

Aug. 87

For: The Commissioners

From: Victor Stello, Jr.
Executive Director for Operations

Subject: LICENSE RENEWAL FOR THE RADIATION TECHNOLOGY,
INC., IRRADIATOR FACILITY AT ROCKAWAY, NEW JERSEY

Purpose: To advise the Commission of the staff's intent to renew the license for operation of the Radiation Technology, Incorporated (RTI) irradiator facility at Rockaway, New Jersey for a 2 year period; in light of: (1) the staff's evaluation of RTI performance relative to the Rockaway facility during the probationary period of August 22, 1986, to February 28, 1987; (2) subsequent developments that have delayed staff action on RTI's application for license renewal; and, (3) the resolution of the City Council for Elizabeth, New Jersey, urging that the NRC reject continued licensing of any RTI facility.

Discussion: The Commissioners were previously informed of staff actions pertaining to RTI in SECY-86-93, dated March 21, 1986, and SECY-86-179, dated June 16, 1986. In addition, the NRC Office of Investigations (OI) has issued three reports on their investigations regarding RTI (Case No. 1-84-026, dated June 9, 1986; and Case Nos. 1-86-006 and 1-86-009,

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dated October 21, 1986). A summary of NRC actions relative to RTI from 1977 to August 1986 is included as Enclosure 1. On August 22, 1986, RTI's Material License No. 29-13613-02 was renewed for a probationary period of six months by Amendment 19, which expired February 28, 1987. During this six month probation the Commission required that the staff take the following actions:

- a. The staff was to schedule additional inspections to evaluate the licensee's performance, and to establish a frequent NRC presence.
- b. The staff was to meet, as necessary, with RTI employees to strongly convey the seriousness with which NRC views the company's past actions, and the necessity to demonstrate improvement as a condition for any further renewal of the license.
- c. The staff was to keep the Department of Justice informed of any actions that the Commission plans relative to RTI.

Details of the staff's actions relative to these measures are provided in Enclosure 2. In summary, 13 inspections of RTI's operations at the Rockaway facility were performed during the probationary period; a meeting was conducted with employees of RTI at their facility by the Director, Office of Inspection and Enforcement and the Regional Administrator, Region I to discuss NRC's concerns; and, the staff has kept the Department of Justice informed through contacts with the Office of Investigation.⁵

The performance of the licensee during the probationary period was evaluated by a SALP Board on February 20, 1987. The Board concluded that further strengthening in licensee programs was needed in preventive maintenance, quality assurance and procedure adherence, but that the licensee's performance was generally satisfactory. Management attention and involvement in facility operations was evident, radiological safety activities were appropriate, and the licensee demonstrated the interest and capacity to continue program performance improvements. Based on these observations, the staff was prepared to request Commission consent to renew RTI's license. However, two significant issues developed which had the potential to alter the bases upon which the SALP Board's conclusions were predicated. First, RTI made substantive changes in the management and staffing of the licensed program. The ability and desire of the resulting

organization to sustain improvements in the licensed program and facility, and the corporate support for those actions was unknown. Second, information initially provided by the licensee to the NRC, and subsequently supported by others, suggested that radioactive material may have been improperly buried in the past on the RTI property in violation of NRC requirements. The staff determined that the ramifications of these issues would have to be understood before any action could be taken with regard to the license renewal. RTI's license for the Rockaway facility has been maintained active under timely renewal as permitted by 10 CFR 2.109 to enable the staff to evaluate these concerns.

In the interim, Region I staff has continued to perform frequent and comprehensive inspections of licensed activities to monitor RTI's performance. These inspections have included sustained observations of licensee radiation safety activities, lengthy discussions with operators, supervisors and managers, review of licensee records and logs, and efforts to characterize the implication and extent of buried radioactive materials.

With regard to the issue of organization, the Vice President of Operations and Engineering/Radiation Safety Officer, who was in charge of operations during the probationary period, resigned on March 31, 1987. Subsequent to his departure, RTI adopted a new austere fiscal policy. While RTI maintains that licensed activities will not be adversely affected, the staff notes that, on April 2, 1987, RTI discharged and apparently does not intend to replace, two members of the engineering support staff. Further, personnel hired in the probationary period ^{to} ~~for the purpose of enhancing~~ the quality and implementation of personnel training and qualification were similarly terminated. These terminations and new fiscal policy are of concern to the staff in light of the history of electrical and mechanical problems that have been experienced with the aging Rockaway irradiator, the proffered explanation of past transgressions relating to the level of operator training and past management pressure on them to maintain production levels despite an unreliable safety interlock system, and the fact that the engineering support staff was charged with implementing a program of reestablishing the ability of the facility to operate reliably. Despite these problems, the new Vice President of Operations and Engineering/Radiation Safety Officer appears to have assumed the leadership role in sustaining the improvements initiated by his predecessor.

To date, the performance of the licensee staff, their apparent candor with NRC inspectors and the condition of the facility continues to improve; although, not at the pace previously observed.

Recently the staff was informed by the licensee that the President and Chairman of the Board of RTI had resigned, reportedly for personal reasons. The Treasurer of the company is currently acting President awaiting action by the Board of Directors to appoint a new senior executive.

The issue regarding buried radioactive material was initially raised by the licensee in information provided to the NRC on December 24, 1987, following their discovery of buried radioactive waste. In response to this issue, the staff requested that the licensee perform preliminary exploratory excavations. As a result, several items containing radioactive materials were uncovered. While this material was allegedly buried under the direction of individuals previously involved with RTI, the licensee has been unable to produce required records describing the burials. Under the guidance of Region I staff, the licensee has initiated actions to characterize the form and extent of this radioactive material and to develop plans for removal, containment and

disposal of this material, as appropriate. The cooperation of the licensee in working with the staff to determine the extent of the problem with buried radioactive material has been noteworthy.

RTI's past performance and their published plans to construct another facility at the Port of Elizabeth was a major concern to the city of Elizabeth, New Jersey. At the city's request, the Region I staff met with city officials on January 29, 1987, and explained the NRC's role in licensing and inspecting RTI's facilities. The city representatives voiced their objections to any construction of a facility in Elizabeth and the continued licensing of the facility in Rockaway. To this end, the Elizabeth City Council adopted a resolution of February 10, 1987, strongly urging the NRC to reject continued licensing of any of RTI's facilities, and requested that this resolution be submitted to and considered by all of the Commissioners in connection with activities pertaining to continued licensing of RTI's Rockaway facility. The letter requesting this consideration is included as Enclosure 3.

While the City of Elizabeth's concerns relative to RTI are understandable, the bases for the resolution pertain~~s~~ to matters already addressed by the NRC, and on which the Department of Justice is currently engaged in prosecutorial review. Furthermore, since receipt of this resolution, RTI has abandoned plans to construct the facility in Elizabeth, ^eNw Jersey. Consequently, the staff believes that the resolution should not effect the continued licensing of RTI's Rockaway facility.

In light of the evolving situation at RTI, the staff is not prepared to issue a full five year term license for the facility. The NRC could continue to allow operation under timely renewal until sufficient experience and information can be accumulated to provide a basesⁱ for predicting how the licensee will perform in the long run. However, a condition in the current license restricts promotion to management positions of several, more experienced RTI employees, due to concern regarding their possible contribution to previously identified problems. Balanced with the recent reduction in staff, this condition could impede continued improvement of performance.

Taking these factors into consideration, the Region I staff believes that the most appropriate action is to issue a license renewal for a two year interval, with conditions incorporated to relieve specific personnel restrictions currently specified, and to effect characterization and control of buried radioactive materials, including any ^{radioactively} contaminated soil.

The staff is now and intends to continue conducting frequent inspections of the RTI facility. Inspection activities at RTI's new facility in Salem, New Jersey, have also recently been increased, since the personnel and fiscal policy changes identified affect both operations.

Recommendations: That the Commission:

1. Approve a two-year renewal of RTI's license for the Rockaway, New Jersey facility in order to provide the staff an opportunity to monitor and reevaluate performance during normal operation.

2. Note the license conditions the staff intends to require of RTI to address the staff's concerns with the Rockaway facility, especially in regard to radioactive waste material and contamination present at the facility site. Proposed correspondence to RTI, transmitting the renewed license and associated Safety Evaluation Report, is enclosed (Enclosure 4). The staff intends to send this letter within 10 working days of the date of this paper unless otherwise instructed by the Commission.

Victor Stello, Jr.
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Enclosures:

1. Summary of NRC actions relative to RTI, prior to August 1986
2. Details of staff actions relative to RTI during the period of probation
3. Letter from the City Council for Elizabeth, New Jersey
4. Draft letter to RTI including license renewal and Safety Evaluation Report

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ENCLOSURE 2

Details of Staff Actions Relative to RTI During the Period of Probation

The following discussion provides details on staff efforts August 1986 to present, including the six month period of probation (August 1986 to February 1987). The details presented in sections A, B and E address the staff actions required by the Commission during the probation period. These actions were specified in the memorandum for Victor Stello, EDO, from Samuel J. Chilk, Secretary, dated August 8, 1986.

- A. Additional inspections to evaluate the licensee's performance, and to establish a frequent NRC presence.

During the six month period of probation, the staff conducted 13 inspections at RTI's irradiator facility in Rockaway, New Jersey. These inspections were performed in accordance with the inspection plan described in Attachment 1. In order to fully evaluate the licensee's performance from these inspections, the staff elected to use a Systematic Assessment of Licensee Performance (SALP).

The SALP process is generally not used to evaluate the performance of material licensees. This is primarily because the number of inspections of a material licensee over a given time period is usually not sufficient to provide an adequate data base on which to qualify performance. However, the 13 inspections performed at RTI in this six month period provided sufficient information to support SALP evaluation. The SALP report, included as Attachment 2, describes the staff's assessment of the licensee, and their qualitative judgment of the licensee's performance during this period.

The SALP Board determined that, while some areas needed strengthening, such as preventative maintenance, quality assurance, and adherence to in-house procedures, the licensee's performance was satisfactory. In general, management attention and involvement were deemed to be evident and appropriately directed toward radiological safety. At the time of this assessment, the Board was of the opinion that the licensee had the interest and capacity to continue to improve program performance.

- B. Meetings with RTI employees to convey the seriousness of RTI's past actions and need for improvement as a condition of to license renewal.

On September 15, 1986, Mr. James M. Taylor the Director of the Office of Inspection and Enforcement, Dr. Thomas Murley the Regional Administrator for Region I, and Mr. Thomas T. Martin the Director of the Division of Radiation Safety and Safeguards for Region I, addressed RTI employees associated with the Rockaway facility and several RTI corporate officers. The purpose of this meeting was for the staff to strongly convey the seriousness of the company's previous actions regarding willful disregard of NRC regulatory requirements, and the need to demonstrate improved performance in order to regain the confidence of NRC, as a condition for license renewal.

The effectiveness of this meeting was apparent to NRC inspectors in subsequent inspections of the facility. The licensee's attitude and sensitivity to operating in accordance with regulatory requirements was observed to have greatly improved. Conservatism with regard to facility operation was routinely exhibited. In addition, RTI employees were noted to be open and frank about problems encountered and kept the NRC Region I Office fully informed of anomalous occurrences and deficiencies.

C. Staffing changes subsequent to the SALP review.

Since the SALP review changes were made in RTI's organization that could affect the bases for the Board's decision and could adversely impact improvements gained and expected in RTI's radiation safety program. The first significant change was the resignation of Dr. Robert Cockrell, the Vice President of Operations and Engineering/Radiation Safety Officer during the assessment period. As noted in the SALP report, Dr. Cockrell was instrumental in bringing about the significant program improvements observed, and consequently enhanced the credibility of the RTI organization in the view of the staff. While his replacement is reportedly capable and has so far been responsive and demonstrated attention to radiological safety matter, NRC has not had the opportunity to evaluate his impact on the program.

Compounding the possible effects of this staff change, on April 2, 1987, there was a significant reduction of the engineering support staff in the organization. Furthermore, personnel hired during the probation period to enhance the personnel training and qualification program were terminated. The staff has detected that the abruptness with which this personnel reduction was executed may have adversely impacted the morale of the remaining employees and therefore may also affect performance. RTI maintains that licensed activities will not be adversely affected, however this has yet to be observed by NRC staff.

In addition, the staff was recently informed by RTI that the President and Chairman of the Board has resigned, reportedly for personal reasons. The Treasurer of the company is the acting President until the Board of Directors appoints a new senior executive. The affect of this change uncertain.

While the reductions in staff do not directly effect regulatory compliance, since none of the affected positions are identified in the license, many of the observations noted in the SALP report were predicated on: (1) the existence of sufficient technical depth in the organization to address the engineering and design problems that had been an ongoing problem at the Rockaway facility; (2) the licensee's commitment to improve the quality of personnel training; and (3) management's intent to continue to strengthen its oversight and control of licensed activities. Current observations have not revealed any deterioration in program performance, however, the staff continues to monitors performance to determine if the changes deter implementation and maintenance of the safety program for licensed activities.

D. Identification of buried radioactive material.

On December 24, 1986, Dr. Robert Cockrell informed Region I that exploratory excavations had been made in an effort to locate possible radioactive waste containers whose burial and location were indicated to him in conversation. A plastic bucket had been unearthed and, though it did not contain radioactive material, Dr. Cockrell did detect radiation levels approximately 40 times background at the bottom of one excavation. Soil

and water samples subsequently taken from the same excavation revealed no radioactive contamination. Based primarily on the lack of radioactivity observed in monitor wells around the site, the staff concluded that an immediate public health and safety concern did not exist. Therefore, in consideration of poor weather conditions, no immediate action was taken.

On March 9, 1987, the Office of Investigations provided documents to Region I staff that had been obtained during investigation of matters related to RTI. These documents identified the apparent location of buried radioactive material in the same vicinity as the excavations directed by Dr. Cockrell. Subsequently, additional documentation was provided by the licensee that appeared to show burial of materials may have occurred. These documents indicated that material was supposedly buried between 1976 and 1977, unearthed and then reburied between 1981 and 1982. In addition, Region I staff interviewed several individuals previously associated with RTI who revealed that radioactive material may have been improperly stored or disposed of on RTI property without proper controls or restrictions.

In light of Department of Justice's interest in RTI activities and this new information, Region I accelerated actions to characterize the RTI's property and determine the extent of buried radioactive material for removal, storage, and/or disposal, as appropriate. A Confirmatory Action Letter (CAL) was negotiated with the licensee and issued on March 24, 1987 (Attachment 3). The CAL documented the licensee's commitment to conduct a comprehensive survey and to characterize selected portions of the property ~~relative to the potential for buried radioactive material.~~

Region I contracted technical assistance from Oak Ridge Associated Universities (ORAU) to survey the unrestricted portions of the RTI property (about 250 acres), in an effort to identify the presence of any radioactive materials that may have been stored or disposed of in that area. This effort was initiated on April 13, 1987, and resulted in the discovery of some items containing low level radioactivity, but nothing determined to be of significant health and safety concern.

Currently, the Region I staff, with the cooperation of the licensee, is performing limited exploratory excavations to characterize the extent of buried radioactive materials, including contaminated soil. Several containers of radioactive material have been unearthed, one from which radiation measurements were as high as 200 millirem per hour at contact. Following an analysis of these findings and evaluation of the licensee's proposal for remediation, the staff will make a determination relative to the need to comprehensively excavate and extract any remaining buried radioactive material. The licensee has already initiated efforts to consolidate and properly dispose of radioactive waste materials previously unearthed. Since the State of New Jersey has a mutual interest in RTI relative to the disposition of hazardous chemicals, the NRC staff has been coordinating these activities with the state.

- E. Inform the Department of Justice of any actions that the Commission plans relative to RTI.

During the probationary period, the staff kept the Department of Justice informed of any actions or events relative to RTI and the Rockaway facility, including information concerning buried radioactive material as it became available. All significant information has been communicated to the Department of Justice through the Philadelphia Field Office for the Office of Investigation.

Attachments:

1. Inspection plan for RTI
2. Systematic Assessment of Licensee Performance (SALP) for RTI
3. CAL documenting RTI's commitment to characterize possible buried radioactive materials