



Entergy Nuclear Generation Company
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360

J. F. Alexander
Director
Nuclear Assessment

ENV1.00-002
February 14, 2000

NPDES Programs (SPA)
U.S. Environmental Protection Agency
P.O. Box 8127
Boston, MA 02114-8127

Massachusetts Department of
Environmental Protection
Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02347

2000 MARINE FISHERIES MONITORING PROGRAMS AND PLANS

Gentlemen:

In accordance with NPDES Permit No. MA0003557 (Federal) and No. 359 (State) for Pilgrim Station, the 2000 Marine Fisheries Programs and Plans are submitted by Entergy Nuclear Generation Company for your approval. This submittal is made in accordance with Part 1, Paragraph 8d, of the above-referenced permit and supplements and expands on our previous submittal of 12/27/99 for 2000 environmental monitoring.

In addition to the programs detailed in our letter of 12/27/99, the 2000 Marine Fisheries Program will include:

- Tagging, release, and tracking of juvenile winter flounder (~ 6 months old), provided by a hatchery to determine wild survivability in comparison with natural population.
- Use of historical winter flounder data as input parameters to various applied biological models to assess PNPS impact. The models to be used will include Production Foregone, Mixed, and Reproductive Potential.
- Winter flounder larvae field sampling studies and assessment in regards to winter flounder larvae entrained in relation to real-time abundance off PNPS. The area to be sampled will include the discharge canal and PNPS coastal waters to a depth of ~ 120'.

~~COO1~~
COO1

Some members of the Pilgrim Administrative – Technical Committee (PATC) believe the scope of biological monitoring and modeling programs should be expanded beyond that proposed in this letter by Pilgrim Station. Generally, these members propose that winter flounder area swept population estimates be continued and that population impact modeling exercises for several species, other than winter flounder, be included in the 2000 Pilgrim Biological Monitoring Program. Pilgrim does not agree for the following reasons:

Winter Flounder Area Swept Population Estimates:

Area swept sampling has been performed since 1995. The results are used with equivalent adult analysis in attempts to present the environmental impact of Pilgrim's operations three years earlier than the analysis allows. Pilgrim's design and operational profile remains essentially unchanged after 25 years of operation and results from analysis projections vary widely. No consistent correlation between environmental impact on adult population and plant operations has become evident after 5 years of analysis, and recent RAMAS population impact modeling on winter flounder for Pilgrim has shown a < 5% impact. Another perspective is that the uncertainties associated with sampling statistics and population analysis assumptions render current methods marginal in predicting Pilgrim's specific impact. Larger area population impact, sampling gear inefficiencies, untrawlable habitat, and biological density dependent compensation are examples of factors that are difficult to account for in the impact assessments and also have large uncertainties. Furthermore, the absence of accurate assessments of other potential impacts, such as overfishing, on fish populations renders the conclusions of 3 year projection impact analysis questionable at best. Therefore, Pilgrim believes that continuing to collect fish population data from a limited impact area to feed prospective impact analysis is non-productive. Such impact assessment methods have not provided and can not provide current real-time results. Resources are better applied to monitoring protocols and impact assessments with fewer uncertainties. We believe the proposed "larvae on larvae" impact assessment program is less susceptible to the uncertainties that affect adult equivalent assessment/area swept comparisons and will be a more effective and realistic tool to assess Pilgrim's environmental impact on a real-time basis.

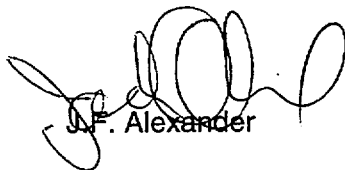
Various Population Models for Several Species:

Some PATC members have proposed the scope of population impact modeling be expanded to include cunner, Atlantic mackerel, Atlantic menhaden, Atlantic cod, and Atlantic herring. With the exception of cunner, which has been assessed for minimal impact by recent recruitment studies, these species are migratory and widely dispersed and, therefore, highly unlikely to be significantly impacted by Pilgrim plant operations. The absence of evidence of significant plant impact on these species is supported by 25 years of biological monitoring data. As a further consideration, the availability of biological parameters necessary for impact models of these species may not be readily available or exist, and adult equivalent analysis for them is ongoing which will provide additional impact information. Requiring such modeling

would commit Pilgrim to an expensive long term and potentially fruitless research agenda for input data. Otherwise, baseless assumptions would have to be proposed to feed models which by their nature have uncertainties associated with them. Pilgrim believes the results of these additional species population impact modeling is unwarranted and of little incremental value in predicting Pilgrim's impact.

If there are any questions concerning the attached programs and plans, please do not hesitate to call Mr. Robert Anderson (508-830-7935).

Sincerely,



J.F. Alexander

RDA/

cc: U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Senior Resident Inspector
Pilgrim Nuclear Power Station

Mass. Dept. of Environmental Protection
Office of Watershed Management
627 Main St.
Worcester, MA 01608

Mr. Nicholas Prodany
U.S. EPA
Region I, Industrial Permits Section
JFK Federal Building
Boston, MA 02203