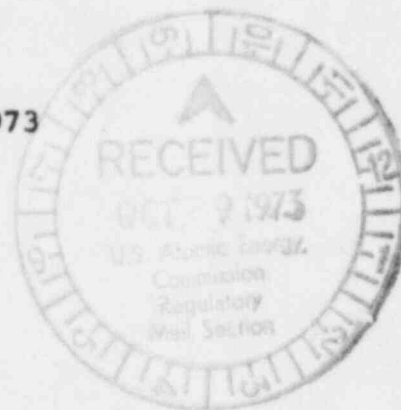




Commonwealth Edison  
One First National Plaza, Chicago, Illinois  
Address Reply to: Post Office Box 767  
Chicago, Illinois 60690

October 5, 1973



Mr. J. F. O'Leary, Director  
Directorate of Licensing  
Office of Regulation  
U.S. Atomic Energy Commission  
Washington, D.C. 20545

Subject: Quad-Cities Station Units 1 and 2 - Request  
for Review of Reactor Building Stack Effluent  
Limits - AEC Dkts 50-254 and 50-265

Dear Mr. O'Leary:

In the past four months the releases of iodine and particulate from the reactor building ventilation stack have been above the Technical Specification limit on 16 days. These releases had no measured effect on the iodine content of the milk from cows at the nearest pasturable land or any milk sampling location. This was determined from our weekly milk sampling test results. It is concluded that the Technical Specification release rate limit for iodine and particulate effluents from the reactor building ventilation stack is unnecessarily restrictive and should be reviewed by your staff.

Our ability to take prompt corrective action on the day of a release in excess of the rate specified in Section 3.8.B.3.a is very limited. If an increase in the release rate is suspected based on an increasing CAM reading or discovery of a leak, the vent system can be isolated and the Standby Gas Treatment System initiated. Frequently, however, the release is not known to exist until the iodine sample cartridge is counted the next day or until the particulate sample is analyzed three days after the high release rate occurred. Even if the release could always be detected immediately the effectiveness of the corrective action is questionable. The relatively low flow rate of the Standby Gas System cannot "clean out" the reactor building. If the release is detected quickly enough and the vent system isolated for the remainder of the day, we might avoid exceeding the LCO on that day. Due to the long lived nature of the isotopes,

8306140064 731115  
PDR ADOCK 05000254  
S PDR

7452  
III  
COPY SENT REGION

Mr. J. F. O'Leary

- 2 -

October 5, 1973

involved, however, it can be seen that we are only using the building as a large hold-up volume prior to eventual release. From our experience it is apparent that it takes 3 to 4 days after an occurrence before the release rate approaches what might be considered an equilibrium. During this period any event such as a minor leak or unit scram unavoidably puts the release rate over the limit again for that day.

Recent abnormal occurrences of this nature have clearly demonstrated the sensitivity of the vent stack release rate to the concentration of iodine in the reactor coolant. This is true even though the iodine levels during transients continue to be a small fraction (less than 10%) of the steady state limit of Technical Specification 3.6.C.1. This had the effect of increasing the contribution to the release rate of very minor leaks. This problem is also compounded by the relatively low capacity of the Quad-Cities reactor water cleanup systems. We expect that this problem will be magnified in the near future by a recent increase in the off gas activity on Unit 2 from about 5,000 uc/sec to 17,000 uc/sec at full load.

It is suggested that the following basis be used in this requested review. The present reactor building ventilation stack limit was calculated based on meteorological data for the most critical 22.5 degree section and a hypothetical cow pastured at the site boundary in the critical section. This location is north of the station where the boundary is approximately 1250 feet from the reactor building ventilation stack. Actually, the nearest pasturable land is not located at this location defined by the intersection of the site boundary and the critical 22.5° meteorological section. The nearest pasturable land is located approximately 5500 feet south of the reactor building ventilation stack. This is the location of the Saddle Club Farm.

The Saddle Club Farm extends from the southern boundary of Commonwealth Edison Company property at Quad-Cities Station, south, for 1.3 miles. The farm area consists of approximately 370 square acres, on both sides of Illinois Rt. 83.

There are 410 head of Swiss Dairy Cattle, 375 of which produce. The remaining 35 head are either dry or in a state of pregnancy. The farm produces approximately 7,000 lb/day with the average output per head being 29 lb/day/cow.

Commonwealth Edison Company

Mr. J. F. O'Leary

- 3 -

October 5, 1973

The cattle are fed grain three times daily, and other than this, they are allowed to roam the farm's fields. They are in the field year round, only coming into the barns for milking.

Saddle Club Farm has a processing plant which handles only the milk produced at the farm. It is pasturized and processed into butter, ice cream, cottage cheese, and the full line of dairy products. These are sold through the plant's outlet and to groceries within the immediate area on both sides of the river.

The cattle are fed an average of 15 pounds of grain/day and 30 pounds of hay/day/head.

The attached drawing shows the location of the Final Safety Analysis Report (FSAR) site boundary, all Commonwealth Edison Company owned land contingent to the Quad-Cities site, the reactor building ventilation stack and the Saddle Club Farm northern boundary.

It is requested you recalculate the reactor building ventilation stack iodine particulate effluent limit, Technical Specification 3.8.B.3.a, based on the nearest pasturable land as the north boundary of the Saddle Club Farm. It is our estimate that using this basis the effluent limit can be raised by a factor of five (5). If your review results in a recalculated Technical Specification limit based on the nearest cow at the Saddle Club Farm we propose the following measures to ensure the environmental effects remain insignificant. As indicated on the attached drawing, all hypothetically pasturable land between the Quad-Cities Station and the Saddle Club Farm is owned by Commonwealth Edison Company. To verify that the Saddle Club Farm is the nearest land used for pasturing milk cows, a survey will be conducted annually during the grazing season. To verify that there is no measurable effect of an increased Technical Specification limit, the milk sampling program at the Saddle Club Farm will be continued on a weekly basis for the first year of operation with increased effluent limits.

Commonwealth Edison Company

Mr. J.F. O'Leary

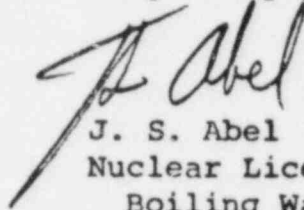
- 4 -

October 5, 1973

This matter is of significant importance to warrant your prompt response. If you have any questions or comments concerning this request, we are available to meet with you at your earliest convenience.

One signed original and 39 copies of the request for review are submitted.

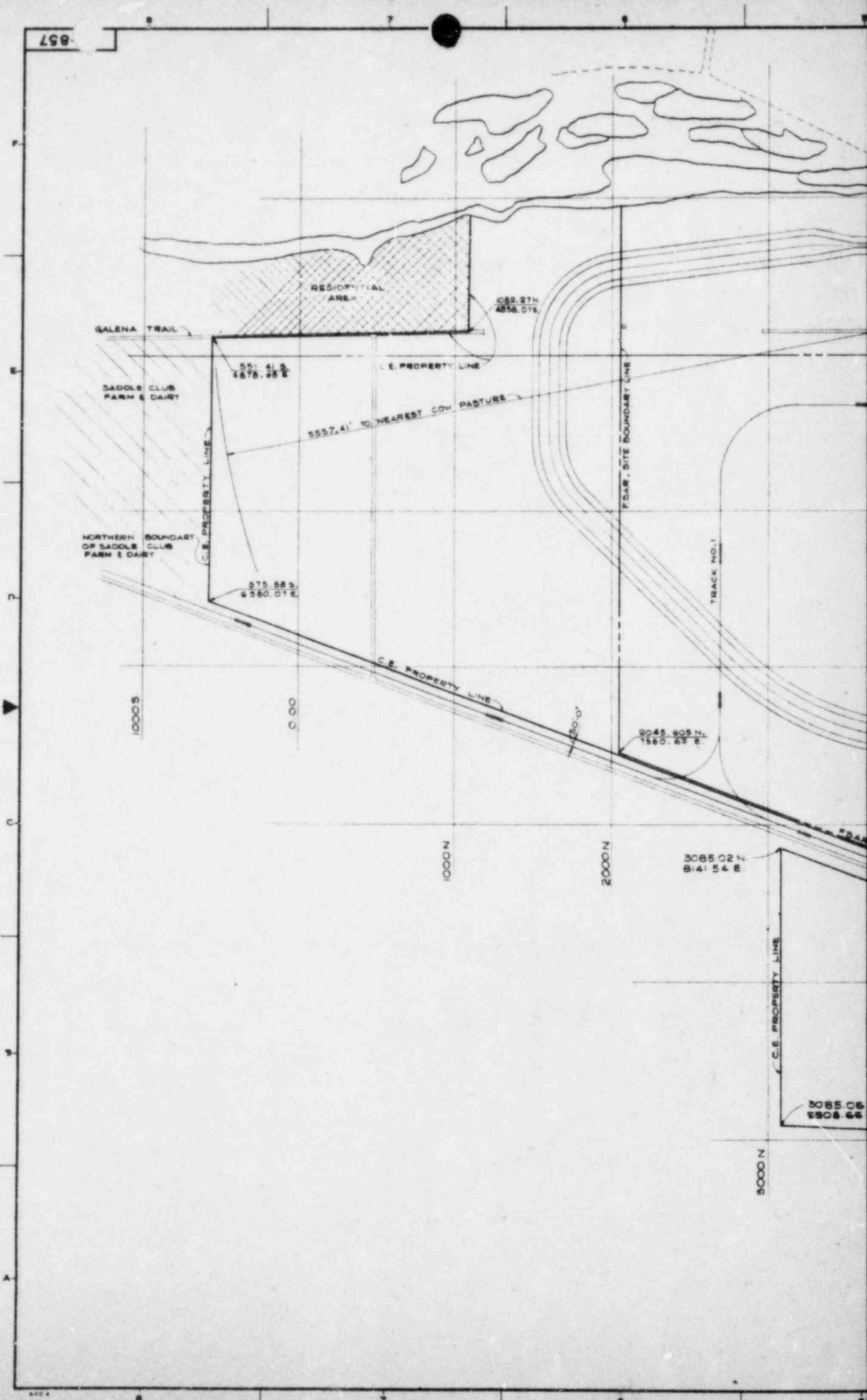
Very truly yours,

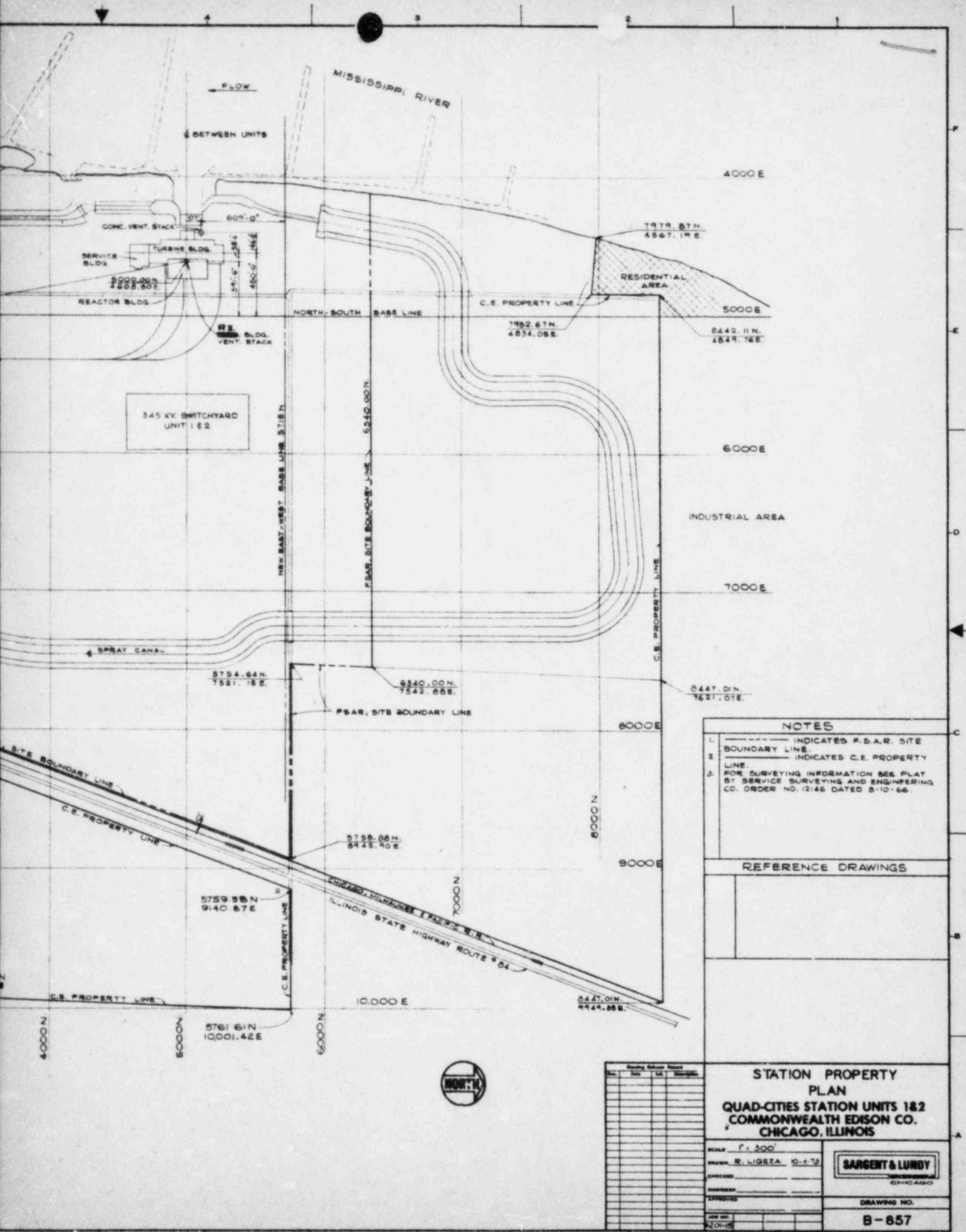
A handwritten signature in dark ink, appearing to read "J. S. Abel", is written over the typed name.

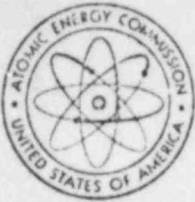
J. S. Abel

Nuclear Licensing Administrator  
Boiling Water Reactors

Attachment







UNITED STATES  
ATOMIC ENERGY COMMISSION  
DIRECTORATE OF REGULATORY OPERATIONS  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

TELEPHONE  
(312) 858-2660

RO Files

NOV 12 1973

LOCAL PUBLIC DOCUMENT ROOMS

Enclosed are copies of documents listed below relating to  
Commonwealth Edison (Quad Cities 1), Docket  
No(s). 50-254.

TXW Notification of Incident dated October 3, 1973.

This correspondence is submitted pursuant to arrangements made by  
the Public Proceedings Branch, Office of the Secretary, for use by  
the public.

Where possible, these materials should be punched and filed in a  
folder labeled as follows:

CORRESPONDENCE TO AND FROM APPLICANT OR LICENSEE  
(Excluding Environmental and Antitrust)

*James G. Keppler*  
James G. Keppler  
Regional Director

Enclosures:  
As noted above

cc: Washington Public Document Room, w/encl  
Central Mail & Files Unit, Document Room Clerk, w/o encl

*Wait  
50254*