



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
631 PARK AVENUE  
KING OF PRUSSIA, PENNSYLVANIA 19406

JAN 20 1978

Niagara Mohawk Power Corporation  
ATTN: Mr. R. R. Schneider  
Vice President  
Electric Operations  
300 Erie Boulevard West  
Syracuse, New York 13202

Gentlemen:

Subject: Iodine Pathway Study

The Nuclear Regulatory Commission's Office of Inspection and Enforcement is currently working on a study to determine the feasibility of using routine licensee monitoring data to evaluate the predictive models for the environmental transport of radioiodine (specifically I-131) through the air-grass-cow-milk chain. We are considering cases where elevated concentrations of radioiodine have appeared in milk samples. A search of licensee environmental monitoring reports has identified thirty-eight such cases. Enclosure 1 lists those cases of interest for your Nine Mile Point facility. We believe that such a perspective study will be valuable in gaining a better grasp of the accuracy of the current model and will assist in understanding some of the mechanisms which affect the movement of iodine through the chain.

In order to accomplish these objectives we will need the detailed effluent release, meteorological, and dairy (goat) farm data which are specified in Enclosure 2. We request your cooperation in providing this information. Please send the requested information to this office within thirty (30) days.

If there are any questions or additional information needed, please contact J. Philip Stohr of this office.

Sincerely,

Boyce H. Grier  
Director

Enclosures: As Stated

may



Niagara Mohawk  
Power Corporation

2

cc w/encl:

T. E. Lempges, General Superintendent, Nuclear Generation  
T. J. Perkins, Station Superintendent  
C. L. Stuart, Operations Supervisor  
E. B. Thomas, Jr., Esquire  
A. Z. Roisman, Counsel for Citizens Committee  
for Protection of the Environment

bcc w/encl:

IE Mail & Files (For Appropriate Distribution)  
Central Files  
Public Document Room (PDR)  
Local Public Document Room (LPDR)  
Nuclear Safety Information Center (NSIC)  
Technical Information Center (TIC)  
REG: I Reading Room  
~~Region Directors (III, IV)~~  
State of New York  
A. Z. Roisman, Counsel for Citizens Committee for  
Protection of the Environment



## ENCLOSURE 1

FACILITY NINE MILE POINT

<u>DATE OF SAMPLE</u>	<u>I<sup>131</sup> CONTENT IN MILK (pCi/l)</u>	<u>LOCATION</u>
7/22/75	0.78 $\pm$ .38	#1
7/22/75	1.08 $\pm$ .19	#2
7/22/75	2.61 $\pm$ .29	#3
9/22/75	1.70 $\pm$ .14	#2
9/22/75	0.04 $\pm$ .11	#3
9/22/75	2.99 $\pm$ .20	#4



## ENCLOSURE 2

### INFORMATION REQUIRED FOR IODINE PATHWAY SURVEY

For the cases listed in Enclosure 1, the following detailed (day-by-day/hour-by-hour) information is needed. For items 1 and 2, it would be helpful to have the data for a period of two weeks prior to the elevated milk results and for one week after.

#### 1) Gaseous I-131 Effluent Releases

- a) Height(s) of release.
- b) Minimal cross sectional area of surrounding buildings if release is not from a free-standing stack.
- c) Heat emission rate of release.
- d) Duration of release.
- e) Exit velocity of release at vent and stack.
- f) Inside diameter of stack vent where release occurred.
- g) Any documented, short-term, peaked releases during period of interest.
- h) If release is given as an average value, the maximum and minimum values for the period of interest are needed.

#### 2) Meteorology

- a) Wind speed (at height(s) of release, preferably).
- b) Wind direction (at height(s) of release, preferably).
- c) Atmospheric Lapse Rate ( $\Delta t$ ):
- d) Dew Point.
- e) Precipitation (hourly, if possible).

#### 3) Dairy (Goat) Farm Particulars

- a) Pasturing methods.
- b) Unique or outstanding characteristics of the local terrain.
- c) Any other available and pertinent information.

