COMMENT:

Great Lakes would like to point out that the EIS distribution list does not include Chequamegon National Forest, Hiawatha National Forest and the Minnesota Pollution Control Agency. These agencies should be included on the final EIS distribution list.

G4

86

G4-86 Comment noted. See revised appendix G.

G5

CNG Transmission Corporation

A CNG COMPANY

445 West Main Street
Clarksburg, WV 26302-2450
(304) 623-8000

LEGAL DEPARTMENT

April 27, 1990

Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Re: CNG Transmission Corporation
Docket Nos. CP89-712-000/CP88-195-002/CP88-195-005
Ceti/Indeck and Niagara Cogen Projects
CNG's Comments on the DEIS and Updates on the Niagara Cogen and Ceti/Indeck Data Responses filed at FERC on February 26, 1990

Dear Secretary Cashell:

CNG submits for filing, in the captioned proceeding comments on the open-season Nipps Draft Environmental Impact Statement (DEIS) issued by FERC on March 16, 1990. Comments are due at FERC on April 30, 1990.

CNG also submits for filing in this proceeding updates to its Data Response filed at FERC on February 26, 1990.

CNG has also sent a copy of this filing, via Federal Express overnight service, to George Willant, at EBASCO, the FERC's environmental consultant on these projects.

Sincerely,

James M. Hostetler

James M. Hostetler

xc: Kurt Flynn, FERC
George Willant, EBASCO

G5

CNG'S COMMENTS ON NIAGARA IMPORT POINT PROJECT

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Section	Page	Comments			
2.1.8	2-3 & Table 2.1.2	The Leidy meter station in Niagara Cogen (Docket No. CP88-195-005) which proposes to deliver gas to Texas Eastern will be a new facility at an existing site not a modification to an existing meter station.	1	G5-1	Comment noted. See revised table 2.1.2.
2.1.6	2-12	The TL-403 replacement pipe and the regulation at Marilla proposed in Niagara Cogen (Docket No. CP88-195-005) are also proposed and required in CETI/Indeck (Docket No. CP89-712-000). All comments in the DEIS that pertain to the replacement pipeline and meter station at Marilla should be included in the sections for both projects.	2	G5-2	Thank you for your comment.
2.1.8	2-13	Although CNG and Texas Eastern are co-applicants in Niagara Cogen (Docket No. CP-88-195-005), the facilities described in Section 2.1.8 are proposed to be wholly-owned and constructed by CNG. Texas Eastern would have no responsibility for or ownership in the described facilities.	3	G5-3	Thank you for your comment. See footnote to section 2.1.8.
2.1.9.5.1	2-15	Transportation of 29,000 Mcfd of natural gas to Texas Eastern will occur with a new interconnection at Leidy not an existing interconnection at Leidy.	4	G5-4	Comment noted; section 2.1.9.5.1 has been revised accordingly.
2.2.1	2-25	As stated in a data response filed with FERC on February 26, 1990, a third staging area for TL-470, in addition to the staging areas on the eastern end and western end of the pipeline, is required on the eastern side of the Hudson River. CNG has not yet obtained an option on a property.	5	G5-5	This additional information has been incorporated into section 2.2.1.
2.2.1	2-25 and 2-27	As stated in the FI-IV of the PennEast Niagara Cogen Project submitted to FERC, at page 1, Section 1.2.2, the existing maintained right-of-way for TL-403 is 55 feet, not 100 feet, and the total construction right-of-way is 100 feet, not 120 feet.	6	G5-6	Figure 2.2-7 and section 2.2.1 have been revised. However, acreages have not been revised since affected acreage would be reduced by only 1 acre.

G5

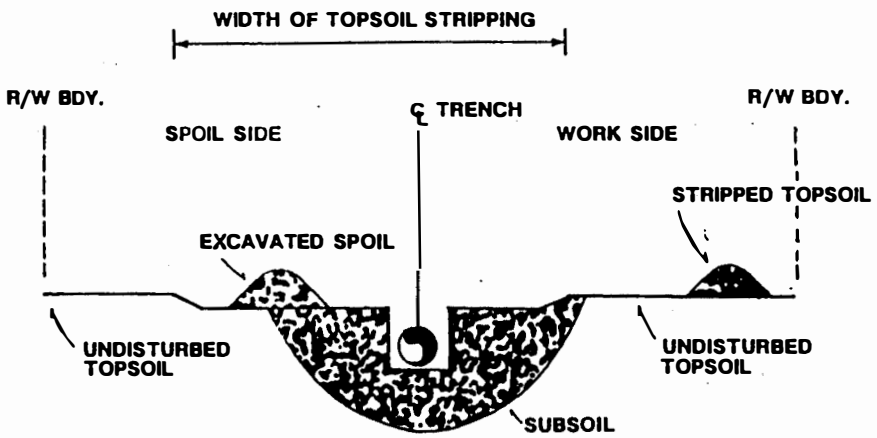
Section	Page	Comments			
5.1.2.2	5-7	CNG responded to Staff's standard set of erosion control, vegetation, and maintenance procedures in the data response filed with FERC on February 26, 1990. After reviewing Staff's procedures in Appendix C of the DEIS which were modified to incorporate comments from applicants, CNG's comments on the procedures are still valid and are attached as Exhibit B.	7	G5-7	Several comments were received from CNG concerning the Erosion Control, Revegetation, and Maintenance Plan in appendix C. Appendix C has been revised to include any changes resulting from consideration of CNG's comments. Please refer to section 7.3 (DEIS recommendation 8 modified) for circumstances under which deviations would be allowed.
5.1.3.2.1	Table 5.1.3.-1	Estimated volumes of hydrostatic test water for TL-470 and TL-403 are 430,000 and 32,000 gallons, respectively.	8	G5-8	Comment noted. This information has been incorporated into table 5.1.3-1.
5.1.2.1	5-9 & Figure 5.1.2-1	CNG proposes a modification to Figure 5.1.2-1 which shows topsoil stripping cross-section. This modification is shown in Exhibit C and moves the stripped topsoil area from the outside of the spoil side to the outside of the work side of the ROW. This modification ensures separation of the excavated spoil and the stripped topsoil and eliminates the distance (and unuseable ROW) between the spoil and topsoil required by the method shown in Figure 5.1.2-1.	9	G5-9	Our modified figure 5.1.2-2 in exhibit C still fulfills the intended purpose of topsoil stripping and segregation measures as outlined in section 5.1.2.2 and appendix C. FERC maintains that topsoil shall not be stockpiled in areas of vehicular traffic.
5.1.3.2.1	5-17	After reviewing Staff's Stream and Wetland Construction and Mitigation Procedures in Appendix O of the DEIS, which were modified to incorporate comments from applicants, CNG's comments on the procedures filed with FERC on February 26, 1990 are still valid and are attached.	10	G5-10	Comment noted. Sections 5.1.3.2.1 and 5.1.7.1 have been modified to include comments that were received after publication of the DEIS on the Stream and Wetlands Construction and Mitigation Procedures. In reference to the comment referring to instream sediment control devices, FERC has eliminated the recommendation for instream sediment control devices for reasons similar to those offered by CNG, but does require installation of such devices at streambanks, around spill piles, and at the base of slopes located adjacent to streams (see appendix D, part I(B2), (E2) and (F5).
5.1.8.1.2	5-67	CNG provided a copy of its plan approval for one 1100 Hp compressor and a copy of the application for the other 1100 HP compressor at State Line in the data response filed on February 26, 1990 - not "a copy of its air permit application for the two 1,100-HP compressor units". CNG submits the plan approval for the other 1,100 HP compressor at State Line in the data response update included in this transmittal.	11	G5-11	The discussion on the air quality impact from the State Line Compressor Station (see section 5.1.8.1.2) has been amended and updated to include CNG's acquisition of plan approvals from the PADER for both 1,100-hp compressor engines.

Section	Page	Comments			
5.1.9.2	5-88	CNG may need to deviate from the cleared right-of-way between MPS 1.8 and 2.12 to avoid the abandoned landfill and the Van Buren archaeological site described on page 4-85. CNG also proposes to deviate from Niagara Mohawk's right-of-way between MPS 1.62 and 1.84 to avoid a wetland.	12	G5-12	Any deviations from the proposed route must be filed with the Secretary of the Commission for review and approval of the Director of OPPR prior to construction in accordance with section 7.3 (see DEIS recommendation 2).
Recommendation #67	7-18	CNG may need to deviate from Niagara Mohawk's right-of-way between MPS 1.8 and 2.12 to avoid the abandoned landfill and the archaeological site. See comments on Section 5.1.9.1.2 above.	13	G5-13	See response to comment G5-12.

PD-CHC/sam

EXHIBIT C

CNG MODIFICATION OF FIGURE 5.1.2-1



PROFILE
NOT TO SCALE

CNG ATTACHMENTS

CNG submitted several exhibits that, because of the volume of material, are not reprinted here. This includes their comments on appendix C, Erosion Control, Revegetation, and Maintenance Plan, and appendix D, Stream and Wetland Construction and Mitigation Procedures. Our responses to these comments are discussed in sections 5.1.2, 5.1.3.2.1, and 5.1.7.2.

G6

ALGONQUIN GAS TRANSMISSION COMPANY
1284 SOLDIERS FIELD ROAD BOSTON, MASSACHUSETTS 02135
AREA CODE 617 254 4050

April 30, 1990

Federal Energy Regulatory Commission
824 North Capitol Street, NE
Washington, DC 20426

Attention: Ms. Lois D. Cashell, Secretary

Re: Algonquin Gas Transmission Company
Comments on Draft Environmental Impact Statement(s)
Issued March, 1990 in Docket Nos. CP88-171-001 et al
and CP88-187-002

Dear Ms. Cashell:

Attached please find one original and fourteen copies of Algonquin Gas Transmission Company's comments on the Draft Environmental Impact Statement issued for the Niagara Import Point Project.

Very truly yours,

Frank B. Bailey

Frank B. Bailey
Principal Associate,
Regulatory Affairs

FBB:AL028
Enclosures
cc: K. Flynn

IN THE UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

ALGONQUIN GAS TRANSMISSION COMPANY	) DOCKET NO. CP88-187-002
TENNESSEE GAS PIPELINE COMPANY	) DOCKET NO. CP88-171-001
GREAT LAKES GAS TRANSMISSION COMPANY	) DOCKET NO. CP89-892-000
CNG TRANSMISSION CORPORATION and TEXAS EASTERN TRANSMISSION CORPORATION	) DOCKET NO. CP88-195-002
CNG TRANSMISSION CORPORATION	) DOCKET NO. CP89-712-000
TEXAS EASTERN TRANSMISSION CORPORATION	) DOCKET NO. CP89-711-000
TRANSCONTINENTAL GAS PIPELINE	) DOCKET NO. CP89-7-001
CORPORATION	) DOCKET NO. CP89-710-000
NATIONAL FUEL GAS SUPPLY CORPORATION AND PENN-YORK ENERGY CORPORATION	) DOCKET NO. CP88-194-001

INTRODUCTION

Algonquin Gas Transmission Company ("Algonquin") is submitting herewith its comments to the Draft Environmental Impact Statement ("DEIS") issued for the Niagara Import Point Project ("NIP Project"). On February 12, 1990 Algonquin filed an amendment to its Transportation for Cogenerator Project in Docket CP89-187-002 which is one of the several components of the NIP Project.

Facilities proposed by Algonquin in its amendment consist of seven (7) pipeline segments totalling 24.2 miles of pipeline loop and pipeline replacement, one (1) compressor unit and one (1) meter station. The following facilities are proposed:

- 4.9 Miles, 12-inch E-1 System Loop in Norwich, Connecticut;
- 5.5 Miles, 20-inch G-8 System Replacement and Loop in Wareham, Plymouth and Bourne, Massachusetts;

- 1.1 Miles, 36-inch Mainline Loop in Chaplin and Eastford, Connecticut;
- 5.5 Miles, 24-inch G-5 System Replacement in Attleboro, Rehoboth and Seekonk, Massachusetts;
- 3.3 Miles, 36-inch Mainline Loop in Medway, Holliston, Millis and Sherborn, Massachusetts;
- 1.8 Miles, 10-inch H-1 System Replacement in Milford and Medway, Massachusetts;
- 2.1 Miles, 16-inch G-4 System Loop in Tiverton, Rhode Island;
- 5500 Horsepower Compressor Unit to be installed at the existing Burrillville, Rhode Island Compressor Station;
- Bellingham, Massachusetts Meter Station.

Algonquin's comments on the DEIS are organized in four sections. Section I addresses Staff's conclusions and recommendations set forth in Section 7 of the DEIS since these items may form the basis for certificate conditions. One such recommended condition is for applicants to agree to implement Staff's Appendices "C" and "D" which set forth uniform plans for erosion control and wetland crossing mitigations. Algonquin believes that waivers of Appendices "C" and "D" will be required to construct facilities, consequently Staff's Appendices are discussed next in Section II. Section III recites Algonquin's detailed comments on other sections of the DEIS. Finally, Section

IV contains Exhibits including correspondence and markup aerial photographs detailing Algonquin's recommended route versus Staff variations.

Algonquin's concerns and exceptions to the recommendations set forth in the DEIS chiefly involve the following points:

- Limitation of federal rights available to applicants;
- Imposition of environmental mitigations which may compromise pipeline safety;
- Overspecificity of rules which Algonquin believes can ultimately result in more damage to the environment than implementation of performance guidelines;
- Requirement that Algonquin construct its facilities along route variations set forth in the DEIS referred to as the Medfield Variation and the Wawecus Hill Road Variation;
- Establishment of conflicting time construction windows which result in inefficient additional construction activities, again potentially increasing impacts to the environment compared to reasonable mitigations.
- An unprecedented nine (9) separate Mitigative Measures applicable to Algonquin which each require post-certificate filing, review and approval by the Commission; and

- Mitigative Measures recommended by Staff which may result in unprecedented and as yet undetermined cost impact.

These and other concerns are specifically addressed in Algonquin's comments *infra*.

SECTION I

COMMENTS ON DEIS

SECTION 7

7.3

Mitigative Measure 2 (All Applicants)

It must be noted that the words "minor field realignments per landowner needs and requirements" in the second sentence could be read to imply that the landowner has the ability to set the final pipeline alignment. This cannot be so. It is the pipeline company that must have the discretion to make minor field realignments to avoid construction difficulties or to accommodate reasonable landowner concerns, where practicable. The ability to make such minor realignments is within the proper domain of the pipeline company, not of the landowner. To imply that a landowner has this right would severely frustrate a pipeline's ability to fix its route and commence condemnation proceedings. Conceivably a landowner could use this language to encourage a court to require Algonquin to consider alignments off his property prior to, or as part of, condemnation. Algonquin does not believe Staff intends such uncertainty with respect to routing. Accordingly, it is suggested that the words "per landowner needs and requirements" be deleted and replaced with "by the applicants to accommodate a landowner's reasonable needs or requirements, unforeseen subsurface conditions or other impediments to construction."

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G6-1 The intent of DEIS recommendation 2 is to allow certain flexibility for the applicant to make minor realignments during negotiations with landowners. This does not imply that the landowners have the right to force a shift in the proposed route.

Further, in the second paragraph of Mitigative Measure 2, Staff implies that state regulatory authorities have the ability to make route changes after the Certificate is issued. This is clearly inconsistent with the principles of federal pre-emption and would constitute a burden on interstate commerce. The courts have upheld these principles in a long line of cases, most recently in National Fuel Gas Supply Corporation v. Public Service Commission of the State of New York, 894 F.2d 571 (2nd Cir. 1990). As the Second Circuit stated in National Fuel, "Congress placed authority regarding the location of interstate pipelines. . . in the FERC. . ." See, also Transcontinental Gas Pipe Line Corp. v. Borough of Milltown, 93 F. Supp. 287 (D.C.N.J. 1950) (rejecting town attempt to change pipeline route under its zoning regulations). State agencies have a right to intervene and comment to the Commission prior to the issuance of a Certificate if they desire a route change. To invite a route change after the certificate is issued completely undermines the FERC process and the federal rights granted to interstate pipelines.

There should be no implications that pipeline alignment is subject to an ongoing review process between the Commission and the states once a certificate is issued. One of the fundamental concepts of the National Environmental Policy Act's regulations is that such state agencies are encouraged to participate in the Commission's environmental review process. If they chose not to participate in the process or if their concerns are outweighed by

G6

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G6-2 The pre-emption point raised is not an issue, because the recommendation requires FERC approval of any state-recommended modifications. We also note that such recommended modifications are most likely to result from the applicants' lack of prefiling consultation with state agencies.

G6

other considerations, they may not be allowed to contradict or attempt to undermine the Commission's final determination as reflected in the Certificate.

2

Further, the last clause of the second paragraph of Mitigative Measure 2 must be clarified consistent with earlier comments about landowners.

Lastly, there is uncertainty with respect to the "affect" on adjacent properties. To the extent an alignment change shifts the right-of-way closer, but not onto, an adjacent lot, one could theoretically claim the adjacent lot is "affected." Thus, even a slight deviation toward an adjacent lot could be deemed to "affect" such lot. To avoid such a result, it is suggested that the Commission clarify this requirement to exclude those alignment changes which do not move the right-of-way onto an adjacent property. It is suggested that the words "also affect adjacent properties" be deleted and replaced with "would move temporary or permanent right-of-way onto adjacent properties which were not previously intended to be so encumbered."

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G6-3 See modified DEIS recommendation 2.

Mitigative Measure 3 (All Applicants)

Algonquin has two primary concerns with the requirements of Mitigative Measure 3. First, Algonquin is concerned about the

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G6-4 We understand the reluctance of Algonquin to work over existing pipelines. However, we have recommended this type of construction in only one area of the G-5 Replacement where residences are located within 50 feet of the proposed pipeline. The cross-section for that area shows temporary work space requirements of 35 feet and permanent right-of-way requirements of 10 feet adjacent to these residences. This is unacceptably close considering the existing 65-foot-wide right-of-way. We are not asking Algonquin to compromise safety, but to endeavor to make greater use of the existing right-of-way.

G6

Staff's imposition of the requirement to work over existing high pressure pipelines. It has been Algonquin's operating philosophy and practice to limit the crossing of existing pipelines by heavy equipment. Algonquin has required that such crossings be limited to those absolutely necessary and that the crossings be perpendicular to the pipeline to minimize the length of pipe impacted. To the extent crossings are required, the pipeline must be ramped, bridged or stripped and sand padded. Algonquin is adamant that these precautions are necessary to maintain the integrity and safety of the existing high pressure pipelines.

Staff's recommendation does not appear to balance adequately the issues of safety and environmental impact. Working over existing pipelines should be a decision left to the pipeline operator accounting also for risk of service outages to its customers. Operators generally will allow such a practice only where there are no other practicable alternatives. Although Staff's recommendations with respect to Algonquin involve relatively small distances, Algonquin is very concerned that Staff is setting a precedent for this type of practice which it may impose on a larger scale in subsequent projects. 4

Second, Staff requires that applicants shall file "detailed construction and restoration plans" prior to construction for review and approval by FERC. This is a vague and ambiguous requirement since Staff has given no indication as to the 5

G6-5 Tables 5.1.9-2 and -3 identify three types of residential mitigation techniques: Type A, route variation, and Types B and C, residential construction techniques. In the case of route variations, the final alignment would depend on final negotiations between Algonquin and the affected landowners. In the case of residential construction techniques, tables 5.1.9-2 and 5.1.9-3 did not identify the specific construction technique to be used for each one of the affected residences. Instead, several options for residential mitigation were specified in order that Algonquin, its contractor, and the affected landowner could determine the best mitigation solution based on site-specific information that is unavailable at this time.

information and level of detail required in such plans. This lack of specificity may lead to time consuming cycles of review and denial by FERC if the information desired is not filed. Algonquin has submitted a great deal of detail regarding its construction and restoration plans for this project. To the extent specific additional information is required, Staff may request such prior to issuance of the Certificate. To the extent Staff only desires such plans to reflect the requirements of Tables 5.1.9-2 and 5.1.9-3, a filing is not required if such requirements are made a condition of the Certificate. Unless the condition is modified, Staff has created more uncertainty and the potential for delay to the project.

Algonquin takes exception to the Wawecus Hill Road Variation and Medfield Loop Variation recommended by Staff. Refer to detailed comment on Sections 6.3.1 and 6.3.2.

Mitigative Measure 4 (All Applicants)

Again, Staff has imposed a condition that has no practical value but adds to the uncertainty of the project. To delay delivery of gas after all facilities are complete is contrary to the public interest. Preventing the delivery of gas as a result of Staff's review of the Endangered Species Act serves no meaningful purpose. Construction could be complete and facilities

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5 Tables 5.1.9-2 and 5.1.9-3 identify residences where we believe construction mitigation is required and the options for mitigation to be considered. Recommendation 3 requires that, prior to construction, the applicant determine the specific mitigation and restoration plan to be used for each listed residence and submit these plans to FERC. These plans should be final alignment sheets, supplemented with final recommendations on type of construction to be used (stove-pipe or drag-line), width of construction right-of-way, fencing, locations of existing trees indicating which trees would be removed and which could be preserved, and restoration plans.

We do not believe submittal of these plans for the residential areas identified on table 5.1.9-3 would delay the project.

6 G6-6 See response to comments G6-99 and G6-100.

7 G6-7 Comment noted. DEIS recommendation 4 has been deleted because ESA review has been completed for Algonquin-related nonjurisdictional facilities.

ready to be placed in-service. To prohibit deliveries at that time is purely punitive and serves no environmental benefit.

Nevertheless, attached hereto as Exhibit 7.3.4 is a copy of a review by the Massachusetts Natural Heritage Program for Algonquin's proposed Bellingham Meter Station facility which is within the site boundary of the NEA cogeneration plant.

G6

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Mitigative Measure 5 (All Applicants)

One environmental inspector per spread is not practical for some of the short sections Algonquin is constructing. Where a proposed spread for other applicants may encompass 30-50 miles, Algonquin is only proposing to construct approximately 24 miles in seven different locations. It does not seem reasonable to require only one inspector for a 50 mile spread, yet seven inspectors for only 24 miles of pipeline. While it may not be possible for one inspector to cover all seven locations, Algonquin should have the discretion to combine several smaller projects under one inspector. Larger segments, particularly new laterals, may require one full-time inspector. However, it is unreasonable to require one full-time inspector for every segment to be constructed.

Environmental inspectors should not necessarily be present at

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G6-8 FERC maintains that the environmental inspector should be accessible for consultation and direction related to construction impact on the environment throughout the period of construction. Means of communication with the environmental inspector shall be available at each construction spread throughout the work-day and throughout the periods of construction. The chief inspector is responsible for insuring that the FERC-specified environmental mitigative and preventative measures are being applied correctly. Refer also to comment response G4-33.

all times on a single construction spread. Inspection of environmental devices at a frequency of once each day may be adequate except for sensitive areas when several inspections per day may be required. This approach negates the need to assign one environmental inspector to each spread.

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In summary, there are some segments which will not require a full time inspector. Algonquin projects proposed are generally short enough such that one environmental inspector can easily cover more than one spread.

Mitigative Measure 6 (All Applicants)

Staff's recommendation to ensure compliance with Section 106 of the NHPA would require the applicant or the non-jurisdictional facility sponsor to prepare work plans for the Commissions review and approval. Such a requirement, if necessary, should consider if cultural resources have a potential to be affected. If no potential effect of project construction on cultural resources exists, then work plans should not be required.

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Enclosed as Exhibit 5.2 is a letter from the Massachusetts Historical Commission dated April 16, 1990 which states, "Since NEA's 300-MW cogeneration facility is currently under construction, and since Algonquin's proposed Bellingham Meter Station will be

G6-9 We have revised the language of DEIS recommendation 6 to clarify when work plans are needed and when FERC staff must review them.

located within the cogeneration plant area, no further review of these two projects is required by the MHC."

Mitigative Measure 7 (All Applicants)

Algonquin is simply not in a position to make certifications regarding matters beyond its control and outside of its responsibilities. Algonquin would be willing to file the Customer Certification with the Commission.

Mitigative Measure 8 (All Applicants)

Algonquin has reviewed the "Erosion Control, Revegetation, and Maintenance Plan" (Appendix C) and "Stream and Wetland Construction and Mitigation Procedures" (Appendix D) proposed by Staff to be adopted for construction in this docket and has provided detailed comment in Section II. We emphasize that these procedures have been reviewed exclusively with regard to this project and to the extent that these procedures or modifications thereto are considered for other pipeline construction projects, further review and comment is necessary.

The deviations reporting and approval process is not defined and may be not practical. If deviations are reported two weeks

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G6-10 The intent of DEIS recommendation 7 is to allow the Commission a means to meet its NEPA responsibilities for related nonjurisdictional facilities by ensuring that potentially significant environmental effects not currently identified are thoroughly evaluated. By certifying to the Commission that the nonjurisdictional facility had received all necessary permits, we would be reasonably assured that any significant environmental issues had been resolved. By this recommendation, we do not intend that once the jurisdictional applicant has completed its certification requirements it would then be responsible for auditing or monitoring compliance with any permit provisions. We see no need to delete this recommendation.

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G6-11 The applicants' comments regarding specific measures of the Erosion Control, Revegetation, and Maintenance Plan and the Stream and Wetland Construction and Mitigation Procedures have been addressed in sections 5.1.2.2, 5.1.3.2.1, and 5.1.7.1. These sections have been modified where appropriate to address Algonquin's comments that have been filed since the publication of the DEIS.

We expect that the applicants would identify and submit to FERC most proposed deviations from these Procedures before contracts and bids would be prepared. We expect that most additional changes would be identified prior to construction. As indicated in the comment, it would be in Algonquin's best interest to minimize the number of deviations "reported two weeks before implementation."

For many of our requirements, we have allowed the applicants to defer to state or local requests if they are more appropriate for local conditions. However, as Algonquin has commented (see revised section 2.7), approvals for state or local permits may not be required on the grounds of Federal pre-emption. We are unwilling to allow Algonquin to follow only requirements on requests from state or local agencies when they are not bound to follow such requirements. Therefore, we maintain that these Procedures are requirements and not guidelines, and that any deviations be submitted to FERC for approval prior to implementation. It should be noted that minor review of these deviations would be required by the staff when they are made at the request of a state or local agency and appropriate documentation of the request is included with the submittal.

In most instances, the state and local review process would be conducted prior to construction. Therefore, changes to the Procedures, as requested by state or local officials, could be adequately reviewed by FERC staff. This would still allow the applicant enough time to revise construction specifications and adjust contracts. FERC staff is determined that this process will be guided by adequate environmental review, while still attempting to keep to the applicants' construction schedule.

before implementation, the contract has already been prepared and the work will at least be out to bid. To make changes at that time will cause the Operator substantial extra costs when the work is done. If the changes are not acceptable to Staff, it will be too late to make the necessary contractual alterations. Therefore, the solution recommended by Staff is not practicable or workable.

Deviation from appendices "C" and "D" may occur because of state or local agency review and changes. Such changes may occur just prior to, or in some instances, beyond critical start times for construction to meet in-service day commitments. Thence, under Staff's proposal the changes must be submitted to OPPR for possible alteration as measured against some yet to be defined standard. Further, change may result in the local or state permit being voided creating a catch-22 situation. In one specific instance, Algonquin filed an application for a wetlands crossing permit (a minor crossing) in April 1989. It is anticipated that such permit may be issued in time for July, 1990 construction. Hypothetically, if this particular plan was subjected to OPPR review and not approved without modification, a new permit application could be required triggering another state review period, which, if based upon earlier experience, could delay construction for another 12 plus months and, depending upon the time of issue, could result in slippage of construction to a subsequent season to comply with construction windows.

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Algonquin suggests that appendices "C" and "D", with the modifications detailed in Section II of Algonquin's comments, be used as guideline requirements to obtain some uniformity in approach but not require that reasonable changes imposed by the state or local agency be subject to further approval by OPPR. 11

Mitigative Measure 9

Whether stumps are removed or not should be left to the discretion of the pipeline and the landowner. Leaving stumps on the permanent right-of-way may allow woody vegetation to reestablish. Algonquin cannot allow woody vegetation on the right-of-way and meet its obligations for access and maintenance under D.O.T. regulations at 49 CFR 192. Additionally, leaving stumps on the right-of-way exposes the pipeline to liability which could otherwise be avoided. The sharp remnants of a stump are a potential cause of personal injury. In fact, a suit was brought against Algonquin as a result of an injury caused by a stump on Algonquin's right-of-way. The pipeline company should weigh such factors as cost, location, public access, and terrain when deciding whether or not to remove stumps. 12

G6-12 Comment accepted; refer to response G4-61.

Mitigative Measure 11 (All Applicants)

Algonquin requests clarification of Staff's recommended prohibition on refueling of vehicles and storage of potentially hazardous materials within all designated well-protection areas. If so, then the recommended prohibition would apply to large construction spreads of approximately 9,000 feet on the G-5 Replacement and 15,000 feet on the G-8 Replacement/Loop. Construction of such large spreads is unfeasible with a prohibition on refueling of vehicles and storage of potentially hazardous materials.

Mitigative Measure 12 (All Applicants)

Preparation of a Spill Prevention Containment and Control (SPCC) Plan for maintenance and storage areas is unwarranted. Actions in response to a spill event are already regulated by the EPA and appropriate state agencies. Further, the requirements of such a plan have not been defined by the Commission. Also, Algonquin notes that equipment maintenance and storage occurs at locations off the right-of-way, at yards leased by the pipeline contractor for that purpose.

This requirement essentially assigns the applicant the responsibility of defining and obtaining the yard for the project's contractor. It also will require that the applicant become

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G6-13 Our DEIS recommendation 10 refers to the 200-foot, 400-foot, or other designated protection radius around groundwater supply wells and not to the areas you have commented on. However, these large protection areas are zoned districts in which town by-laws restrict certain land uses and activities and construction in such areas would require special permits from local authorities.

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G6-14 Please see responses to comments G7-9, G7-10, and G10-46.

responsible for the equipment maintenance of the contractor. Both of these items are typically beyond the scope of the applicant. The recommendation does not define the time frame in which the notification must be made. If Algonquin requires that the low bidder supply this data, the start of any project will be delayed for an unidentified time period while OPPR reviews and either approves or rejects the site and the SPCC plan.

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Mitigative Measure 13 (All Applicants)

The timing of construction, as specified in the DEIS, will cause construction delays. Section 5.1.2.2 on Page 5-11 states that no construction may occur in agricultural or residential areas during the period of April 1 through May 15 of any year. Section 5.1.3.2.1 on Page 5-18 and Appendix D state that stream crossings can only be done during the period of June 1 through September 30 of any year. Staff's recommendation at Mitigative Measure 58 limits the G-8 construction across Glen Charlie Pond to the period of September 31 to May 1. Staff's recommended Mitigative Measure 60 limits the G-5 construction across the Caratunk Wildlife Refuge to the period of September to June.

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The task of scheduling and cost of mobilizing and demobilizing the contractor to achieve Staff's recommendations is significant. Staff's recommendation does not allow Algonquin the flexibility to

G6-15 We feel that the recommended construction windows are appropriate and should be used to minimize the environmental impact from the proposed construction. See response to G4, number 2.

construct the proposed facilities in an efficient and cost-effective manner. To comply with all of the timing restrictions would necessitate the award of several construction contracts for each of the projects. The cost of mobilization and demobilization for a contractor is approximately $100,000.00. This underscores the financial exposure to award the work separately. Algonquin suggests that appropriate mitigation be developed to allow construction throughout the year.

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Mitigative Measure 16 (All Applicants)

This recommendation should be modified by the addition of "without the approval of the land owner".

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G6-16 DEIS recommendation 16 in section 7.3 has been modified to include "without the approval of the landowner."

Mitigative Measure 18 (All Applicants)

Again, Staff is imposing a requirement that may have no environmental benefit but could significantly delay the project. The Staff requires that each applicant file a plan describing how the measures identified in Section 7.3 will be implemented. This must be filed after the issuance of the Certificate and will require Commission approval. It is not clear whether Staff intends to prohibit construction until approval is given. If approval is required prior to construction, more of the 1990 construction

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G6-17 The purpose of this condition is to expedite approvals by reducing surprises or misunderstandings when construction is imminent. As stated above in comment response G6-2, some of these requirements would not have been necessary had the applicant conducted the analysis up front.

Where condemnation procedures would be required, the timing of construction and restoration is unknown. Therefore, we have modified the 30-day time-limit for providing information required in (2) and (3) where condemnation is required.

season will be lost. Assuming a Certificate is issued in late June and assuming a filing is made as soon as possible thereafter, it is unreasonable to assume approval by the Commission could occur earlier than the end of July. Thus, only the four months of August through November would be available for construction prior to the 1990-1991 heating season. Acknowledging that it takes a contractor a week or two to mobilize and that notice to proceed is not prudent until Commission approval is received, the already limited construction period is shortened by two weeks.

This additional delay is unnecessary. The applicants have provided Staff with extensive details on their construction and mitigation plans. To the extent these plans are modified by the conditions in the Certificate, applicants are compelled to comply with such measures. To require applicants to go through the exercise of modifying the plans, submitting them to the Commission, and then waiting for Commission review and approval is not necessary and does not benefit either the public or the environment.

Algonquin would be willing to comply with item (1): thirty days from the acceptance of a Certificate for this project. However, Algonquin cannot comply with the thirty day notifications requirements for items (2) and (3) since these schedules will not be defined within the time-frame specified by the Commission. From the time of issuance of a Certificate any condemnation proceedings

may require three months or longer. Upon resolution of the condemnation proceedings, the project would go out to bid, followed by award of the construction contract. At that time Algonquin could inform the Commission of the schedules required in items (2) and (3).

Mitigative Measure 19 (All Applicants)

To what extent is the requirement of Mitigative Measure 19 different from Mitigative Measure 17? It appears these two requirements seek the same information.

Mitigative Measure 20 (All Applicants)

Algonquin does not understand why the requirements exclude Transco's Compressor Stations. Algonquin would agree that expansions of existing compressor stations should not be subject to this requirement. If this is the reason for the Transco exception, Algonquin requests similar treatment for the expansion of its Burrillville Compressor Station.

Locations for pipe storage yard and staging areas are selected at the end of the project design schedule. Algonquin is concerned that Staff's recommended procedure for approval may result in

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G6-18 DEIS recommendation 17 refers to consideration of all contemporary cultural values and concerns about properties that are listed in or eligible for listing in the NRHP, as specified in the implementing regulations for Section 106 of the NHPA (36 CFR Part 800). DEIS recommendation 19 refers to notification of formally acknowledged Native American Tribes (through their designated leaders), as identified by BIA, as specified under the American Indian Religious Freedom Act.

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G6-19 Subsequent to a background study and evaluation of archeological sensitivity, Transco's proposed compressor station modifications were fully documented for and reviewed by the New Jersey and Pennsylvania SHPOs and FERC staff. Documentation you provided to us in April 1990 as part of your responses to data requests indicates that Algonquin has initiated the Phase 1 study in Massachusetts. When the report of this study and SHPO's review comments are available we will be pleased to review them. Comments from the Rhode Island SHPO, dated April 19, 1990, indicate this office has sufficient documentation to determine the work at the Burrillville Compressor Station would have no effect on NRHP-listed or -eligible cultural resources. FERC is required to receive the comments of the SHPO and/or consult on this project prior to providing a final finding. FERC concurs this facility would have no effect on NRHP-listed or -eligible resources.

We understand that selection of pipe storage yards and staging areas is generally delayed until late in the project design schedule. We suggest that the applicant identify as many storage and staging areas as early as possible. Additionally, we recommend the applicants document, prior to consultation with the SHPO, all areas where use is likely to cause no effect on cultural resources (e.g., paved areas, demonstrably disturbed areas). These individual classes of storage and staging sites may be reviewed and cleared for use quite quickly. We then suggest you investigate those few remaining areas that the SHPO believes require Phase 1 study.

We acknowledge your suggestion on review, but FERC cannot delegate its Section 106 responsibility.

substantial cost and time delays. Specifically, Algonquin anticipates the need to secure lease agreements for such areas well in advance of mobilizing the contractor. Algonquin suggests that a review by a qualified archaeologist coupled with SHPO consultation is adequate to address the concern for potential impact on cultural resources at pipe storage yards or staging areas.

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Mitigative Measure 22 (Selected Applicants)

Algonquin should not be prevented from availing itself of all the disposal alternatives allowed under the TSCA regulations, 40 CFR 761.60. Although Algonquin has applied for an Alternate Disposal Permit under 40 CFR 761.60(e) and would use such procedures if obtained, Algonquin should not be precluded from complying with 40 CFR 761.60(b). Accordingly, such permits need be filed only if the pipelines intend to use alternate disposal techniques.

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G6-20 DEIS recommendation 22, although rewritten, has not changed in intent. Since you are replacing 12.6 miles of existing 10- to 24-inch diameter pipeline in Massachusetts, it is still applicable. It is simply a generic mitigation measure that allows the FERC staff to review each of the applicants' authorizations from the EPA for the removal of pipe. As stated in section 5.1.13.4.2 of the EIS and in your application, Algonquin has requested a permit from the EPA by modifying the current Texas Eastern Pipe Removal Permit by modifying its own construction program in Massachusetts. You have indicated in your filings that the EPA concurred with this approach, pending resolution of peripheral issues.

Mitigative Measure 57 (Algonquin)

Algonquin agrees to limit construction right-of-way to 50 feet within the orchard and tree farm where apple trees or Christmas trees might otherwise be impacted.

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G6-21 Thank you for your comment.

Mitigative Measure 58 (Algonquin)

Algonquin suggests that confining construction activity between September 31 and May 1 would appear to contradict Staff's timing recommendation for stream crossings. In Section 5.1.2.2-1, Staff recommends that in-stream construction be allowed only from June 1 to September 30. The task of scheduling and cost of mobilizing and demobilizing the contractor to achieve Staff's recommendations is significant. Staff's current recommendation does not allow Algonquin the flexibility to construct the proposed facilities in an efficient and cost-effective manner. To comply with Staff's recommended timing restrictions would necessitate the award of several construction contracts. The cost of mobilization and demobilization is approximately $100,000.00. Algonquin suggests that appropriate mitigation be developed to allow construction throughout the year.

Mitigative Measure 60 (Algonquin)

Algonquin suggests that the proposed expansion of rights-of-way is minimal. Exhibit 7.3.60 details Algonquin's existing and proposed facilities in the Caratunk Wildlife Refuge (Caratunk). Currently, Algonquin has an existing right-of-way that crosses Caratunk for approximately 0.55 mile. For 0.50 mile of that distance, the existing right-of-way is occupied by two existing pipelines. Approximately 0.05 mile before Algonquin's existing 10-inch and existing 16-inch pipelines leave Caratunk, the pipelines deviate from their parallel path. As a result, for that

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G6-22 DEIS recommendation 58 supersedes the timing requirements of appendix D applied to the crossing of Glen Charlie Pond.

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G6-23 Our primary concern with the Caratunk Wildlife Refuge is increasing the width of the pipeline right-of-way and the resultant clearing of vegetation. Cross-sections submitted in January 1990 between MPs 2.1 and 2.2 showed both the proposed temporary work space (35 feet) and the proposed permanent right-of-way (10 feet) would occur within Caratunk lands. Exhibit 7.3.60 indicates only 10 feet of permanent right-of-way would occur within Caratunk land and that 35 feet of temporary work space would be located within Algonquin's right-of-way on the other side of the existing 16 inch pipeline. If exhibit 7.3.60 is indeed correct, the permanent right-of-way clearing requirements would equate to approximately 1 acre, which is acceptable although we see no reason why this 10-foot-wide strip could not be allowed to revegetate. We have revised our recommendation.

From MPs 2.2 to 2.5, temporary work space would be located within the powerline right-of-way and no new permanent right-of-way would be required. For the remaining 0.15 mile, previously provided aerials indicated that both existing pipelines followed the jog away from the powerline right-of-way. If Exhibit 7.3.60 is correct, the existing pipelines are located on separate rights-of-way. Approximately 0.4 acre of vegetation between the two pipelines would be removed for a 20-foot-wide permanent right-of-way. Although this is not excessive, we do not believe a 50-foot-wide right-of-way is essential in an area where the proposed pipeline would abut an already cleared powerline right-of-way, unless equipment movement is prohibited by terrain conditions.

short distance, Algonquin has two existing rights-of-way in Caratunk. Except for approximately 0.1 mile after first entering Caratunk, the existing right-of-way for both pipelines parallels an existing power line right-of-way. After the pipelines deviate from each other near their exit from Caratunk, the existing 10-inch pipeline right-of-way continues parallel to the existing power line right-of-way.

The proposed 24-inch pipeline replacement will replace the existing 10-inch pipeline. Limited expansion of the existing right-of-way will be necessary to accommodate construction and operation of the proposed 24-inch pipeline replacement. The proposed pipeline enters Caratunk at approximately M.P. 2.1 and exits Caratunk at approximately M.P. 2.65.

For approximately the first 0.1 mile in Caratunk (M.P. 2.1 to M.P. 2.2) the proposed 24-inch pipeline replacement will require an additional 10 feet of permanent right-of-way and 35 feet of temporary work space.

For the majority of the distance that the proposed 24-inch pipeline replacement crosses Caratunk (M.P. 2.2 to M.P. 2.5), no new permanent right-of-way will be necessary for operation of the proposed pipeline replacement. Only 15 feet of temporary work space will be necessary during construction and this temporary work space lies within the existing power line right-of-way that

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Our second concern regarding the Caratunk Wildlife Refuge is the effect of construction disturbance on summer programs, especially camp programs in July and August. This is a highly used recreational area especially in the summer. If the construction window for the crossing of the unnamed tributary of Coles Brook conflicts with that for the refuge, Algonquin should request an exemption from the appendix D construction window for this tributary.

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parallels the pipeline right-of-way.

For approximately the final 0.15 mile before the proposed 24-inch pipeline replacement leaves Caratunk, the existing 30 foot right-of-way will be expanded by 20 feet. Again, 15 feet of temporary work space will be necessary and this temporary work space lies within the exiting power line right-of-way. The existing 16-inch pipeline and associated right-of-way, which leave Caratunk after a similarly short distance, is unchanged by the proposed pipeline replacement.

Algonquin questions the suggested timing of construction activity. Algonquin suggests that confining construction activity to September through June would appear to contradict directly Staff's timing recommendation to confine river and stream crossings to periods of low flow (i.e. June to September). In particular, Algonquin reminds Staff that the proposed replacement pipeline crosses an unnamed tributary to Coles Brook, near the exit from Caratunk at M.P. 2.65. Staff's current recommendation does not allow Algonquin to address both concerns. Further, following Staff's recommendation, other stream crossings along the G-5 Replacement would occur in the period from June 1 to September 30. The task of scheduling and cost of mobilizing and demobilizing the contractor to achieve Staff's recommendations is significant. Staff's current recommendation does not allow Algonquin the flexibility to construct the proposed facilities in an efficient

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and cost-effective manner. To comply with Staff's recommended timing restrictions would necessitate the award of several construction contracts. The cost of mobilization and demobilization is approximately $100,000.00. Algonquin suggests that appropriate mitigation be developed for construction throughout the year.

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SECTION II

COMMENTS ON DEIS

APPENDICES "C" AND "D"

G6

DEIS APPENDICES C AND D

General Comments

Algonquin has reviewed the "Erosion Control, Revegetation, and Maintenance Plan" (Appendix C) and "Stream and Wetland Construction and Mitigation Procedures" (Appendix D) proposed by Staff to be adopted for construction in this docket. We emphasize that these procedures have been reviewed exclusively in regard to this project and to the extent that these procedures or modifications thereto are considered for other pipeline construction projects, further review and comment is necessary.

The Staff's proposals for "Stream and Wetland Construction and Mitigation Procedures" (Procedures) and "Erosion Control, Revegetation and Maintenance Plan" (Plan) have changed considerably within individual filings and between other filings. Because of the considerable changes, implementation of these provisions for specific facilities certificated by the Commission is extremely difficult. How to adopt the ever-changing Plans and Procedures is unclear to operators.

Construction of Algonquin's facilities proposed at this docket requires numerous construction spreads over a time period of several years. Similarly, construction of facilities proposed

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G6-24 In response to comments from the applicants, we have modified our Stream and Wetland Construction and Mitigation Procedures (Procedures) and Erosion Control, Revegetation, and Maintenance Plan (Plan). To avoid confusion of the contractor where construction of facilities proposed in other projects would occur in the same "time-frame" with the facilities proposed in this project, we suggest that the contractor use the current Plan and Procedures for all of the facilities. The certified conditions requiring the procedures allow applicants to ask the staff to approve modifications. This would allow use of a single consistent procedure during the current period of development. With respect to maintenance of existing facilities, we suggest the procedures be applied to those as well.

at other dockets will occur within the same time-frame. Execution of the proper Procedures and Plan recommended by the Commission for each spread cannot be reasonably achieved, particularly where Staff has failed to maintain consistency in its Procedures. In many cases, the same contractor may be constructing multiple spreads to different standards.

Further, Algonquin cannot guarantee maintenance practices for facilities certificated at this docket different from those practiced on the vast majority of its system. This is particularly true when certain conditions are imposed on a loop which are not required on the original line only a few feet away. The Commission should reevaluate and clarify its position on this matter.

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Specifically, Algonquin notes that the procedures as proposed herein have been altered from those procedures put forth by Staff for comment in environmental data requests at other Dockets. Many of the earlier proposed procedures which were of concern to Algonquin and to other project participants as well have been deleted or revised. Although Staff's procedures included in this DEIS are improved, many provisions still exist which cannot be achieved without severe and costly restrictions on construction practices. Algonquin believes that the alternative suggestions included herein which alleviate some of the extreme restrictions are fully

protective of environmental features.

The desire of Staff to develop uniform procedures for stream and wetland construction and hydrostatic testing to be used within individual applications, and in general for the companies proposing construction in the Niagara Import Point Project, is understandable. It must be noted, however, that significant variations exist in the location of pipeline construction proposed by the Niagara Import Point Project participants and that a general approach may not be the most effective means of minimizing impacts to wetland and stream resources.

The different geographical areas and related geology, topography and hydrologic regimes existing within and between applications dictate that procedures sensitive to the specific characteristics of each region be developed. In addition, various state and local agencies review certain environmental aspects of pipeline construction in their regions (i.e., wetlands, stream crossings and soils). These reviews are very detailed, and generally site specific. Algonquin will be filing for permits with various State and local regulatory agencies regarding Algonquin's stream and wetland crossings proposed in this project. These agencies which encompass multiple states and numerous cities and towns will perform detailed review of stream and wetland crossings and

G6-25 We have not received comments from <u>any</u> government agency indicating that the measures included in our Procedures and Plan are "unacceptable." If a state or local agency has disagreed with our measures, Algonquin should provide us with the specifics of the disagreement.

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hydrostatic discharge procedures. To the extent that a single plan is adopted for all construction, it may severely limit the ability of state and local agencies to review such crossings on an individual basis and suggest appropriate mitigative measures which are specifically related to the areas requiring protection.

Assuming arguendo that such state and local reviews are a valid exercise of residual jurisdiction by these agencies, to the extent that such agencies do not impose unreasonable conditions or completely prohibit the pipeline, the imposition of uniform conditions by the Commission may bring the inherent federal-state jurisdictional issue to a head. If such conditions are not acceptable to all state and local agencies, the pipelines are put in a position whereby compliance with the Commision's conditions results in violation of state and local conditions. Such a conflict is an invitation to unnecessary litigation and must be avoided.

Algonquin is supportive of developing procedures for wetland and stream crossings and hydrostatic testing which are protective of environmental features. We recommend, however, that at this time in the review process a more performance-oriented approach be taken, and that detailed procedures be developed in conjunction with the various state and local agencies most familiar with the local environment.

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Notwithstanding our general comments on the concept of uniform plans for erosion control, revegetation, and maintenance and procedures for mitigation of stream and wetland construction impacts, based on our review, we have the following comments and suggestions for alternate procedures:

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ALGONQUIN ATTACHMENTS

Algonquin has provided a number of comments on our recommended Erosion Control, Revegetation, and Maintenance Plan (appendix C), and Stream and Wetland Construction and Mitigation Procedures (appendix D). We have reviewed and discussed these comments in section 5.1.2 and in sections 5.1.3.2.1 and 5.1.7.2, respectively. Because of the volume of material, Algonquin's comments on these appendices are not reprinted here.

Comments G6-26 and G6-27 are Algonquin's comments on our recommended Erosion Control, Revegetation, and Maintenance Plan (appendix C), and Stream and Wetland Construction and Mitigation Procedures (appendix D). Because of the volume of material, Algonquin's comments on these appendices are not reprinted here.

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G6-26 and G6-27 We have addressed Algonquin's comments on these appendices in section 5.1.2 and in sections 5.1.3.2 and 5.1.7.2, respectively and in revised appendices C and D.

SECTION III

COMMENTS ON DEIS

SECTIONS 2 - 6

ALGONQUIN GAS TRANSMISSION COMPANY

2.1-1

Table 2.1-1

Algonquin

The "G-8 Replacement" should be changed to read the "G-8 Replacement/Loop" with a total mileage of 5.5 miles. The total Algonquin mileage should then be corrected to 24.2 miles. 28

G6-28 Comments noted. See revision to table 2.1-1.

2.1.3.1

The title correctly defines this segment as a replacement, but the text refers to the project as a loop. 29

G6-29 Comment noted. See revision to section 2.1.3.1.

2.1.3.2

Algonquin currently proposes approximately 4.1 Miles of 20-inch replacement pipeline followed by approximately 1.4 Miles of 20-inch loop pipeline for a total of 5.5 Miles. 30

G6-30 Comment noted. See revision to section 2.1.3.2.

2.1.3.6

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The Chaplin Loop as currently proposed is 1.1 miles in length.

31 G6-31 Comment noted. See revision to section 2.1.3.6.

2.2.2

Algonquin also proposes to install a 5,500 horsepower compressor within lands owned by Algonquin at its existing Burrillville, Rhode Island compressor station.

32 G6-32 Last line in section 2.2.2 states "all proposed compressor station additions and meter modifications would occur within existing facilities and boundaries." This includes the 5,500-hp of compression at Burrillville Compressor Station.

2.2.1

Algonquin requests clarification of the Typical Right-of-Way Sections shown in Figure 2.2-3. Algonquin has previously filed detailed right-of-way cross-sectional diagrams which do not appear to correspond with Figure 2.2-3.

33 G6-33 Algonquin submitted 12 pages of right-of-way cross-sections detailing each proposed pipeline loop and replacement. Although these cross-sections were invaluable in our analysis, publication of these cross-sections in the EIS would have required that the same level of detail be shown for all other proposed pipeline routes. Since the EIS covers over 544 miles of pipeline, such detail would have required an additional volume. Our intent was to show a typical right-of-way configuration to provide a basis for discussion and understanding. Figure 2.2-3 was based on Algonquin's cross-sections, and it has been modified. Although complex, it basically reflects the range of cross-sections provided.

2.3.1

49 CFR Part 192 does not specify trench depth specifically to accommodate heavy farm machinery or drainage systems in agricultural areas.

The U.S. Army Corps of Engineers requirements for a minimum of 4 feet of cover within navigable waterways may supersede minimum requirements in 49 CFR Part 192.

34 G6-34 The reference to 49 CFR Part 192 in this statement has been deleted. See revised section 2.3.1.

State highways and inactive railroads may not require boring.

2.7

In Section 2.7 and at various other places in the DEIS, the Commission references state and local permits or approvals. Many of these references imply that receipt of all such approvals are required by the Certificate holder. It is essential that FERC does not expressly or implicitly condition its Certificate on receipt of all state or local approvals referenced therein. Numerous court cases have held that such approvals may not be required on the grounds of federal pre-emption or the burden placed on interstate commerce.

For example, see First Iowa Hydro-Electric Cooperative v. Federal Power Commission, 328 U.S. 152 (1946) (state agencies not allowed to veto projects authorized by federal agencies); Transcontinental Gas Pipe Line Corp. v. Hackensack Meadowlands Development Commission, 464 F.2d 1358 (3rd Cir. 1972) (state commission could not lawfully condition a permit upon agreement to abandon facility at a designated date); and Transcontinental Gas Pipe Line Corp. v. Borough of Milltown, 93 F. Supp. 287 (D.C.N.J. 1950) (zoning ordinance which prevented construction of interstate pipeline invalidated as unduly burdensome on interstate commerce). Most recently, the Second Circuit in the National Fuel case referenced in the comment on Section 7.3, Mitigative Measure 2 held that New York's Article VII proceeding was preempted by the

G6-35 Comment noted. See revised section 2.7.

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Commission.

Although it is Algonquin's practice to work cooperatively with all state and local agencies and to seek all applicable approvals from such agencies, the pipelines must retain their federal rights should such agencies impose unreasonable conditions or attempt to prohibit construction of the project. FERC has concurred with this position in the past and stated as follows:

> We note that the proper procedure to construct the facilities is to seek permits at the state and local level. However, we did not intend to condition approval herein upon Algonquin's obtaining the relevant state and local permits, nor did we intend to deny Algonquin its preemptive rights argument afforded in the Natural Gas Act. Accordingly, the statement in the EA was meant to be informational and not conditional. Algonquin Gas Transmission Company, 43 FERC ¶ 61,554 (1988).

Because of the numerous references to state and local approvals in the DEIS, and the inference that receipt of such may be required by the Certificate, it is suggested that the Commissions include similar language in the FEIS and in Certificates is sued for the projects referred to in this DEIS.

Table 2.7-1

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Consistent with the above comment, it should be noted that Table 2.7-1 represents permits which are typically sought by the applicant, but which are not "required" by the Certificate. In addition to the federal rights issue, some of the permits listed may be obtained by alternative means. For example, in Massachusetts, a pipeline may receive its wetlands permit from the Department of Environmental Protection if the local Conservation Commission fails to issue a permit in a timely manner. Similarly, a road opening permit may be obtained by a pipeline through the local municipality or through the Massachusetts Department of Public Utilities.

36 G6-36 Comment noted. See response to G6-35.

3.4 and TABLE 3.4-1

Refer to comments at 6-3.1 and 6-3.2 regarding the Wawecus Hill Road and Medfield Loop variations proposed by Staff.

37 G6-37 See response to comments G6-99 and G6-100.

4.1.3 and TABLE 4.1.3-2

Are the aquifer protection areas designated in Table 4.1.3-2 also well-protection areas?

Refer also to comments at 5.1.3.1.2 regarding Contamination of Aquifers.

38 G6-38 Table 4.1.3-2 does not refer to wellhead protection areas, which are usually a 200- to 400-foot radius around a groundwater supply well. The Algonquin routes do not traverse any wellhead protection areas but do cross areas that have been designated in town by-laws as areas in which specified uses are prohibited for the protection of groundwater resources. Special permits would be necessary in order to conduct certain activities in these areas.

4.1.3.2

"East Storehouse Brook" should read "East Branch Stonehouse". 39

G6-39 Thank you for your comment. The text has been corrected.

4.1.9.1.1

Algonquin's currently proposed project includes 12.9 miles of loop and 11.2 miles of replacement pipeline. 40

G6-40 Comment noted. Section 4.1.9.1.1 has been revised to total 24.2 miles of pipeline looping and replacement, not 24.1 miles as indicated here.

4.1.9.1.2

The proposed Bellingham Meter Station is within the site boundary of NEA's cogeneration plant. 41

G6-41 Comment noted. Section 4.1.9.1.2 has been revised.

4.1.9.2

Algonquin maintains a 50-foot right-of-way for operation of its existing G-8 System 6-inch and 8-inch pipelines. 42

G6-42 Comment noted. Section 4.1.9.2 has been revised.

4.1.11.1

Field work for archaeological investigations will start in May 1990 and draft reports on the findings of the Phase 1 Study for all facilities is currently scheduled for completion by January 1991. 43

G6-43 Your comment is noted and the text is revised. The Rhode Island SHPO's comments on the proposed Tiverton Loop have been incorporated.

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Algonquin's cultural resource consultant, The Public Archaeology Laboratory, Inc. is currently collecting additional information for the Rhode Island SHPO on the proposed Tiverton Loop. Comments from the Rhode Island SHPO will be provided to the Commission's Environmental Staff when they become available. 43

5.1.1.1

In order to clarify Algonquin notes that, while blasting in Massachusetts is regulated by the Board of Fire Prevention and the State Fire Marshall issues Certificates of competency, the blasting permit for a specific project is issued by the local fire department and the blasting bond is filed with the municipality in most cases. 44

G6-44 Thank you for your comment.

Contrary to the language in the last paragraph of Section 5.1.1.1, identification of the preferred method of rock disposal does not always necessitate coordination with local officials. The pipeline company should be free to dispose of the rock in a manner it deems appropriate consistent with landowner requirements and applicable law. 45

G6-45 Coordination with local authorities for purposes of determining waste rock disposal options is an important source of local information. Good relations with landowners and local authorities should always be in the best interests of the applicants. In consideration of the available options, the determination of the most appropriate disposal option is the responsibility of the applicants.

5.1.2.2

Slope Breakers

Slope breakers are a valuable tool in retarding or stopping soil erosion. However, the placement of breakers is site specific in that it is very dependent upon topography and soil conditions. Algonquin has several steep slopes in solid rock where installing breakers in accordance with this recommendation would be ineffective. In very soft soils, it may be necessary to place the breakers more frequently. Breaker placement must be site specific and subject to the professional judgement of the environmental inspector. Further, the use of breakers as a temporary erosion device during construction is not necessarily effective. Breaker is only useful until the first vehicle or piece of construction equipment passes over it, at which time it may become a channel for erosion. Other methods of siltation control along the edge of the right-of-way would be more effective, as they would not impede the work of laying the pipeline which thereby lengthens construction time and defers the start of restoration.

G6-46 Clarification of the recommended placement of slope breakers was made in section 5.1.2.2 and within the Erosion Control, Revegetation, and Maintenance Plan (appendix C). The use of slope breakers as a form of temporary erosion control would be effective as long as right-of-way traffic uses as small an area as possible and if proper maintenance of erosion control measures is insured at the end of each work-day.

46

Vegetation Strip/Sediment Barrier

The use of sediment barriers is site specific. Algonquin places them along the edge of every stream. Installation of sediment barriers such as silt fences along slopes at road crossings may block the only access to the right-of-way. Algonquin requires tracking pads at road access sites, which is effective as a sediment control device. Delays for maintenance of sediment barriers such as silt fences at road crossings would occur.

G6-47 The intended use of sediment barriers did not include barring access to the right-of-way. Properly constructed and maintained sediment control methods, including use of crushed stone "tracking" pads, sediment traps, silt fences, and staked hay/straw bales, can readily provide adequate sedimentation control while allowing ready access to the right-of-way.

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Algonquin believes that its proposed use of sediment barriers such as silt fences is consistent with the performance objectives of Appendix D. 47

Trench Breakers

As a guideline, the spacing of trench breakers should approximate the spacing of slope breakers. 48

G6-48 FERC maintains that the specifications given for spacing and installation of trench breakers is warranted. Trenches concentrate both surface runoff and potential seepage and should, therefore, be closer spaced than surface runoff diversions.

Topsoil Segregation and Stone Removal

Algonquin cannot segregate topsoil as detailed in Figure 5.1.2-1 and necessarily contain spoils to within its proposed construction right-of-wav. 49

G6-49 FERC believes that the proposed right-of-way width is sufficient to provide adequate space for topsoil stripping/segregation and construction operations as depicted in figure 5.1.2-1. We have modified figure 5.1.2-1 to allow for a construction right-of-way not to exceed 100 feet in width where full right-of-way topsoil stripping would be used in actively cultivated areas.

5.1.2.4

As a clarification, Algonquin does not generally allow any of its contractors or consultants to interact directly with landowners, state agencies or state representatives. Algonquin interacts directly with these individuals, although consultants such as the environmental inspectors are generally present if the discussions involve environmental compliance. Because the pipeline company may be liable for any actions relating to construction or representations made by its agents, it is Algonquin's policy in 50

G6-50 Comment acknowledged, FERC is aware of applicant liability issues. The need for the environmental inspector to attend landowner meetings relevant to environmental compliance is a vital requirement for the inspector's ability to fulfill his responsibilities. It is the applicants' prerogative to accompany its agents to such meetings.

such matters to have the consultant accompanied by, and under the direction of, Algonquin personnel.

5.1.3.1.2

Contamination of Aquifers

Preparation of a Spill Prevention and Containment Plan for maintenance and storage areas is unwarranted. Actions in response to a spill event are already regulated by the EPA and appropriate state agencies. Further, the requirements of such a plan have not been defined by the Commission. Also, Algonquin notes that equipment maintenance and storage occurs at locations off the right-of-way, at sites leased by the pipeline contractor for that purpose.

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G6-51 Please see responses to comments G7-9, G7-10, and G10-46.

Algonquin request clarification of Staff's recommended prohibition on refueling of vehicles and storage of potentially hazardous materials within all designated well-protection areas. Are the aquifer protection areas designated in Table 4.1.3-2 also well-protection areas? If so, then the recommended prohibition would apply to large construction spreads of approximately 9,000 feet on the G-5 Replacement and 15,000 feet on the G-8 Replacement. Construction of such large spreads is unfeasible with a prohibition on refueling of vehicles and storage of potentially hazardous

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G6-52 Please see our response to comment G6-13.

materials.

5.1.3.2.1

Stream Construction and Mitigation Procedures

Time Window for Construction

Algonquin suggests that the Staff's Procedures not include a time window for construction across streams. Algonquin suggests that stream crossing requirements related to mitigation of fisheries impacts, including timing constraints, be developed with the appropriate regulatory agencies familiar with the characteristics and sensitivities of individual streams to be crossed. In most instances, regulatory agencies are amenable to development of mitigation measures which negate the need for timing restrictions.

The four (4) month window provided for in-stream construction, from June 1 to September 30, may not be long enough for most projects. Algonquin's experience has been that even smaller projects normally require three (3) months, from mobilization to demobilization by the pipeline contractor. If a state or local agency specifically deletes any of the time frame authorized by the Commission's recommended time period, the operator may not be able to construct the facilities within a single construction season. Adoption of such a time restriction would increase costs for construction due to mobilization and demobilization activities.

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G6-53 FERC will defer to alternative site-specific construction time windows based on additional information recommended by the state, if appropriate.

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Split season construction could result in additional impacts as well, including the inability to deliver gas for the upcoming heating season. 53

Crossings Procedures

Further definition of the crossing length parameters is necessary as stream widths and depths vary considerably over time. Such variations may be annual (due to climatic changes), seasonal, or daily (due to single storm events). By example, a stream determined by survey to be ten (10) feet in width may be considerably greater or less than ten (10) feet at the time of construction. Such variations upset attempts to implement predetermined methods of construction. 54

Requirements for minor stream crossings should be written in performance language. Writing the requirements in very specific terms will not allow for flexibility due to variable stream flow conditions.

The flume pipe described in the requirement may not be covered with rock at the location of crossing, but must be dammed at both ends to direct the flow of the water into the flume. Gravel is only needed at equipment crossings. 55

Placement and removal of in-stream devices may actually cause 56

G6-54 Comment noted. Our Procedures require construction equipment to utilize temporary bridges to cross all minor and major streams except those specified in I(D)(7) of appendix D; therefore, it is not necessary to provide additional crossing length parameters.

G6-55 Comment noted. Please see our revised Stream and Wetland Construction and Mitigation Procedures in appendix D.

G6-56 Comment noted. Please see our response to comment G5-10.

more sedimentation than would otherwise occur. When removed, in-steam devices release essentially all of the entrapped sedimentation to the stream to dissipate small amounts of silt as construction occurs.

Requiring dry construction may not always be practical. If rock is encountered, then any required drilling and blasting would necessitate removal of the flume pipe.

Bank Stabilization/Revegetation

Algonquin is obligated to comply with the Department of Transportation ("DOT") Regulations for Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards at 49 CFR Part 192. Some of the reasons Algonquin cannot allow the growth of trees on its permanent right-of-way and comply with DOT regulations include, but are not limited to the following:

1. Operators must have clear right-of-way to perform the maintenance and surveillance activities that are required under DOT regulations. Allowing growth on the right-of-way impedes ready access for emergency or maintenance activities, significantly limits the effectiveness of aerial patrols, impedes ground patrols and hinders the ability to perform leak surveys. Failure to perform these required activities properly, for whatever reasons,

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G6-57 Comment noted. These considerations have been incorporated into our revised Procedures in appendix D.

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G6-58 Our Procedures specify a 10-foot-wide riparian strip be allowed to permanently revegetate with native woody plant species across the entire right-of-way. Because the area specified for permanent revegetation is only 10 feet wide and because woody plant species does not refer only to trees, we do not believe that access to the pipeline would be limited in these areas and maintain that this is an appropriate mitigation measure for bank stabilization.

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could result in a violation of federal law for non-compliance with DOT regulations.

2. Tree roots can undermine the integrity of the external pipeline coating, resulting in accelerated corrosion.

3. Trees can act as lightning rods, potentially grounding the pipeline and causing a failure.

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5.1.3.2.1 and TABLE 5.1.3-1

Trench Dewatering/Hydrostatic Testing and Table 5.1.3-1

- The proposed water source for hydrostatic testing of the Chaplin Loop is the East Branch of Stonehouse Brook. The estimated volume of hydrostatic test water is 310,000 gallons.

- The proposed water source for hydrostatic testing of the H-1 Loop is a municipal source. The estimated volume of hydrostatic test water is 40,000 gallons.

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G6-59 Comment noted. This information has been incorporated into table 5.1.3-1.

5.1.3.2.2

The reference to Order of Condition License should read "Order of Conditions under the Massachusetts Wetlands Protection Act".

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G6-60 Comment noted. This information has been incorporated into section 5.1.3.2.2.

The East Branch Stonehouse Brook does not cross Algonquin's right-of-way in an area which can be defined as a stream. It

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G6-61 Comment noted. We have deleted this stream from our perennial stream table 4.1.3-6 because the USGS map indicates it is intermittent.

G6

crosses the right-of-way in a swampy wetland which is estimated at 400 to 500 feet long. It is not practical or feasible to cross such a long wetland using the so-called dry-ditch method. We have assumed that this crossing will be made by floating the pipe into place. 61

5.1.4.1.1

Sediment and Turbidity

Refer to comments at 5.1.3.2.1 regarding Time Window for Construction and Crossing Procedures

The timing requirements contained herein may be reasonable in most cases. However, if solid rock or some other obstacle is encountered, the crossing time frame could be considerably longer. The timing requirement should be put in performance language such as "The crossing should be accomplished as quickly as possible, within 72 hours in most cases." Conditions at the time of construction may require greater than 72 hours to complete a crossing. A requirement to stop construction, pending approval from the Commission, is not reasonable. Immediate response from the Commission including on weekends and holidays is necessary to comply with this requirement to avoid costly delays. 62

G6-62 In emergency situations or in situations where day-to-day decisions must be made, FERC staff will issue approval as quickly as possible.

Cover Loss

Refer to comment at 5.1.3.2.1 regarding Bank Stabilization/Revegetation.

5.1.4.1.2

Refer to comment at 5.1.3.2.1 regarding Time Window for Construction.

Also refer to the comment at 5.1.3.2.2 regarding crossing the East Branch of Stonehouse Brook.

5.1.6.1

The limitations on right-of-way maintenance to once every three (3) years and then only after August 1 is unacceptable. Right-of-way maintenance is a year round activity. It is incumbent on every operator to clear and keep clear its right-of-way. These restrictions will make it impossible for an operator to meet its obligations under the DOT regulation at 49 CFR Part 192. Algonquin has a policy that requires right-of-way be cut at least once every three (3) years. Some sections require more frequent cutting to allow for patrols required by DOT. Right-of-way maintenance is an operator responsibility under DOT Regulations and the frequency for clearing should be left to the prudent judgment of the operator.

Further, it is neither practical nor cost effective to

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63 G6-63 We do not feel that allowing shrub vegetation to regrow on the right-of-way in wetlands would seriously impair ground or aerial surveillance of the pipeline. Wetland tree and shrub species are generally very shallow rooted and damage to the pipeline from such roots would not occur. Wetland woody vegetation that would reestablish on a right-of-way would only grow to the same height, or would be maintained shorter, than the surrounding vegetation. This would not significantly increase the chance of the pipeline being struck by lightning. Please also see response to comment G6-58.

64 G6-64 Comment noted.

65 G6-65 Comment noted.

66 G6-66 We feel that 3-year-old vegetation on a right-of-way would not unreasonably restrict ground access or reduce the efficiency of aerial patrols. We note that this requirement does not seem to be a significant deviation from Algonquin's existing policy of clearing at least every 3 years.

We agree that implementation of dual procedures may be impractical or may be an additional cost burden for the reasons noted by Algonquin. However, we do not feel that these concerns justify eliminating our requirement. Based on our review and the reviews of cooperating agencies, we have determined that certain standard industry practices should be changed. In addition, we disagree with Algonquin's statement that "... such requirements would not apply to the original right-of-way immediately adjacent." Where a proposed loop is installed within an existing right-of-way or where a new permanent right-of-way is continuous with an existing right-of-way, the original right-of-way would be maintained in a similar manner.

G6

implement maintenance practices for facilities certificated in this Docket different from those applied to the majority of Algonquin's system. This is particularly true where Staff's recommendation would apply only to a limited portion of the right-of-way required for new loops but such requirements would not apply to the original right-of-way immediately adjacent. 66

5.1.6.2

Algonquin requests clarification of the statement "However, by following our Procedures (see Appendix D), this 7.6 acres would be allowed to revegetate to a scrub-shrub condition." 67

G6-67 This statement refers to our right-of-way maintenance requirement that vegetation removal within wetlands be limited to cutting only those trees within 15 feet of the pipeline that are greater than 15 feet in height. This would allow vegetation in forested or scrub-shrub wetlands to revert to a scrub-shrub condition.

5.1.7.1

Refer to comments at 5.1.3.2.1 regarding Bank Stabilization/Revegetation. 68

G6-68 Please refer to response to comment G6-13.

It is neither practical nor cost effective to implement maintenance practices for facilities certificated in this Docket differently from those applied to the majority of Algonquin's system. 69

Refer also to comments at 5.1.6.1.

G6-69 We recognize Algonquin's concern. However, based on past experience and our review of the proposed projects, as well as review by cooperating agencies, we have determined that a number of procedures that have become standard industry practice must undergo modification. A necessary consequence is the application of maintenance practices that differ between new pipeline segments. Algonquin can avoid this problem by changing right-of-way maintenance procedures on existing rights-of-way. Please see response to comment G6-66.

5.1.7.2

Staging Areas

Staff's recommended prohibition on refueling may be possible in a relatively small, well defined wetland. However, for a large wetland, it is not reasonably possible to comply with this requirement. The refueling specification would require that the equipment be moved to the nearest road, traveling long distances in the wetland, loaded on a trailer and moved to a refueling site outside the defined areas. This method of refueling necessitates extensive movement of equipment within the wetland. Careful monitoring and refueling in an environmentally safe manner will minimize disturbances to large wetland areas by limiting the movement of equipment.

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G6-70 This comment has been added to section 5.1.7.2, which outlines the Stream and Wetland Construction and Mitigation Procedures and addresses each applicant's comments on the Procedures.

Refer also to comments at 5.1.3.1.2 regarding Contamination of Aquifers.

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G6-71 Please see the response to comment G6-13.

Spoil Placement

Placement of sediment filter devices along the length of the entire right-of-way within wetland areas at the limits of proposed construction to contain sidecast spoils is unnecessary, costly and ineffective. Installation, maintenance and removal of sediment control devices will extend the duration of construction activity and the number of vehicle trips causing necessary siltation. The installation cost alone for silt fence would be approximately $20,500 for a 1000-foot wetland. Further, in areas of deep

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G6-72 Comment noted. Refer to revised section 5.1.7.2.

standing water, sediment filter devices would be ineffective.

Crossing Procedures

Algonquin cannot allow woody vegetation on the permanent right-of-way and meet its obligations for access and maintenance under D.O.T. regulations at 49 CFR Part 192.

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G6-73 Comment noted. This comment has been previously addressed in section 5.1.7.2 of the DEIS.

Refer also to comments at 5.1.3.2.1 regarding Bank Stabilization/Revegetation.

74

G6-74 Please see the response to comment G6-63.

Algonquin suggests that siltation barriers be implemented around spoil piles as necessary to achieve performance criteria consistent with Appendix D.

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G6-75 Comment noted. This comment has been previously addressed in section 5.1.7.2 of the DEIS. See also response to comment G6-11.

Algonquin has proposed right-of-way widths in its environmental report which it believes are the minimum necessary to complete the proposed facility construction. Limiting the clearing of right-of-way to 50 feet in wetlands does not provide sufficient areas to complete the pipeline installation and fails to consider the special requirements for working in wetland areas. Because of the nature of the instability of soils which occur in wetlands, efforts to segregate topsoil, and the additional measures employed to stabilize equipment, wetlands are in fact areas where maintaining construction operations within the typical upland right-of-way width is difficult. Algonquin does not believe

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G6-76 Thank you for your comment. We have reevaluated our recommendation to restrict the width of construction rights-of-way through wetlands to 50 feet. A number of applicants have commented on this requirement and, for the reasons noted in Algonquin's comment, we now recommend that clearing in wetlands be limited to 75 feet. Sections 5.1.6 and 5.1.7 have been modified accordingly.

construction of the pipeline by conventional procedures is possible with the right-of-way limitation proposed in this Section.

Algonquin recognizes the value of returning seeds, roots and rhizomes that are within the topsoil to the surface where they can rapidly revegetate. However, wetlands soils will distribute over a large area when set aside due to their fluid consistency. Segregation of topsoil cannot practically be accomplished within a 50-foot construction right-of-way as recommended by Staff. Insofar as segregation of topsoil cannot practically be accomplished within the construction right-of-way recommended by Staff, greater wetland disturbances may result.

Temporary Erosion and Sediment Control

Refer to comments at 5.1.7.2 regarding Spoil Placement.

Right-of-Way Maintenance Practices

The Staff recommendation that no mowing or other vegetation maintenance practices occur on the right-of-way within wetlands is unacceptable. Algonquin cannot allow woody vegetative growth on its right-of-way which will limit access for operational and practice activities. Operators are obligated to ensure access for maintenance and emergency activities under D.O.T. regulations under 49 CFR Part 192.

G6

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G6-77 We are aware that topsoil in wetlands cannot always be segregated successfully. However, if topsoil segregation is only marginally successful, it would still result in faster revegetation than if there was no topsoil segregation. Therefore, we stand by this recommendation. Also, please note response to comment G6-76.

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G6-78 Please see comment response G6-72.

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G6-79 Comment noted. This comment has been previously addressed in section 5.1.7.2.

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Refer also to comments at 5.1.3.2.1 regarding Bank Stabilization/Revegetation.

80 G6-80 Please see response to comment G6-63.

Further, it would be extremely difficult to implement the maintenance practice recommended by Staff for the pipeline loop and pipeline replacement proposed in this Docket as such is materially different from practices currently implemented on the vast majority of Algonquin's 1000 mile pipeline system.

81 G6-81 Comment noted. Please see response to comment G6-69.

Revegetation Techniques

Staff's recommendation regarding undesirable plan species should recognize that no appropriate technique may exist for control of undesirable plant species (i.e. purple loose strife). Algonquin underscores the comment by Tennessee that the currently available means of control for purple loose strife (chemical control and hand pulling) are neither environmentally acceptable nor cost-effective. Further, undesirable plant species surround the right-of-way in numerous areas along Algonquin's system. Any attempts to control undesirable plant species in such areas will be ineffective.

82 G6-82 Comment noted. The comment referenced to Tennessee has been previously addressed in DEIS section 5.1.7.2. This section has been modified to include Algonquin's comment.

The Staff recommendation that no mowing or other vegetative maintenance practices occur on the right-of-way is unacceptable.

83 G6-83 Comment noted. This comment has been previously addressed in DEIS section 5.1.7.2.

Refer to comments at 5.1.7.2 regarding Right-of-Way

84 G6-84 Comment noted. Please see response to comments G6-63 and G6-79.

Maintenance Practices and 5.1.3.2.1 regarding Bank Stabilization/Revegetation. 84

5.1.8.2.2

Algonquin does not currently propose to locate exterior station equipment within a courtyard formed with masonry walls. Algonquin does commit to file with the Secretary for review and approval by the Director of OPPR, an acoustical evaluation of the proposed turbine and noise controls prior to the start of construction. 85

G6-85 Comment noted, section 5.1.8.2.2 has been revised accordingly.

5.1.9.1.1

The language on page 5-77 requires some clarification. While it is Algonquin's general practice to file for condemnation in Massachusetts with the Department of Public Utilities, the company also has the right under the Natural Gas Act to file for condemnation in federal court. Algonquin must reserve the right to file in whichever forum it deems appropriate. 86

By way of example, the last sentence of the last paragraph of this section is typical of the federal rights concern raised by Algonquin in its comments on Section 2.7.

G6-86 Comment noted. Section 5.1.9.1.1 has been revised to include the right of the applicant to file for condemnation in either state or Federal court.

5.1.9.1.2 and Table 5.1.9-3

E-1 Loop 87

G6-87 Thank you.

G6

Algonquin agrees to limit construction right-of-way to 50 feet within the orchard and tree farm where apple trees or Christmas trees might otherwise be impacted. 87

Refer to comments at 6.1.1 regarding the Wawecus Hill Road Variation.

G-5 Replacement

Algonquin is concerned about Staff's imposition of the requirement to work over existing high pressure pipelines. It has been Algonquin's operating philosophy and practice to limit the crossing of existing pipelines by heavy equipment. Algonquin has required that such crossings be limited to those absolutely necessary and that the crossing be perpendicular to the pipeline to minimize the length of pipe impacted. To the extent crossings are required, the pipeline must be ramped, bridged or stripped and sand padded. Algonquin is adamant that these precautions are necessary to maintain the integrity and safety of existing high pressure pipelines. 88

Staff's recommendation does not appear to balance adequately the issues of safety and environmental impact. Working over existing pipelines should be a decision left to the pipeline operator, who generally will allow such a practice only where there are no other practicable alternatives. Although Staff's recommendations with respect to Algonquin involve relatively small

G6-88 See response to comment G6-4.

distances, Algonquin is very concerned that Staff is setting a precedent for this type of practice which it may impose on a larger scale in subsequent projects.

Algonquin will consider reducing the construction work space to accommodate the stove pipe method within the Fairway Drive residential development. Algonquin will replace pre-existing ornamental vegetation consistent with Algonquin's maintenance policy.

Algonquin's practice and policy is to install right-of-way barriers as requested by landowners.

G-8 Replacement/Loop

Removal of trees in the Glen Charlie Subdivision adjacent to Little Road is necessary for construction of the G-8 Replacement/Loop. Removal of these trees will not eliminate existing screening between homes.

Construction within the existing right-of-way would require working over an existing in-service pipeline. Algonquin is concerned about the Staff's imposition of the requirement to work over existing high pressure pipelines. Refer to the above detailed explanation of the concern as it pertains to the G-5 Replacement.

G6

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89 G6-89 Thank you.

90 G6-90 Thank you.

91 G6-91 Comment noted. We have modified table 5.1.9-3.

92 G6-92 See response to comment G6-4.

3.3 Mile, 36-Inch Mainline Loop

Refer to comments at 6.3.2 regarding the Medfield Loop Variation.

Bellingham Meter Station

The proposed Bellingham Meter Station is within the site boundary of NEA's cogeneration plant. 93

G6-93 Text has been revised.

5.1.9.2.2

Algonquin has proposed right-of-way width within the Caratunk Wildlife Refuge which it believes are the minimum necessary to complete the construction of the G-5 Replacement. Refer to more detailed comments at Section 7.3, Mitigative Measure 60. 94

G6-94 See response to comment G6-23.

Algonquin questions the suggested timing of construction activity within the Caratunk Wildlife Refuge along the G-5 Replacement and also across Glen Charlie Pond along the G-8 Replacement/Loop. Algonquin suggests that confining construction activity between September and June within the Caratunk Wildlife Refuge and between September and May across Glen Charlie Pond would appear to contradict Staff's timing recommendation for river and stream crossings. In Section 5.1.3.2.1, Staff recommends that in stream construction be allowsd only from June 1 to September 30. 95

G6-95 See response to comment G6-23 and G6-22.

In particular, Algonquin reminds Staff that an unnamed tributary to Coles Brook is located near the exit from Caratunk at M.P. 2.65. Following Staff's recommendation, other stream crossings along the G-5 Replacement and G-8 Replacement would occur in the period from June 1 to September 30. The task of scheduling and cost of mobilizing and demobilizing the contractor to achieve Staff's recommendations is significant. Staff's current recommendation does not allow Algonquin the flexibility to construct the proposed facilities in an efficient and cost-effective manner. Algonquin suggests that appropriate mitigation be developed to allow construction throughout the year. 95

5.1.11.2.1

Algonquin's cultural resource consultant, The Public Archaeology Laboratory, Inc., is currently collecting additional information for the Rhode Island SHPO on the proposed Tiverton Loop. Comments from the Rhode Island SHPO will be provided when they become available. 96

G6-96 Comment noted.

5.1.13.3

Algonquin does not displace the gas in the section with nitrogen, but replaces the gas with air, by means of air movers. 97

G6-97 Section 5.1.13.3 has been revised to indicate that natural gas can be displaced by nitrogen gas or air.

5.2

Staff's recommendation to ensure compliance with Section 106 of the NHPA would require the applicant or the non-jurisdictional facility sponsor to prepare work plans for the Commission's review and approval. Such a requirement, if necessary, should consider whether cultural resources have a potential to be affected. If no potential impact from project construction on cultural resources exists, then work plans should not be required.

Enclosed as Exhibit 5.2 is a letter from the Massachusetts Historical Commission dated April 16, 1990 which states, "Since NEA's 300-MW cogeneration facility is currently under construction, and since Algonquin's proposed Bellingham Meter Station will be located within the cogeneration plant area, no further review of these two projects is required by the MHC."

G6-98 Comment noted. However, our analysis (section 5.2) and DEIS recommendation 6 require that work plans be prepared only where deemed necessary by the SHPO. For clarification, we have modified the language in section 5.2 and section 7.3 accordingly. Based on MHC's April 16, 1990, letter included as Exhibit 5.2 in Algonquin's comments, it would appear that no further Section 106 review would be required for NEA's 300 MW cogeneration plant or for the Bellingham Meter Station. The fact that all necessary permits for NEA's cogeneration plant have been obtained should be noted by the Commission in its review of Algonquin's application.

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6.3.1

Algonquin suggests that its Proposed Route (Proposed Route) has a lesser impact upon ecological resources than the Wawecus Hill Road Variation (Variation) which outweighs the marginally greater impact upon existing residences. In addition, because the Variation is longer than the Proposed Route, it would increase the cost of the Project. When considered in conjunction with mitigating factors and the shorter length of the Proposed Route,

G6-99 Comment noted. The City of Norwich endorses the variation (see comment L5-12). Our route variation remains as originally recommended.

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these factors favor the Proposed Route.

As noted on page 6-13 of the DEIS, the Variation would require an additional 4.1 acres of forest clearing. In total, the Variation would require an additional 7.0 acres for right-of-way. As shown in Table 6-1 of the DEIS, the Variation would also require one more river/stream crossing than the Proposed Route.

While the Proposed Route would come within 50 feet of three (3) residences and the Variation within 50 feet of only one (1) residence, the Variation lies within 100 feet of four (4) residences, including the one within 50 feet. Only three (3) residences (those within 50 feet) are within 100 feet of the Proposed Route. For those residences, Algonquin proposes residential mitigation techniques such as snow-fencing work areas, avoiding tree removal wherever possible and reducing the working crew. In addition, Algonquin will use stove-pipe construction techniques whenever possible in areas of residential development. Algonquin is concerned that drag-line construction techniques will damage pipeline coating. As a result, Algonquin suggests use of stove-pipe construction techniques. In the area of the large wood retaining wall, pipeline alignment would be on 10 foot centers. Special precautions would be taken to protect it during construction.

99

Restoration would include Algonquin's standard procedures for

restoring to pre-construction condition. Special provisions would dictate the extent of this work as negotiated with property owner.

Exhibit 6.3.1 attached hereto provides an aerial photographic comparison of the Proposed Route and the Variation.

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6.3.2

The construction right-of-way for Algonquin's Proposed Route comes within fifty feet of only eight residences, while the construction right-of-way Medfield Loop Variation comes within fifty feet of fifteen residences. For the eight residences within fifty feet of the construction right-of-way for its Proposed Route, Algonquin will employ certain residential mitigation techniques, as specified in Table 5.1.9.2 of the DEIS. Algonquin proposes to snow-fence work areas, avoid removal of trees wherever possible and reduce working crew. In addition, Algonquin will use stove pipe construction techniques wherever possible in the area of residential development.

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G6-100 We have reevaluated the Medfield Loop and the Medfield Loop Variation (see section 6.3.2).

Exhibit 6.3.2 Provides an aerial photographic comparison of the Proposed Route and the Medfield Loop Variation

SECTION IV

COMMENTS ON DEIS

EXHIBITS

ALGONQUIN ATTACHMENTS

Algonquin submitted a number of oversized aerial photos and maps that, because of their size, are not reprinted here.

EXHIBIT 5.2

April 16, 1990

Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, DC 20426

RE: Niagara Import Point Project, Draft EIS. Tennessee Gas Pipeline Company (FERC Docket No. CP88-171-001) and Algonquin Gas Company (FERC Docket No. CP88-187-001).

Dear Ms. Cashell:

Staff of the Massachusetts Historical Commission have reviewed the Draft Environmental Impact Statement on the proposed projects referenced above.

To date, only preliminary cultural resource surveys have been conducted of portions of proposed projects by Tennessee Gas Pipeline Company and Algonquin Gas Company. Tennessee Gas Pipeline Company's Segment 8 in Longmeadow, East Longmeadow, and Agawam (Hampden County, MA) was the focus of a reconnaissance (Phase 1a) archaeological survey by the UMass Archaeological Services. The results of this investigation, presented in a report entitled, "Archaeological Reconnaissance Survey for the Proposed Tennessee Gas Company Pipeline, Niagara Settlement Project, Central Massachusetts," indicated that 5.1 km (3.2 miles) of the proposed route have a moderate to high potential to contain significant historical and archaeological resources. MHC has approved the research design submitted by UMass Archaeological Services for an Intensive (Locational) Archaeological (Phase 1b) Survey of Segment 8.

The Office of Public Archaeology at Boston University has received MHC approval for a research design submitted for an Intensive (Locational) Archaeological Survey (950 CMR 70) of Tennessee Gas Pipeline Company's Segment 9 in Hopkinton (Middlesex Co., MA). Tennessee Gas Pipeline Company's Segment 8 Longmeadow and Wolf Swamp Variations, where they differ from the Segment 8 primary route proposal, have not been previously reviewed by this office.

Phase 1 Archaeological Surveys for portions of Algonquin Gas Transmission Company's proposed pipeline routes and facilities have only recently commenced. The Public Archaeology Laboratory, Inc. has submitted research designs approved by the MHC to conduct Intensive (Locational) Archaeological Surveys on the Algonquin H-1 Replacement (Milford, MA), Algonquin Medfield Loop (Holliston & Millis, MA—Middlesex & Norfolk Cos.), and the Algonquin Bellingham Meter Station (Bellingham, Norfolk Co., MA). The PAL, Inc. received MHC approval to conduct a survey on a portion of the proposed Algonquin G-8 Replacement (Plymouth & Barnstable Cos., MA), (i.e., MP 2.0 to MP 5.2) and what was once identified as an "alternate" route (MP 4.1 to 5.3);

the latter is actually a small portion of the proposed G-8 Replacement route and not an alternate as proposed in the DEIS. MP 0.0 to MP 2.0 of the G-8 Replacement route has not been reviewed, nor has the Algonquin G-5 Replacement route.

Review of MHC's files indicates that MHC received notice on June 16, 1986 of the NorthEast Energy Associates' cogeneration plant (DEIS 5.2.2.1) through an Environmental Notification Form (filed with the Massachusetts Executive Office of Environmental Affairs). The project was then identified as the Continental Cogeneration Corporation's "CCC Bellingham, MA" project. No request for further review was made by the MHC at that time. Since NEA's 300-MW cogeneration facility is currently under construction, and since Algonquin's proposed Bellingham Meter Station will be located within the cogeneration plant project area, no further review of these two projects is required by the MHC.

The Final EIS should include a table indicating the status of cultural resource surveys by route, listing the firms conducting the research. In addition, the towns through which the facilities pass should be listed.

MHC requests that a Reconnaissance (Phase 1a) Archaeological Survey be conducted on those segments of the Tennessee and Algonquin routes that have not been previously surveyed. MHC concurs with the recommendations of FERC (DEIS 5.1.11.1) that Tennessee and Algonquin defer construction of the proposed facilities until FERC and the MHC have determined what effect the proposed project may have on significant historical and archaeological resources in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800).

Should you have any questions regarding these comments, please feel free to contact Edward L. Bell of my staff.

Sincerely,

Edward L. Bell

for Brona Simon
State Archaeologist
Deputy State Historic Preservation Officer
Massachusetts Historical Commission

xc: Debra Vrabel, FERC
Kurt Flynn, FERC
ACHP
UMass Archaeological Surveys
PAL, Inc.
Stone & Webster Environmental Services (for Tennessee Gas)
Algonquin Gas Transmission Company
OPA

G6

EXHIBIT 7.3.4

Massachusetts Natural Heritage Program

10 January 1990

Jeffrey King
HMM Associates, Inc.
196 Baker Avenue
Concord, MA .01742

RE: Gas Meter Station
Depot Street
Box Pond
Bellingham, MA

Dear Sir or Madam:

Thank you for contacting the Natural Heritage and Endangered Species Program regarding rare species and ecologically significant natural communities in the vicinity of the project referenced above.

At this time, we are not aware of any rare plants or animals or ecologically significant natural communities that would be affected by the proposed project.

If your project plans change, or if additional fieldwork and research results in an update of our database, this evaluation may require reconsideration.

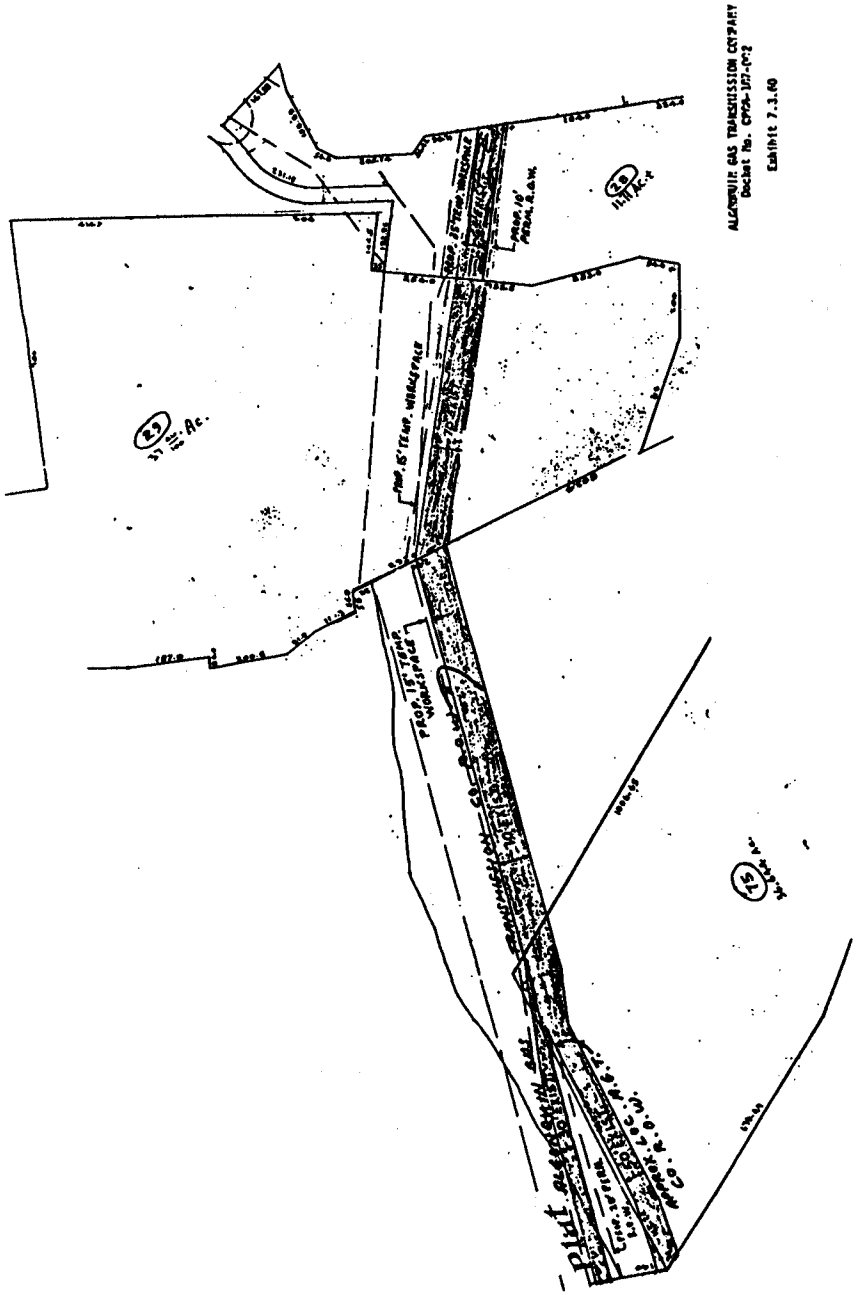
Sincerely,

Jay Copeland
Environmental Reviewer

JC/jc

cc: town file, chrono file

EXHIBIT 7.3.60



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FILED
OFFICE OF THE SECRETARY

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FEDERAL ENERGY
REGULATORY
COMMISSION

TEXAS EASTERN GAS PIPELINE COMPANY
DOCKET NO. CP89-711-000

COMMENTS TO THE
NIAGARA IMPORT POINT PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Texas Eastern's comments on the proposed mitigation set forth in Section 7.3 of the DEIS are as follows:

Mitigation Measure No. 2. This measure would require Texas Eastern to obtain the approval of the Director of OPPR for any routing alterations other than Staff's recommended variations and minor field realignments per landowner needs and requirements. It is Texas Eastern's experience in constructing pipeline facilities that unanticipated minor route modifications are inevitable. Since the need to modify the route is usually not discovered until shortly before or during construction, it is essential that the revised alignment be made as quickly as possible. For minor route deviations, Texas Eastern already consults with the landowner and as needed, state or local permitting agencies. Subjecting the revised route to OPPR approval would unacceptably delay this process. Texas Eastern therefore suggests this approval should only be required for significant route variations greater than 660 feet. 1

G7-1 We do not feel that this recommendation is overly burdensome to the applicants. We are especially concerned with route modifications developed following submission of detailed project data and approval of the Director of OPPR. We are not concerned with minor field realignments to satisfy an individual landowner, so long as they do not result in greater impact than those approved. However, when a realignment results in the crossing of land that would affect landowners previously not affected, no matter how minor the realignment, this recommendation is applicable.

Mitigation Measure No. 3. This measure would require that Texas Eastern use certain construction techniques and submit and obtain the Director of OPPR's approval of detailed construction and restoration plans for certain residential areas. Texas Eastern's concern with this proposal is that the delay in receiving approval could hinder implementation, since the purpose of this mitigation measure is to reduce the impact of construction in residential areas. Prior to construction, however, Texas Eastern will have already contacted all affected landowners in an attempt to address their concerns as well as satisfying any requirements imposed by state and/or local permitting agencies. Because of the detail apparently contemplated by Staff, and the number of plans required (not necessary from Texas Eastern but from the other applicants), it is likely that the plans will not be submitted until shortly before construction. Due to the other items contemplated for OPPR approval and the possibility of Staff modifications, it is unrealistic to assume immediate approval by the Director of OPPR of such plans is obtainable. 2

G7-2 We believe that restoration plans for certain residential areas along the proposed pipeline are necessary to minimize impact on residents. Texas Eastern has not yet provided the construction and restoration plan that would be required in the one residential area that is crossed by its proposed pipeline. Once we get the plan we will review it as soon as possible.

Mitigation Measure No. 6. Texas Eastern has consulted with the Pennsylvania Bureau for Historical Preservation (PA-BHP) regarding the potential effect of the project construction on cultural resource. A Phase I survey at the right-of-way of the proposed project is conducted in coordination with the PA-BHP. Phase I and II survey reports will be filed with the FERC immediately when available. 3

G7-3 Your comment is noted.

Mitigation Measure No. 7. This measure would require the applicant to certify that all necessary permits and approvals to construct and operate the nonjurisdictional facilities have been obtained prior to their construction. Texas Eastern believes this is completely unreasonable and forces the applicant to become involved in the permitting and approval process of the nonjurisdictional facility's environmental review, of which neither the applicant nor the FERC has control over. 4

G7-4 Please see response to comment G6-10.

Mitigation Measure No. 8. This mitigation measure requires Texas Eastern to implement the "Erosion Control, Revegetation and Maintenance Plan" set forth in Appendix C to the DEIS and the "Stream and Wetland Construction and Mitigation Procedures" set forth in Appendix D to the DEIS. In addition, the measure would allow no deviation from these procedures without written approval of the Director of OPPR at least two weeks prior to implementation.

Texas Eastern's Erosion and Sedimentation Control Plan (E&SC Plan) has been developed to provide effective erosion and sedimentation control measures designed to accommodate varying field conditions during pipeline construction. The measures described in the Plan have been developed and improved upon throughout the past several years of extensive pipeline construction in the state of Pennsylvania and the Northeast. It has been found to provide a practical and workable means of minimizing detrimental impacts to soil and water resources as a result of pipeline construction activities. Texas Eastern believes that many of the requirements of Appendices C and D are too restrictive, inconsistent with local and state permitting regulations, and impractical at certain geographic locations. Texas Eastern recommends that those appendices be rewritten in performance oriented language so that site and time specific conditions inherent in any construction project can be dealt with in an environmentally sound manner. It is Texas Eastern's intent, in order to comply with local and state permits, as well as to provide the most prudent and practical erosion and sedimentation control measures, to follow the recommended guidelines of Appendices C and D as commented upon previously (02/05/90) and attached hereto once again.

5

G7-5 We have recommended the procedures outlined in appendices C and D in response to Federal, state, and local agency concerns regarding the potential for environmental impact from pipeline construction. These procedures have been reviewed and commented on by these agencies and by various pipeline companies and have been subsequently revised to incorporate comments. We believe their use provides a consistent level of environmental protection of land resources, erodible and prime soils, surface waters, and wetlands. We do not believe they are too restrictive, although we realize in some site-specific instances every procedure may not be applicable. In these cases, we have provided the applicant with an opportunity to request relief on a site-specific basis. Specific comments to our Procedures have been addressed in revised section 5.1.7.2.

The requirement for prior approval of changes by the Director of OPPR is not practical and burdensome. The requirement does not allow for any type of quick reaction to and resolution of problems which inevitably occur during construction. In the past, Texas Eastern has successfully worked with the local conservation office and state permitting agency in obtaining changes to the approved E&SC Plan. If FERC deems that such an approval process is necessary, Texas Eastern requests verbal approval or notification within 24 hours of a request by the applicant, including weekends and holidays. It is Texas Eastern's belief that failure to respond rapidly by the FERC may in some cases cause environmentally irrevocable damage.

6

G7-6 The applicant's environmental inspectors should be very familiar with each of these procedures. In their initial field review of the route and in their participation in preparation of construction specifications and drawings, most instances where compliance with these procedures could not be met would be identified with sufficient time to request relief from FERC. FERC will not allow the applicant carte blanche authority to determine when these procedures are not applicable. In emergency situations or in situations where day-to-day decisions must be made, FERC staff will issue approval as quickly as possible.

Mitigation Measure No. 9. Texas Eastern disagrees with Staff's recommendation that tree stumps be removed only in the areas immediately over the trench and where grading is required. Texas Eastern has agreed to restrict tree stump removal to the areas directly over the trench only when crossing federally delineated wetland areas.

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G7-7 Comment noted; refer to response G10-44.

Texas Eastern must maintain its permanent rights-of-way of 25 feet on either side of the pipeline so as to provide access to the rights-of-way for maintenance activities and in case of emergency. Equipment required for pipeline maintenance typically requires a cleared 50-foot wide rights-of-way for ingress and egress. Tree stumps left along the right-of-way will impede the movement of this equipment hindering not only maintenance, but the applicant's ability to act in a case of emergency as called for in the Code of Federal Regulations (49 CFR Part 192.615). Also, a 50-foot wide permanent rights-of-way is needed for conducting an accurate aerial reconnaissance survey to observe surface conditions on and adjacent to the rights-of-way for indications of leaks, construction, and encroachment activities as specified in the Code of Federal Regulations (49 CFR Part 192.705).

Mitigation Measure No. 10. This mitigation measure would require Texas Eastern to document pre- and post-construction water quality and yield of all water supply springs and wells that may be affected by construction activities. Texas Eastern will perform pre- and post-construction inspections of any water supply springs or wells within 50 feet of the pipeline when requested by the landowner. Texas Eastern has successfully utilized various practices that prevent or minimize the impact of pipeline construction on groundwater sources. Should such sources be adversely affected by construction, corrective measures would be dependent upon the severity and type of damage. Adequate potable water supplies would be provided unless otherwise agreed upon by the well owner/water authority. Staff has identified no justification for abandoning this successful practice in favor of a far more burdensome and expensive procedure.

Mitigation Measure No. 11. The groundwater monitoring plan proposed in this mitigation measure is unnecessary and burdensome. Texas Eastern has agreed not to store hazardous materials, chemicals, fuels, and lubricating oils, or refuel construction equipment within 100 feet of streams or within any municipal watershed area.

Mitigation Measure No. 12. The preparation of a Spill Prevention Containment and Control Plan for maintenance and storage areas is unwarranted. Actions in response to a spill event are regulated by the EPA and appropriate state agencies. Further, the requirements of such a plan have not been defined by Staff. Equipment maintenance and storage typically occurs at locations off the right-of-way, at yards leased by the pipeline contractor for that purpose.

Mitigation Measure No. 13. Texas Eastern agrees that construction be limited in agricultural and residential lands during periods when the soil is the wettest (April 1 to May 15) unless project constraints necessitate construction at this time. If compaction and rutting occurs due to construction during this time, appropriate restoration measures will be undertaken in agricultural and residential lands. If the project were delayed and started late, it could become necessary to complete final right-of-way restoration early the following spring. A landowner may desire that the restoration work be completed as soon as possible in the early spring in order that the land may be readied for cultivation.

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G7-8 Since Texas Eastern has indicated that they plan to conduct pre- and post-construction monitoring activities and have documented techniques for preventing and minimizing impact on groundwater, we assume that documentation for performance of these activities exists. Recently, we have received many comments from individual and state and local agencies concerning the potential impact of pipeline construction and operation on valuable groundwater supplies. We maintain that our review of monitoring procedures is appropriate to ensure protection of groundwater supply systems.

G7-9 We recognize that many communities and homeowners rely on groundwater as their only source of drinking water. We maintain that this requirement is necessary to protect groundwater supplies from potential contamination by accidental spills of fuel and hazardous materials.

G7-10 We do not agree that our recommended spill prevention and control plan is unnecessary. Contractors should already have a similar type of plan in place and we maintain that this is a prudent request that would protect environmental resources and workers' safety. Furthermore, we do not believe that refueling activities would always take place in equipment yards and potential spills during such activities must be addressed.

G7-11 Refer also to comment response G4-33. FERC maintains that the issue of soil compaction and rutting mitigation necessitates DEIS recommendation 13.

Mitigation Measure No. 15. This mitigation measure would require Texas Eastern to contact local soil conservation offices to determine locations where future drainage systems may be used and to increase cover depth or make other provisions for future installation. This is unnecessary and would be an added expense to provide the additional cover. Texas Eastern proposes to discuss with the individual landowners who may be considering future drainage systems and provide such measures at those site specific locations.

12

G7-12 DEIS recommendation 15 has been deleted. We have modified our Erosion Control, Revegetation, and Maintenance Plan to provide for discussion with individual landowners.

Mitigation Measure No. 16. Texas Eastern agrees not to pile excavated rock along or adjacent to the existing rights-of-way unless requested to do so by the landowner. Texas Eastern will dispose of the excess rock in accordance with agreements with landowners and the requirements of state or local agencies.

13

G7-13 DEIS recommendation 16, modified in section 7.3 has been revised to include "without the approval of the landowner" (see DEIS recommendation 16, modified).

Mitigation Measure No. 18. Within 30 days of the issuance of a certificate for this project, Texas Eastern will agree to identify dates for (1) the completion of any outstanding (if any) cultural resource requirements and other surveys, (2) the start of construction, and (3) start and completion of restoration.

14

G7-14 Thank you for your comment.

Mitigation Measure No. 20. Texas Eastern agrees to defer the construction of any proposed facility until the FERC staff and SHPOs have reviewed and approved all Phase I and II cultural resource survey reports, and Phase III mitigation plans and reports when applicable. Texas Eastern agrees to consider any comments of the respective SHPOs and ACHP.

15

G7-15 Your comment is noted. The text reflects your comment.

Mitigation Measure No. 66. The field survey strategy and applied methodology of the Phase I field survey of the right-of-way is being coordinated with the PA-BHP and is being carried out in compliance with the applicable state guidelines and federal regulations.

16

G7-16 Your comment is noted. We must emphasize, however, that we strongly suggest you discuss and implement a stratified sampling strategy in consultation with the Pennsylvania Bureau for Historical Preservation.

TEXAS EASTERN GAS PIPELINE COMPANY
CANADIAN SUPPLY PROJECT
CP89-711-000

FOLLOW-UP TO DECEMBER 27, 1989
FERC DATA REQUEST

TEXAS EASTERN DEIS
APPENDIX C & D COMMENTS

Texas Eastern has provided a number of comments on our recommended Erosion Control, Revegetation, and Maintenance Plan (appendix C), and Stream and Wetland Construction and Mitigation Procedures (appendix D). We have reviewed and discussed these comments in section 5.1.2 and in sections 5.1.3.2.1 and 5.1.7.2, respectively. Because of the volume of material, Texas Eastern's comments on these appendices are not reprinted here.

NIAGARA MOHAWK

NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315)474-1511

April 27, 1990

FEDERAL EXPRESS

Hon. Lois D. Cashell
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Niagara Import Point Project
Draft Environmental Impact Statement
Tennessee Gas Pipeline Co., CP88-171 et al.

Dear Secretary Cashell:

Enclosed for filing with the Commission, pursuant to its March 26, 1990 Notice published in the Federal Register, are an original and fourteen copies of the comments of Niagara Mohawk Power Corporation in this proceeding.

Kindly acknowledge receipt and filing of the enclosures by date stamping the enclosed copy of this letter and returning it in the postage paid envelope provided.

Yours truly,

M. Margaret Fabic

M. Margaret Fabic, Attorney for
Niagara Mohawk Power Corporation

MMF/jaf
Enc.

cc: Mr. Kurt Flynn

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Tennessee Gas Pipeline Company	)	Docket Nos. CP88-171-001
Great Lakes Transmission Company	)	CP89-892-000
Algonquin Gas Transmission Company	)	CP88-187-001
CNG Transmission Corporation and Texas Eastern Transmission Corporation	)	CP88-195-002
CNG Transmission Corporation	)	CP89-712-000
Texas Eastern Transmission Corporation	)	CP89-711-000
Transcontinental Gas Pipe Line Corporation	)	CP89-7-001 and CP89-710-000
National Fuel Gas Supply Corporation and Penn-York Energy Corporation	)	CP88-194-001

COMMENTS OF NIAGARA MOHAWK POWER CORPORATION
ON
NIAGARA IMPORT POINT PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

On March 16, 1990, the Staff of the Federal Energy Regulatory Commission (FERC) issued a draft environmental impact statement (DEIS) on the natural gas pipeline facilities proposed in the above-referenced dockets, and related nonjurisdictional facilities.

The DEIS was prepared to satisfy the requirements of the National Environmental Policy Act. The Staff concludes that approval of the proposed project, with appropriate mitigating

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measures, including receipt of necessary permits and approvals, would have limited adverse environmental impact.

Niagara Mohawk Power Corporation (Niagara Mohawk, Company), an intervenor in CNG Transmission Corp., Docket No. CP89-712, hereby comments on the DEIS as follows.

The Niagara Import Point (NIP) Project includes certain facilities proposed to be constructed by CNG Transmission Corporation, designated as pipeline TL-470. Those facilities are described in the DEIS at pages 2-12, 2-16, 2-22, and at Figures A-6-1 and 2.2-5. TL-470 includes 2.7 miles of new 30-inch diameter pipeline proposed to be constructed using 75 feet of right of way now owned by Niagara Mohawk as an electric facilities corridor.

Niagara Mohawk supports the construction of TL-470 as a means of increasing the pipeline capacity in the Albany area. However, the Company objects to the use of its right of way for this pipeline construction. The reasons for that objection include the potential adverse impacts on the safety, integrity and reliability of the Company's electric system that will result from the resulting joint occupation of this right of way.

As Niagara Mohawk explained in its comments in response to the DEIS issued in Iroquois Gas Transmission System, CP89-634 et al, Niagara Mohawk's policy is to minimize joint occupation of its electric facilities rights of way. In this way, the Company restricts inconsistent uses of its rights of way and retains control over its rights of way. In addition, the Company has experienced difficulty in cases where it has allowed joint occupancy in gaining access to its electric facilities and in

G8-1 CNG's proposed use of Niagara Mohawk right-of-way as modified by our DEIS recommendation is consistent with our interest in maximizing the use of existing right-of-way to the extent practicable. However, where necessary for safety or environmental reasons, CNG could file with the Secretary of the Commission for review and approval by the Director of OPPR, the specific justification for a variance to the use of Niagara Mohawk right-of-way. However, in no instance would it be acceptable for the pipe to be placed less than 5 feet within the edge of the electric transmission right-of-way and no permanent right-of-way outside of the existing right-of-way would be granted. We have modified DEIS recommendation 67 to allow for requesting a variance (see section 7.3).

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making repairs to its electric facilities without damaging buried pipeline facilities.

Most important in this case is the Company's intent to reserve this right of way for future expansion of its electric transmission system. This right of way was purchased specifically for that purpose. Installation of TL-470 in this right of way will reduce or eliminate Niagara Mohawk's ability to use its own right of way for that purpose. Niagara Mohawk will then be forced to purchase additional right of way in this area for its electric facilities expansion, despite the fact that it has already purchased the existing right of way for that purpose.

1

For all of these reasons, Niagara Mohawk Power Corporation objects to the use of its right of way for construction and operation of CNG's TL-470 facilities and requests that the facilities be installed on right of way not reserved for electric facilities use by Niagara Mohawk.

Respectfully submitted,

NIAGARA MOHAWK POWER CORPORATION

M. Margaret Fabic

By: M. Margaret Fabic
Its Attorney
300 Erie Boulevard West
Syracuse, New York 13202
Tel: (315) 428-6593
Date: April 27, 1990

G9

Northern Michigan University

Department of Geography
Earth Science, Conservation and Planning
Marquette, MI 49855-5316
(906) 227-2500

April 13, 1990

Mr. Kurt Flynn
Project Manager
Environmental Policy and Project Analysis Branch
Office of Pipeline and Producer Regulation
Room 7312
825 North Capitol Street, N. E.
Washington, D.C. 20426

Dear Mr. Flynn:

I would like to obtain a copy of the Draft Environmental Impact Statement for the proposed Great Lakes Gas Transmission Company pipeline that was prepared by the Federal Energy Regulatory Commission (FERC).

I am a college professor at Northern Michigan University and teach a course called Environmental Impact Assessment. The above Impact Statement would be useful as a sample for the work the students most prepare. Also as a citizen of the Upper Peninsula, I am interested in reading and possibly commenting on the project. In addition, I would like to receive a copy of the environmental analysis prepared by the Forest Service when it is completed. 1

Thank you for your assistance.

Sincerely,

M. Jean Ferrill
Assistant Professor

G9-1 Thank you for your comment. We have included your name on our mailing list and on the EIS distribution list. To obtain a copy of the Forest Service's environmental analyses, please write to the Forest Supervisors for the Ottawa and Hiawatha National Forests.

UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

Tennessee Gas Pipeline Company) Docket No. CP88-171-001

)

COMMENTS OF

TENNESSEE GAS PIPELINE COMPANY

ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

Tennessee Gas Pipeline Company ("Tennessee") hereby submits its comments on the Draft Environmental Impact Statement ("DEIS") issued by the Commission's Staff ("Staff") on March 16, 1990 for the Niagara Import Point Project. The DEIS is a complete analysis of the environmental impacts of the proposed project and Tennessee supports its fundamental conclusion: that construction and operation of the project proposed by Tennessee will have a limited environmental impact and will result in environmentally acceptable actions. Tennessee does, however, disagree with a number of the mitigation measures, including routing alternatives and construction procedures proposed in the DEIS and therefore submits the following comments which include notice of discrepancies between the DEIS and Tennessee's Environmental Report (ER) submitted in February 1989.

COMMENTS ON TEXT OF FERC DEIS FOR NIAGARA PROJECT
Including Discrepancies with Tennessee ER

p. 2-19 Right-of-way Definitions - Error in definition of right-of-way widths in Massachusetts. FERC says construction ROW consists of 15 ft. existing ROW, 35 ft. new permanent, and 25 ft. new temporary.

Generally, the widths are 15 ft. existing, 25 ft. new permanent, and 25 ft. temporary.

Acreages - As a result, the acreage of new permanent right-of-way is also incorrect. FERC says 137 acres; actually about 127 acres.

1

G10-1 The environmental report submitted by Tennessee states that "in Massachusetts ... an additional 60 feet of construction clearance for the main line looping sections is required," and that "twenty-five feet are only temporarily converted to support construction activities while 35 feet of the new clearing will be maintained as new right-of-way."

We appreciate that Tennessee will be reducing the construction right-of-way to 65 feet and the permanent right-of-way to 55 feet. Since reduction of the right-of-way by 10 feet would reduce permanent right-of-way by 10 acres, we believe our estimate is conservative. We have revised figure 2.2.2 and text where appropriate, but have not changed our affected acreage estimate.

p. 4-25 Stream Crossing Table 4.1.3-6 -

- Stream crossing at MP 230B-102 + 1.8 was regarded as a Seasonal, Tributary to Cayuga Creek in the ER, but is listed in perennial water crossing table and does not indicate (T) for tributary.

- Two streams were included in Table 2-1 of the ER as perennial water crossing that do not appear in EIS stream crossing table.

2

G10-2 Thank you for your comment. Table 4.1.3-6 has been corrected, as appropriate.

- North Branch

  Plum Bottom Creek MP 230-102 + 4.49 (B)

  Ransom Creek MP 230-103 + 1.31 (D)

Segment 2 -

- Crossing of Niagara River was referenced in ER at MP 230B-107 + 0.10; in EIS it was referenced at MP 230B-107 + 0.40.

Segment 3 -

- Each entry addressed in the EIS has been designated a tributary in the ER. Not all of them appear as such in Table 4.1.3-6. 2

- Dale Gulf - two tributaries were recorded in the ER at MP 232 + 2.52 and MP 232 + 2.58. There appears to be a "typographic error" in the EIS with two entries for Dale Brook at MP 232 + 2.5.

Segment 4 -

- Spring Brook at MP 234 + 5.4 indicated as (T) in ER.

- Spring Brook (T) at MP 234 + 8.0 and Unnamed Pond at 234 + 8.3 do not appear in ER.

- The Honeoye Creek appearing in the EIS at MP 234 + 9.5 is included in the ER as a Seasonal, Tributary crossing. However, a crossing of a perennial, tributary of the Honeoye Creek does appear in the ER at MP 234 + 9.8 and is Class C.

- The crossings at MP 234 + 11.3 and MP 235 + 0.6 are designated in the ER as the main branch of Honeoye Creek and Class C. The EIS designates these two at tributaries of Class D. 2

- The Unnamed Creek referenced in the EIS at MP 235 + 2.0 is not within the confines of Segment 4 (referenced in the EIS as extending from MLV 234 to MP 235 + 1.0).

Segment 8 -

- Longmeadow Brook at MP 261 + 3.2 is designated as a tributary in the ER.

- The crossings at MP 261 + 5.7 of the Longmeadow Brook (T) and the MP 261 + 6.1 of the Shaker Pond (T), referred to in the EIS, are referred to as the Jawbuck Brook and Freshwater Brook, respectively, in the ER.

Segment 9 -

- The crossing of the Indian as designated by the EIS at MP 266 + 7.1, was regarded as a tributary to the Indian Brook in the ER.

- The crossings at MP 266 + 8.6 and MP 266 + 8.8 in the EIS are designated as crossings at ... + 8.74 and + 8.93 in the ER.

2

p. 4.21 State Water Quality Classifications - The numbers reflecting the data gathered and presented in the ER are as follows:

		# of Crossings	% of Total
New York	A	6	25
	B	3	12
	C	5	21
	D	10	42
TOTAL		24	
Massachusetts	B	8	100
TOTAL			

3

G10-3 Thank you for your comment. Table 4.1.3-5 has been corrected, as appropriate.

p. 4-29 Tennessee Stream Crossings - From the ER,

Tennessee's proposed loops would cross 32 perennial water bodies -- 24 in New York and 8 in Massachusetts.

4

G10-4 Thank you for your comment. Section 4.1.3-2 has been corrected, as appropriate.

pp. 4-34, 4-39 FERC has made reference to the existence of Immature Burbots, a state-listed species of concern in Longmeadow Brook, and the American Brook Lamprey in the North Pond.

RESPONSE: The existence of these species was not confirmed by the appropriate agencies in response to our requests for information on rare and endangered species in the existing or proposed pipeline corridor.

5

G10-5 The possible occurrence of the state-listed burbot and the state-endangered brook lamprey was indicated to FERC staff during a telephone communication with Mr. David Halliwell, MADEP, on January 3, 1990.

p. 4-64 Percents land use reported by FERC are slightly different than percentages in the ER for all lines.

6

G10-6 Land use for proposed Loops 1, 3, and 4 in New York was remeasured, since these loops were split between the TEMCO EA and the NIP Project. The information presented in Tennessee's environmental report on these loops was not separated and could not be used. Some discrepancies between two independent measurements are inevitable due to differences in criteria, map base, etc. Land use for proposed Loops 8 and 9 was taken from Tennessee's environmental report. However, land use categories presented by Tennessee were sometimes combined by totalling the feet of each category, converting feet into miles, and then calculating the percentages.

p. 4-66 In response to public concern, Tennessee has proposed placing the proposed loop line under an existing sidewalk which partially parallels Wolf Swamp road. This proosal is less extreme than the staff's recommendations to place the loop line in the middle of the road.

7

G10-7 Comment noted.

G10

pp. 4-74, In each case below, Tennessee's mileposts are
4-77 correct; FERC's mileposts are incorrect.
4-78

Erie County Land and Infirmary

FERC: MP230B-102+6.2 to MP230B-103+1.0,
0.5 mi. crossing

TGP: MP230B-102+5.40 to MP230B-102+5.92
2746' crossing

Niagara River Crossing

FERC: MP230B-107+0.4

TGP: MP230B-107+0.04 to 0.39

Carleton Multi-Use Area

FERC: MP232+2.1 to 2.8; 0.6 mile

TGP: MP232+2.48 to 3.00; MP232+1.56 to 1.81

Lima Golf Course

FERC: MP234+6.4 to 6.8; 0.4 mile

TGP: MP234+6.52 to 7.00; 2538'

Longmeadow Golf Course

FERC: MP261+3.0-3.2; 0.2 mile

TGP: MP261+3.32-3.70

(In this case, the difference could be due to Tennessee's proposed route variation).

8

G10-8 Your comments have been incorporated into table 4.1.9-3, where appropriate.

p. 5-7 Soil Mixing - FERC requires that all stones of

diameter >4" be removed from topsoil in all cultivated, improved, or residential land.

Comment: Add "where stones of this size had previously been removed from the topsoil".

9

G10-9 Section 5.1.2.1 of the DEIS stated that "the removal of stones having a 4-inch or greater diameter from the upper 12 inches of soil is normally performed in cultivated lands." The text on this page does not refer to a FERC requirement. The stone-removal measure we recommend is in appendix C, and is designed to avoid construction degradation of topsoil.

p. 5-8 Erosion Control - Spacing of permanent runoff diversions for slopes over 5%:

FERC		TGP	
slope	spacing	slope	spacing
5-10%	150 ft.	5-10%	300-150 ft.
11-15%	100 ft.	10-15%	150-100 ft.
16-30%	75 ft.	15-30%	100- 50 ft.
>30%	50 ft.	>30%	50 ft.

10

G10-10 FERC notes that the permanent runoff specifications described in section 5.1.2.2 are similar to the specifications given by Tennessee. Minor differences from the various applicant-proposed specifications are to be expected on a project as diversified as NIPP. FERC maintains that the permanent runoff diversion slope spacings outlined in section 5.1.2.2, if properly constructed and maintained, would prove both easy to apply and effective.

p. 5-9 Vegetation strip spacing requirements:

FERC		Tennessee
slope	spacing	
5%	25 ft.	none
5-15%	50 ft.	
6-30%	75 ft.	
>30%	100 ft.	

Tennessee prefers to use hay bale strips or silt fences, which are generally placed at 100 ft. intervals on long slopes.

11

G10-11 The FERC vegetation strip specifications outlined in section 5.1.2.2 were offered as an acceptable alternative to the installation of other forms of sediment barriers such as hay bale strips or silt fences. Refer to appendices C and D for the requirements for placing and maintaining sediment barriers.

p. 5-13 Mulch (erosion control) - FERC states that if construction takes place outside of the seeding season for perennial vegetation, Tennessee shall mulch with hay or straw at 3 tons/acre.

12

G10-12 Our specification for an application of hay/straw mulch, outlined in section 5.1.2.2, was developed in consultation with SCS.

RESPONSE: Tennessee specs call for 2 tons/acre hay or straw.

p. 5-13 Fertilization - FERC requires 10-20-20 fertilizer at 200 lbs/acre and lime at 2 tons/acre.

RESPONSE: Tennessee specs call for 1.5 tons/acre lime and fertilizer "as required." Recommended specifications are acceptable, but the final determination of lime and fertilizer requirements will be based on site-specific conditions.

13

G10-13 DEIS recommendation 8 provides the opportunity for applicants to propose deviations to appendix C that can be based on site-specific conditions.

p. 5.23 Table 5.1.3-1 Milepost Segment Tested

FERC 233+1.0 to 235+2.0

TGP 233+0.0 to 235+1.0

Sources of Hydrostatic-Test Water - FERC has identified the intended sources for hydrostatic test water in Massachusetts as Shaker Pond and Crescent Lake.

RESPONSE: Tennessee has identified the Connecticut River (Seg. 8) and North Pond spillway (Seg. 9) as hydrostatic test water sources for these two segments occurring in Massachusetts.

14

G10-14 Thank you for your comment. The information has been incorporated into table 5.1.3-1.

G10

p. 5-25 The Massachusetts Department of Environmental Protection has determined that Chapter 91 licenses are not required for Segments 8 and 9. None of the streams are navigable.

15

G10-15 Thank you for your comment. Section 5.1.3.2.2 has been revised to incorporate this information.

p. 5-45 FERC requires a rare species survey prior to construction for the Many-Fruited False Loosestrife and American Brook Lamprey, and a nesting survey for Common Moorhen.

RESPONSE: The Common Moorhen and Many-Fruited False Loosestrife do occur within Fannie Stebbins; however, during the wetland surveys of the existing and proposed pipeline corridors, no moorhen or loosestrife were found in the project area. The occurrence of the loosestrife appears to be confined to an area north of the existing pipeline. Similarly, optimal habitat for the moorhen is located along the Connecticut River and in the "open water" and aquatic vegetation in the standing water within Fannie Stebbins. These areas will not be affected by the proposed project.

16

G10-16 Comment noted; Tennessee has still agreed at page 32 and 33 to do the required surveys.

p. 5-52 Tennessee has been working with the Town of

Longmeadow to develop a mitigation plan to remove and replace the ornamental trees along Wolf Swamp Road. Tennessee has reviewed the FERC proposal to plan the pipeline in the road. Due to existing utilities in the road, the 30 inch pipeline would be an average of 16 feet deep.

17

G10-17 Comment noted.

p. 5-54 FERC requires the entire ROW to be allowed to revegetate as forested wetlands with the selective cutting of trees >15 ft. in height within 15 ft. of the pipeline.

RESPONSE: All of the permanent ROW (both existing and proposed) will be maintained in an early successional stage for safety purposes. In the event of emergency repairs or outline cathodic surveys, Tennessee must have access to the pipeline, unobstructed by more developed growth.

18

G10-18 Comment noted. Refer to section 5.1.7.2 for a response to this comment.

p. 5-55 FERC requires all staging areas to be located 50 feet from wetland areas.

RESPONSE: This is not possible in Longmeadow at the railroad crossing where wetlands extend on either side of the railroad.

19

G10-19 As noted in DEIS recommendation 8, any deviation from our recommended wetland procedures may be reported to FERC at least 2 weeks prior to implementation. This allows FERC to review on a site-specific basis, and grant relief, if appropriate, to recommendations that we acknowledge may not always be feasible in certain isolated situations.

p. 5-80 Acreage of new operational ROW reported is wrong, (because of the error noted in ROW width, p. 2-19).

FERC	Tennessee
Seg. 8: 22.8 acres	16.3 acres
Seg. 9: 13.5	9.5

20 G10-20 See response to G10-1.

p. 5-84 Table 5.1.93, below are the correct Mileposts for Hopkinton, Massachusetts.

	Milepost
FERC	267+7.3+7.5
Tennessee	266+7+3+7.5
FERC	267+9.1
Tennessee	266+9.1

21 G10-21 Thank you. Correction has been made to table 5.1.9-3.

pp. 5.86 6-12 Tennessee does not agree with the recommended alternate pipeline route through Wolf Swamp Road. The alternate route 7.6 would be more of a disturbance to the residents during construction verses the original proposed route. On March 20, 1990, Tennessee presented a preliminary design of the proposed 30" pipeline to the Longmeadow Water and Sewer Department. The design showed the plan and profile of the proposed pipeline through Wolf Swamp Road. The design also showed the route of the pipeline avoiding storm drains and sewage lines. Due to the elevations of the range from 13 to 17

22 G10-22 Comment noted. We have revised our recommendation.

feet, with the bottom of ditch 16 to 20 feet to clear lines. Tennessee has determined through field investigation that the soil condition under the road is sandy. This would mean that the top of the pipe ditch would be approximately 64 feet, closing the road for at least 2 months. Also, the integrity of the road substructures, sewer laterals, sewer main, water lines, gas lines, storm drains would be permanently altered and could never be fully restored. The town residents would have major complaints from that point indefinitely. 22

pp. 5-86 6-12 7-6 RESPONSE: Tennessee also discussed with the Town of Longmeadow the matter concerning the 660 feet of water main along the proposed pipeline route. Tennessee offered to relocate the water line at our expense on the other side of Wolf Swamp road. Tennessee discussed the issue with the Town Water Commissioner at the public utilities meeting on April 11, 1990. both the Town Engineer and the Water Commissioner are receptive concerning the relocation of the water. The Water Commission will discuss these issues at the Town Selectmen meeting scheduled for May 1990. 23

G10-23 Comment noted.

In a letter dated November 30, 1989, the Town of Longmeadow Board of Selectmen, raised a concern about a pipeline crossing the rear of the ballpark. After meeting with the Parks and Recreation Department, it was agreed that the pipeline in question was not Tennessee's facilities. Mitigating measures to construct across the athletic field were discussed and appear acceptable.

24 G10-24 Comment noted.

Another issue raised was the shade trees along Wolf Swamp Road. This is covered in response 5-52.

pp. 5-94, 7-9 Scheduling Requirements - FERC requires that Tennessee coordinate with the owners of the Longmeadow golf Course and Lima Golf Course to determine whether construction at the golf course crossing should be scheduled between December 1 and April 1.

RESPONSE: Tennessee will negotiate with the owners of the Longmeadow Golf Course and the Lima Golf Course to develop a mitigation plan to minimize the construction time. Construction of

25 G10-25 For the Lima and Long Meadow Golf Courses, we recommend that Tennessee coordinate with the owners to determine the need to schedule construction during the off-season from December 1 to April 1. This option should be made available to golf course owners since construction would close all or parts of the affected golf course. An additional consideration is that, because of continual traffic, reseeding would take much longer during the golfing season.

G10

the pipeline should not be restricted to any further construction dates.

FERC recommends that Segments 8 and 9, in the vicinities of Wolf Swamp School and Elmwood School, should be constructed during summer months when school is not in session.

p. 5-94 Construction in the vicinities of Wolf Swamp and Elmwood School should not be limited to summer months. If the concern is to minimize any potential impact due to construction noise causing disruption with classes (construction should be limited to days or hours when school is not in session and not within 500' of the school).

26

p. 7-9 Additional Reporting Requirements - FERC requests aerial photos, at a scale of 1:6000 or larger, showing all staging areas, pipe storage yards, access roads, and other areas that will be used.

FERC requires Construction and Restoration Plans for all residential areas.

p. C-4 Erosion Control - FERC requirements that if

G10-26 DEIS recommendation 54 has been modified to read that construction shall be limited to days when school is not in session.

seeding does not take place within 30 days after construction, mulch (hay or straw) be applied at 3 tons/acre for a distance of 100 feet on either side of all stream crossings (temporary erosion control). Mulch must be anchored.

RESPONSE: Prior to Oct. 31, if seeding does not take place within 3 weeks after construction, Tennessee will plant with quick-germinating grasses, such as winter rye. After Oct. 31, mulch will be used for short-term erosion control.

p. C-6 FERC requires all sandy sites and all slopes >8% grade be mulched with 2 tons/acre of hay or straw. Mulch must be anchored or used with a liquid binder.

RESPONSE: Tennessee has stated it will mulch all slopes >8% with 1.5 tones/acre hay or straw during optimal seeding seasons; 2.0 tons/acre outside of optimal seeding seasons. The recommended mulch rates could also be acceptable, but final determination of mulch rates will depend on site-specific conditions.

p. C-4 Seeding - FERC has outline seeding requirements in

G10-27 Tennessee had six comments concerned with the Erosion Control, Revegetation, and Maintenance Plan in appendix C. Where appropriate appendix C has been revised. It should also be noted that FERC can waive specific requirements of the Erosion Control, Revegetation, and Maintenance Plan upon specific and detailed requests in the case of extenuating circumstances; see DEIS recommendation 8.

27

Table 1, Appendix C (Pure Live Seeds).

RESPONSE: Tennessee specs call for a seed mixture of; birdsfoot trefoil - 6 lbs/acre; creeping red fescue - 20 lbs/acre; tall fescue - 2 lbs/acre; and perennial ryegrass 5 lbs/acre, unless the land owner or land owner or and management agency specifies otherwise. The recommended seeding rates could also be acceptable, but final determination of seed types and seeding rates will depend on site-specific conditions.

p. C-6 FERC requires that slopes >3:1 be seeded immediately after final grading. 27

RESPONSE: Tennessee has not specified erosion control measures for slopes > 3:1.

p. C-6 <u>ROW Maintenance</u>

FERC recommends that Tennessee plant conifers across the ROW to limit access.

RESPONSE: Tennessee cannot plant woody vegetation on the right-of-way. Where necessary, Tennessee

will post signs, install gates, and/or block access to the right-of-way.

p. C-7 According to FERC, clearing to maintain vegetation in a low-growth state should not be more frequent than every three years.
RESPONSE: Tennessee mows its right-of-way every two to three years.

27

Chapter 7 - Comments on Recommendations

p. 7-1 Tennessee intends to use at least one Environmental Inspector per spread.

p. 7-2 Tennessee will provide compensation for public water supply damage that might occur during construction.

28

G10-28 Comment noted. Tennessee should indicate in the groundwater monitoring plan how and what type of compensation it would provide.

p. 7-3 Tennessee will submit a plan for the Niagara crossing.

Tennessee feels that the requirements for time of construction of stream crossings and fluming of streams should be developed with the state agencies involved with pipeline projects. For example, NY PSC's Environmental Management and

29

G10-29 FERC recognizes that state agencies may have additional information that would indicate a site-specific construction window for a particular stream would be appropriate, and we would defer to the state's review under these circumstances.

The applicants' site-specific stream crossing plans that are submitted to state agencies should incorporate our Procedures. FERC understands that some states may prefer other construction methods at certain streams and FERC would defer to these recommendations only if they are more stringent than our Procedures. Many states do not have the same level of experience as FERC in pipeline construction across streams and could recommend procedures we feel are less stringent and protective. We maintain that our Procedures would be more protective unless evidence is submitted that indicates alternative methods would be preferable under designated circumstances.

Construction Plan procedures require detailed site specific plans for crossing major and sensitive streams. Other state agencies have similar requirements. Tennessee proposes to forward crossing plans developed for state agencies to FERC for review. 29

p. 7-5 Tennessee intends to conduct field surveys of state listed habitats in conjunction with appropriate state agencies. If realignments are required, similar surveys will be conducted in new areas. 30

G10-30 Comment noted.

Tennessee requires a 50 foot right of way and easement for maintenance activities. The width is also required to perform routine operating and maintenance activities according to 49 CFR Part 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards," which are intended to ensure adequate protection for the public."

It is impractical to limit the construction right-of-way width in wetlands to 50 feet in width. Segregation of topsoil and the use of wooden work mats will require the 75 feet of 31

G10-31 Comment noted and accepted. Refer to revised section 5.1.7.2 and revised appendix D.

right-of-way to preform the construction activities in a safe manner. During construction, the heavy equipment operators would be hindered by the narrow (50') right-of-way and forced to work closer to the pipe ditch than normally. Unstable soil conditions are usually encountered in wetlands and the construction equipment could slide into the pipe trench endangering the lives of the construction workers. Tennessee does not see any advantage in restricting the right-of-way width to 50' wetlands and possibly endangering the lives of the construction workers in the process. 31

p. 7-6 Tennessee is presently developing crossing plans in conjunction with landowners and management agencies to minimize construction impacts at Fannie Stebbins, parks, state forests, golf courses, and other publicly owned land. Agreements with golf course owners and others indicate that crossings do not have to be made during the off-peak season, since Tennessee has agreed to minimize construction time. Tennessee feels that these agreements should determine crossing techniques for these areas. 32

G10-32 See comment response G10-25 regarding the golf courses. No recommendation was made to limit construction timing in other areas.

p. 7-9 Additional Reporting Requirements - FERC requests

aerial photos, at a scale of 1:6000 or larger showing all staging areas, pipe storage yards, access roads, and other areas that will be used.

RESPONSE: Tennessee recommends supplying quad sheets showing pipeyard locations and access roads rather than supplying aerial photography. Some of the pipeyards and access roads fall outside of the existing aerial coverage area.

33 G10-33 USGS topographic maps do not provide the detailed and up-to-date information that is shown in the aerial photographs and, therefore, would not suffice for our environmental analysis of the proposed staging areas, storage yards, and access roads, and for further definition of the final route alignment. Supplying the topos in addition to the aerial photographs would be helpful and Tennessee should feel free to do so.

34 G4-34 Comment noted.

FERC requires construction and restoration plans for all residential areas.

RESPONSE: Tennessee will provide detailed alignment sheets prior to construction. Restoration plans are discussed in the FERC Application under backfilling and cleanup. In addition, wetland restoration must comply with local and state requirements. Landowners are contacted individually to discuss restoration of their property.

35 G10-35 Restoration plans for residential areas must be included with the detailed alignment sheets.

Staff Recommended Measures

Item	Comment
1	Tennessee has responded to data requests from FERC and has disagreed with several provisions of those

36 G10-36 See comments below.

requests. These include FERC's Wetland and Stream Crossing Plan and Erosion Control, Revegation, and Maintenance Plan. Further, Tennessee comments provided below include comments on the FERC mitigation plans. It is Tennessee's basic comment the FERC's proposed procedures do not allow for the normal development of site-specific and state-specific mitigation plans and procedures that would allow for pipeline construction with state and local agency overview. More detailed comments are provided below and in Tennessee's responses to data requests. 36

2 Tennessee objects to submitted aerial photographs of project facilities such as staging areas, pipe storage yards, and access roads that are beyond the project construction boundary. These facilities are normally developed at a different time than the project facilities and would therefore require additional flights for separate individual sites. Tennessee would submit USGS maps, wetland maps, and plot plans similar to compressor and meter station maps that would show essentially the same or more information as aerial photographs. 37

G10-37 See response to comment G10-33.

G10

Tennessee objects to submission of all route alignment changes, as discussed below.

Mitigation measure No. 2 would require Tennessee to obtain the approval of the Director of the Office of Pipeline and Producer Regulation ("OPPR") for any routing alterations other than Staff's recommended variations and minor field realignments per landowner needs and requirements. Tennessee disagrees with this requirement. Tennessee's experience in constructing pipeline facilities in the northeast indicates that unanticipated minor route modifications are inevitable. Since the need to modify a route is usually not discovered until shortly before or during construction, it is imperative that the revised alignment be approved as quickly as possible. For minor route deviations, Tennessee already consults with the landowner and state or local agencies. Subjecting the revised route to OPPR approval would unnecessarily delay this process. Tennessee therefore suggests that OPPR approval be required only for significant variations of more than 660 feet.

38

G10-38 See response to comment G6-2. There is no environmental basis for a 660-foot corridor.

3 Staff's Mitigation Measure No. 3 presupposes that prior to construction Tennessee submit and obtain the OPPR Director's approval of detailed

39

G10-39 We will complete our review of the required plans as soon as we can. Our reviews will be expedited if the applicants include copies of pertinent documents and correspondence with affected property owners and state and location permit agencies with their filings.

construction and right-of-way restoration plans for certain residential areas. Again, Tennessee's primary concern with this proposal is the delay that could result from its implementation. Presumably, the purpose of this mitigation measure is to reduce the impact of construction in residential areas. Prior to construction, however, Tennessee will have contacted all affected property owners in an attempt to address their concerns and must also have satisfied the requirements imposed by state and/or local permitting agencies. Staff has identified residential areas for which Tennessee would be required to submit construction and restoration plans. Because of the number of plans required, the detail apparently contemplated by the Staff, and the possibility of further route refinements prior to certification, it is unlikely that the plans will be submitted until shortly before construction. Due to the other items contemplated for OPPR approval and the possibility of Staff modifications, it is unrealistic to assume immediate approval of such plans by the Director of OPPR. 39

Tennessee does not recommend the Wolf Swamp Road variation in Table 7.2-1 "Summary of Route Variations" 40

G10-40 Comment noted. See revised section 6.2.2.

G10

see detail write up for "Section 6.2.2 Wolf Swamp Road Variation" (pg. 6-12). 40

4 Tennessee objects to the stipulation that no gas delivery occur until non-jurisdictional facilities are reviewed under the Endangered Species Act. This review is not Tennessee's responsibility. Tennessee cannot feasibly control the environmental review process for non-jurisdictional facilities. 41

G10-41 As clearly stated in section 5.2, the ESA requires FERC, not the applicant, to determine if a proposed project would jeopardize the continued existence of any federally listed or proposed endangered or threatened species. The condition means that no delivery should be made to specific nonjurisdictional facilities until the appropriate review has been completed for those facilities.

5 Tennessee intends to provide at least one environmental inspector per spread.

6 Tennessee does not agree to the requirement that no gas delivery occur before the review of cultural resources reports for non-jurisdictional facilities is completed. This sets up an impossible task for Tennessee. Tennessee has no authority over non-jurisdictional facilities and has no way to control liability problems associated with other people's work. 42

G10-42 As stated in section 5.2 and DEIS recommendation 6 we must ensure compliance with Section 106 of the NHPA. Either the applicant or the nonjurisdictional facility sponsor must undertake the consultations and submit necessary reports and mitigative plans for our review and approval before delivery of gas may commence. We believe these are reasonable measures; our recommendation stands as written.

7 Tennessee does not agree to certify that non-jurisdictional facilities have obtained all necessary permits. It is likely that not all of the agencies permitting the non-jurisdictional facilities are agencies with which Tennessee is 43

G10-43 Please see response to G6-10.

involved. Tennessee has no input to the agency review process of projects with which it is not involved.

8 Appendix C and D: see writeup below.

9 Tennessee disagrees with Staff's recommendation that tree stumps be removed only in the areas immediately over the trench where grading is required. Tennessee has agreed not to remove tree stumps in wooded wetlands where the the soils are saturated, except for those along the trenchline. However, along the entire right-of-way where trees must be cut (including upland areas), Tennessee does not consider it practical to remove tree stumps only in the area immediately over the trench and in areas where grading is required. Tennessee believes that removal of tree stumps be allowed immediately over the trench, where grading is required, and where vehicular traffic will pass. As a result of the rural nature of most roads in the project area, weight restrictions on such roads, and the accessibility of Tennessee's existing right-of-way, Tennessee intends to utilize the right-of-way as the primary access for construction vehicles and equipment. Several pieces of equipment will be used for each

44

G10-44 Comment accepted. Please refer to response G4-61.

construction spread. If stumps were left in place, the movement to construction traffic along the right-of-way -- and thus the speed at which construction could proceed -- would be significantly impeded. This is because vehicular speeds would have to be reduced, and extra precautions would have to be taken with rubber-tired vehicles. Also, extra safety precautions would be required, especially with vehicles carrying pipe or placing pipe in the trench.

Alternatively, to facilitate vehicular use of right-of-way in which tree stumps are left in place, fill materials would have to be hauled in from offsite and placed over the stumps. This alternative is not practical, from either an economic perspective or an environmental view- point (because the fill material would necessarily mix with the topsoil and would be difficult to remove later). 44

10 Tennessee has, in the past, monitored sources of groundwater as a matter of course by monitoring wells. In the rare instances when construction activities have impacted these groundwater sources, Tennessee has immediately taken appropriate corrective action. Staff 45

G10-45 We do not believe this requirement is an unnecessary burden, because most applicants claim to have conducted monitoring activities in the past and, therefore, must have procedures in place for such activities. Please see also our response to comment G7-8.

has identified no justification for abandoning this informal (but proven) practice in favor of a far more burdensome and expensive procedure. For the reasons sent forth in its comments on Mitigation Measures No.s 2 and 3, Tennessee also objects to the requirement that a groundwater monitoring plan be approved by the Director of OPPR prior to construction.

45

12 FERC requires that a Spill Prevention Control Plan (SPCP) be filed with OPPR prior to construction, and that maintenance and storage areas be preselected. Preselection of maintenance and storage areas is impossible. Several areas may be required for overnight storage of vehicles. Tennessee disagrees with the distance requirements for refueling and storage (within 400 feet of any public water supply well and within a 200 foot radius of all private wells). Tennessee has prepared a SPCP for the project and specified a distance of 100 feet.

46

G10-46 The applicants should provide site-specific spill prevention and control plans whenever possible. For temporary storage areas that cannot be preidentified, generic procedures for spill prevention and containment should be adequate for these areas.

Tennessee's proposed restriction zone of 100 feet would probably not comply with many local regulations regarding activities prohibited in aquifer protection zones. The public has recently voiced many concerns regarding potential contamination of valuable and limited groundwater supplies from pipeline construction activities. We have received many recommendations from Federal, state, and local authorities concerning safe distances for refueling activities. Our requirements have taken these recommendations into consideration. In addition, the applicants may be required to comply with more stringent conditions set by state or local permitting authorities.

14 Mitigation Measure No. 14 would require Tennessee to conduct a comprehensive pre-construction survey of soil drainage systems and to repair all such systems damaged during construction. Tennessee has no objection to continuing its longstanding policy of repairing drainage systems damaged during construction, but the

47

G10-47 DEIS recommendation 14 has been modified to exclude the use of compacted sand fill, as usage could potentially affect local soil drainage. This recommendation has also been modified to include the use of qualified specialists. Recommendation 14 does not require an extensive preconstruction survey of subsurface drainages.

additional requirement of an expensive and time-consuming formal pre-construction survey is unnecessary due to Tennessee's existing practice of consulting with landowners prior to construction to determine the exact location of drainage systems on their property.

Tennessee does not agree that using sand fill for drain tiles to decrease infiltration around the drain tiles. Also, the use of sand for backfill would change existing soil condition and drainage pattern. The existing soil should be used to keep the soil drainage pattern the same. 47

15 Tennessee will work with local land owners to prepare construction procedures that will accommodate existing firm plans to install drain tile systems in the near future. 48

16 Tennessee will consult with local landowners for their preference for disposal of excess rock near the right-of-way. 49

17 As part of initial project notification, Indian tribes were sent information on the project alignment and were requested to provide comments regarding possible 50

G10-48 Please refer to comment response G10-47.

G10-49 DEIS recommendation 16 has been revised to include "without the approval of the landowner."

G10-50 Your comment is noted.

impacts to sacred areas, burial grounds or other ethnographic use areas. The State Historic Preservation Officers (SHPO) have also been notified and an ongoing consultation is taking place as part of the archaeological survey project in accordance with Section 106 review procedures. Any reports identifying archaeological sites have been marked as containing "Confidential Information" and "Not for Public Release." Copies of all reports and SHPO correspondence have been provided to FERC as they are available. 50

18 Tennessee will provide a schedule of compliance with mitigation measures described in this section of the EIS. This schedule will include the completion of cultural resource reports. However, as discussed in several other places in these comments, Tennessee intends to submit schedules and mitigation plans developed in conjunction with state or other agencies as partial fulfillment of this requirement. 51

19 See response to 17 52

20 Tennessee agrees to defer construction of proposed facilities until after SHPO, FERC, and (if appropriate) ACHP review, with the exception of pipe storage areas 53

G10-51 Thank you for your comment.

G10-52 Your comment is noted.

G10-53 We note your comment on Section 106 review of pipe storage areas, but cannot concur because FERC cannot delegate its final review and approval responsibility under this authority.

We understand that selection of pipe storage yards and staging areas may occasionally have to be made very quickly because of vagaries in pipe manufacture and delivery schedules. Thus, we suggest Tennessee identify as many storage and staging areas as possible, early in the design and planning process. Additionally, we recommend the applicant document, prior to consultation with the SHPO, all areas where use is likely to cause no effect on cultural resources (e.g., paved areas, previously used pipe storage areas, demonstrably disturbed areas). These individual

because use of these sites is often required considerably before the start of construction.

Orders for pipe must be made well in advance of construction because of the time delay between placing an order and the manufacture of the pipe and finally the delivery of the pipe. If the pipe is manufactured earlier than anticipated, or if there are unexpected delays in project certification, Tennessee's pipeyards must be utilized well in advance of project certification.

Tennessee recognizes its responsibility to provide SHPO comments to FERC at an early date. However, FERC approval based on these SHPO comments must be timely to avoid inordinate delays of construction. It is Tennessee's experience that FERC has difficulty in approving use of such facilities well in advance of project certification. If no pipe storage areas are available when the pipe is manufactured, Tennessee will incur additional charges, sometimes significant, to have the pipe mill store the pipe, often away from the mill at sites that will not have been subject to cultural resources review. Tennessee, on the other hand, is committed to SHPO review of proposed pipeyards and will not use such sites until SHPO clearance is

classes of work sites (storage and staging areas) may be separately and expeditiously reviewed and cleared for use. This should provide Tennessee sufficient storage space to deal with unexpectedly early pipe delivery. We suggest Tennessee then investigate those few remaining areas that the SHPO believes require Phase 1 survey. Thus, FERC is willing to review this class of work site (storage and staging) separately, as needed. However, we cannot permit any applicant to segment the project and expect numerous separate reviews for individual facilities.

53

We suggest you look at Great Lakes' proposed phasing plan provided in comment G4-58, and our response.

received. Tennessee therefore believes that receipt of SHPO approval for a pipe storage site, without subsequent FERC approval, is sufficient for the use of such sites. Tennessee will provide copies of the SHPO clearance to FERC.

If the Commission still chooses to require Commission approval for pipeyards, provisions must be made for such approval before project certification, when construction is proposed within the same calendar year. Normally sites used for pipeyards are cleared pasture or agricultural lands that are generally not environmentally sensitive.

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21 Noise data from the actual turbine is not available. As the turbines themselves are proposed and not actual, it is more appropriate to rely on existing manufacturer data or data from similar units in service elsewhere.

54

G10-54 The intent of our DEIS recommendation 21 is that the analysis shall be based on field noise data for turbines, compressors, and buildings that are the same type as being proposed or similar, if the same models are not available.

22 A copy of Tennessee's permit application is on file at Docket #CP87-358-001 (NOREX) under a request for confidential treatment. Upon receipt of the EPA permit, a copy will be furnished to Staff.

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G10-55 Recommendation 22 stands as written. If the information received by the Secretary of the Commission is identified as confidential, it will be treated as such.

48 Tennessee does not agree with drilling mud being stored only in nonleaking covered tanks or similar containment

56

G10-56 Our DEIS recommendation 48 does not refer to storage of dry packaged mud constituents but to storage of the wet muds used during drilling. Our observations of various drilling operations have indicated that it is not unusual for drilling fluids to be placed in the ground in unlined pits with no dike or other containment structures. As Tennessee has indicated, we would review storage and containment procedures for drilling fluids in the construction plan.

facilities. This requirement is vague and impractical. First of all, the drill mud will be delivered to the job site in a dry form package in 90 lb. bags. The mud will then be added to a mixer and injected into the drill hole. A dike will be established around the enter and exit points of the drill string to contain the mud during drill operations. After the pipeline is installed in the drill hole, excess mud will be hauled and disposed of at approved landfills. The details concerning the storage and containment of the mud is best addressed in the construction plan. Tennessee will file a Niagara Crossing Plan with OPPR. 56

49 Tennessee will consult MNHESP regarding common moorhen nesting sites. Tennessee does not believe that OPPR approval should be required for route changes within 660 ft. 57

G10-57 Comment noted. See response to G10-38 concerning 660-foot corridor.

50 Tennessee agrees to survey for many fruited loosestrife, except for slight route changes (see 49 above). 58

G10-58 See response to G10-57.

51 Construct across Longmeadow Brook in February to avoid Burbot. Tennessee is presently working out the details of this crossing with state agencies. In addition, Tennessee is preparing a Environmental Report under the 59

G10-59 Thank you for your comment.

Massachusetts Environmental Policy Act, which takes this crossing into consideration.

52 Tennessee agrees to consult MNHESP regarding the survey of North Pond Tributary, for American Brook Lamprey, except for slight route changes (see 49 above).

53 File mitigation Plan for Fannie Stebbins Wildlife Refuge. Tennessee disagrees with obtaining OPPR approval, because the state controls the process and a mitigation plan is being developed in conjunction with state agencies.

54 Schedule of constructions in the vicinity of the Wolf Swamp and Elmwood Schools. See responses for page 5-94.

55 Schedule for construction at golf courses. See response for page 7-6 above.

CONCLUSION

Tennessee expresses its support of staff's conclusion that the Niagara Import Point Project will have limited environmental impact and will be an environmentally acceptable nation. However, to prevent unjustified delay's in construction and needless cost increases, Tennessee urges

60 G10-60 See response to G10-57.

61 G10-61 Fannie Stebbins Wildlife Refuge is a National Natural Landmark. The Commission reserves the right to review and approve the mitigation plan.

62 G10-62 See comment response G10-26.

63 G10-63 See comment response G10-25.

Staff to incorporate the comments set forth above in the Final Environmental Impact Statement for this project.

Respectfully Submitted,

Tennessee Gas Pipeline Company

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TENNESSEE
APPENDIX C & D COMMENTS

Tennessee has provided a number of comments on our recommended Erosion Control, Revegetation, and Maintenance Plan (appendix C), and Stream and Wetland Construction and Mitigation Procedures, (appendix D). We have reviewed and discussed these comments in section 5.1.2 and in sections 5.1.3.2.1 and 5.1.7.2, respectively. Because of the volume of material, Tennessee's comments on these appendices are not reprinted here.

Niagara Project

CERTIFICATE OF SERVICE

I hereby certify that I have, on this 30th day of April, 1990, served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Derrick A. Hobson

Derrick A. Hobson

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