



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

IEKH

50-322

REGULATORY DOCKET FILE COPY
AUG 12 1980

Mr. Leighton K. Chong
464 West Broadway
New York, N. Y. 10012

Dear Mr. Chong:

This is in response to your letter dated May 20, 1980 to Mr. James Allan, Deputy Director of the USNRC Region I, to a similar letter dated May 27, 1980 to Congressman Fuqua, and a third dated July 10, 1980 to Mr. Jerry Strickler of our Office of Inspector and Auditor. All three letters documented your criticisms of the NRC's conduct of an investigation and the findings contained in IE Investigation Report No. 50-322/79-24 relative to allegations of construction irregularities at the Shoreham Nuclear Power Station.

As noted in Congressman Fuqua's response letter to you of June 12, 1980, Congressman Fuqua requested the Chairman of the NRC to initiate further investigative action to "assure that a thorough inquiry will have been made into this matter". In response to this request, the NRC's Office of Inspector and Auditor was directed to conduct further inquiries. Our response to your letters has been delayed until these additional inquiries were completed.

Prior to the involvement of the Office of Inspector and Auditor, the Investigation Report was subjected to a technical review by the Headquarters staff. This review identified five areas questioning the appropriateness or accuracy of the conclusions. These have been documented in memoranda between Region I and the Headquarters' staff. Copies of these memoranda (Enclosures 1, 2 and 3) are enclosed for your information. In our judgment the technical issues have been properly addressed and no substantive evidence was identified that would support the specific allegations.

With respect to your charges relating to the conduct of the Office of Inspection and Enforcement's investigation, the Office of Inspector and Auditor failed to find evidence to support such charges. Conclusions by that Office are documented in memoranda from James J. Cummings to Dudley Thompson, dated July 8, 1980 and from Roger Fortuna to Dudley Thompson, dated July 18, 1980. Copies (Enclosures 4 and 5) are enclosed for your information.

In summary, we believe that the allegations received a responsible investigation. This is further supported by the findings of the Office of Inspector and Auditor. Since the investigation failed to identify specific or substantive evidence to support the allegations, it is our judgment that there is no threat to the public safety for the reasons alleged. Nevertheless I

THIS DOCUMENT CONTAINS
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COMMITTEE ON SCIENCE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES

SUITE 2321 RAYBURN HOUSE OFFICE BUILDING

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January 25, 1980

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Mr. Leighton K. Chong
Darby & Darby
405 Lexington Avenue
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Dear Mr. Chong:

Thank you for your letter of January 10, 1980 regarding the alleged defective construction of the Shoreham nuclear power plant in Long Island, New York. I am most interested in nuclear safety issues. I firmly believe that nuclear power plants must be made safe to operate through a combination of quality construction methods, adequate regulatory controls, and proper attention to operating skills and practices.

With respect to individual plants, the Congress relies to a great extent on the Nuclear Regulatory Commission to properly investigate allegations of improprieties. This is one of the reasons why this regulatory agency was created. However, the charges that your clients have made against the Long Island Light Company are, of course, very serious, and I firmly believe that the Federal Government should take action to fully investigate them. The Nuclear Regulatory Commission Office of Inspection and Enforcement has assured us that they intend to thoroughly investigate these allegations and to take the appropriate actions.

The Committee on Science and Technology has held hearings on the accident at the Three Mile Island nuclear power plant and its ramifications on nuclear safety. As you note, the President's Commission did conclude that, at the time of the accident, the Nuclear Regulatory Commission's policies could significantly be improved. Since the accident, however, the NRC has instituted substantial improvements to its approach to nuclear licensing, and is extremely cautious in regard to regulatory matters. As a result, I believe that its investigation of the charges made by your clients will be comprehensive in every respect.

As you may know, the question of whether a particular nuclear power plant is economically advantageous or not is, for the most part, a judgmental decision to be made by the utility building that plant and the local Public Service Commission. Since the federal role in determining the economics of a particular plant is very small, I do not believe it is a matter with

Mr. Leighton K. Chong
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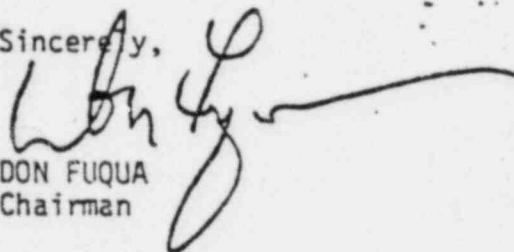
which I should become actively involved. However, I would note that overall, and for most of the eastern United States, nuclear power has been shown to be substantially less expensive than alternative energy sources. It is also desirable from a national security standpoint, because of its potential to reduce the importation and use of foreign oil.

The Shoreham plant cannot begin operation until it meets the safety criteria of the NRC, so there is no immediate threat to the health and safety of the public. I would, however, appreciate receiving any criticism that you may have regarding the breadth of the NRC investigation of your clients' charges.

I am taking the liberty of bringing this matter to the attention of the Ranking Minority Member of this Committee, Congressman John W. Wydler, who as you know is from Long Island. I am sure he will be interested in your letter and this response.

Thank you again for bringing this matter to my attention and for taking the time to submit such detailed information.

Sincerely,



DON FUQUA
Chairman

DF/Vwm

cc: Honorable John W. Wydler

in doubt that the reactor system could operate without a major accident, and is forcing responsible state and local authorities to consider undertaking an independent review of the construction, a step which should be unnecessary if the NRC were doing its job with integrity and commitment to public safety.

Sincerely yours,

Leighton K. Chong

cc: Dr. Charles Gallina

Jock McCrystal, a former weldrod control clerk at Shoreham who also testified about defects at the trial, has had a ladder suspiciously thrown or dropped near him from five stories up, has been the brunt of other intimidation at his workplace, and has also received threats on his life.

Dr. Gallina was advised of the above and expressed his inability to provide assistance or take remedial action.

Throughout its findings, the investigation evidences a greater interest in questioning the credibility or the understanding of the allegers than in getting to the bottom of the allegations. The shallowness of the findings suggests to me that perhaps the investigators themselves were under pressure to produce a whitewash for LILCO. The report goes to unseemly lengths to emphasize that none of the allegations were substantiated. However, a more objective interpretation would be that allegations Nos. 2, 5, 6, 14, 15, 16, 22, 23, and 30 were grounded in fact or inferrable from the overall context. Allegations Nos. 1, 3, 4, 7, 8, 9, 10, 27, 28 and 29 were insufficiently investigated, and Nos. 12, 13, 18, 24 and 26 were of a nature that justified the allegers' concerns. Allegations Nos. 17, 19, 20, and 21 were either too generally stated or misinterpreted for resolution. Finally, the findings in some cases differ markedly from the preliminary reports I received from the investigators on the progress of the investigation, indicating that substantial editing of the written findings has taken place.

In closing, I would strongly urge that the NRC correct the deficiencies in its findings and, further, consider the larger implications of the sorry history of labor practices and QA/QC deficiencies at Shoreham which the specific allegations highlight. As a further example of the necessity for a more conscientious NRC role, I note the recent arrest of a LILCO contractor's quality assurance inspector for selling marijuana during a lunchtime beer and pot party involving some 30 to 60 Shoreham construction workers. The fact that many workers are on the job stoned is well known to everyone except, apparently, the NRC and LILCO management. The response of a LILCO official was typical: just because the QA inspector was arrested for selling drugs off the site does not necessarily mean that the work on the site was deficient.

We, as does the general public, rely heavily upon the integrity of the NRC to take every step necessary to ensure the safe construction and operation of the nuclear power plant. The NRC's reluctance to aggressively regulate LILCO's construction practices is eroding public confidence in the NRC, is putting

Allegation No. 22

The NRC findings substantiate this allegation of severe problems encountered in tubing the condenser box. The investigators made no inspection of the tubes for gouging or potential fracture but relied instead on S&W documentation and limited visual inspection of tube ends. Although the condenser normally operates under vacuum, there are some types of system failures which could result in release of radioactivity into the cooling water from the Sound.

Allegation No. 23

This finding substantiates the allegation as to defective welding of the condenser box. No attempt was made by the investigators to examine the radiographic records for evidence of the alleged foreign objects found in the defective welds. Again, the NRC discounted the direct observations of welders who did the repair work and accepted the opinion of Field QC that there were no foreign objects problems.

Allegation No. 28

Comment on this NRC finding is reserved pending a further review of the data submitted by LILCO on soil liquefaction potential under the reactor building.

Allegation No. 30

The NRC finding on this allegation brazenly states that it found no evidence of pressure on construction workers not to come forward with information to the NRC.

This finding does not mention that John Everett, a carpenter who worked at Shoreham from 1973 to 1976, was removed from his position as shop steward by his union, was terminated by his employer, and has received anonymous threats on his life after he testified about construction problems at Shoreham during the trial in December 1979. At a hearing on a motion for preliminary injunction in a suit by Mr. Everett for reinstatement, Dr. Gallina testified under subpoena from Mr. Everett's attorneys that it is not uncommon for workers in Mr. Everett's position to feel that kind of pressure. Other construction workers who were asked to testify at Mr. Everett's hearing refused to do so because they were afraid of losing their jobs. Mr. Everett's suit is still pending.

large-scale repair of 10 linear feet of weld is exactly the kind of irregularity in the construction which puts in doubt the efficacy of the quality control program and the safety of the reactor system when it is operated under the stresses of actual operating conditions.

Allegation No. 14

The allegation is that S&W, formerly the lead contractor on the construction project, was relieved of its responsibilities when it could not control the deficient performance of sub-contractors, such as Regor and Courter, which LILCO insisted on using. During the period from September 1977 through August 1978, fundamental shifts occurred in project management, including assumption of lead role by LILCO and/or UNICO and relegation of S&W to lesser, engineering duties, departure of Thomas Burke and arrival of Joseph Novarro as project manager, and the Booz-Allen audit ordered by the PSC for LILCO of the construction at Shoreham. The NRC report is silent as to why these changes were made and how they related to the questions concerning cost overruns, delays, and extremely low worker productivity.

Allegation No. 15

As noted in the NRC findings on allegations Nos. 12 and 13, hydrotesting of the system revealed a 10 foot crack in the turbine condenser welding and caused water leakages to reach the 8 foot level in the secondary containment. A hydroflush on June 13, 1979 resulted in at least a blown gasket in the core spray system. The latter was not witnessed by NRC inspectors but only reviewed from documentation after the fact. These failures substantiate the thrust of this allegation that the QA/QC program has not been effective and that the reactor system may experience failure under the stresses of actual operating conditions.

Allegation No. 21

This allegation was directed to the coating on the inside of the reactor pressure vessel, not the primary containment wall discussed in the report. The ordering of unqualified personnel off the job may not have been documented in the NRC inspection reports. Several of the workers who continued on the task were in fact not qualified.

Allegation No. 6

The alleged stated that on numerous occasions he witnessed waterstops not being properly sealed or even omitted entirely. The NRC denies this allegation by noting that the waterstop inspection records show that the waterstops were done properly. Yet, the NRC itself previously cited LILCO for the improper marking of waterstop inspection records routinely with an "S" (for "satisfactory") even though the item was not applicable (Inspection Report No. 75-03). This also occurred during the alleged time frame and tends to substantiate the allegation.

Allegation No. 7

The alleged testified that he was allowed to weld "anchor plates that were used to hold pipes to the wall" (Tr. Dec. 6, p.45) even though he was not a qualified welder. The NRC findings speak only about embedment plates and ignores pipe supports widely used in the Radwaste Building of the concrete expansion anchor type.

Allegation No. 8

This allegation that threaded tie rods for the concrete forms were pulled from the concrete, is consistent with allegation No. 3 that the forms were pulled less than 24 hours after pouring. Removal of a threaded rod without a sleeve means that the concrete was still soft. The NRC denies this eyewitness account as not credible without any actual inspection of the areas where threaded rod was used.

Allegation No. 10

In responding to this allegation, the investigators reviewed the document packages for dissimilar metal welds to determine if ER-308 weld wire was improperly used. The requisition forms themselves could have been filled in afterwards to indicate the required ER-309 wire when in fact none was used. No attempt was made to metallurgically examine a representative sampling of the welds done in the specified areas and time frame to determine if ER-308 in fact was improperly used.

Allegation No. 12

Although the NRC found no irregularities in the repair of this defective turbine condenser weld, we believe that a

pouring by challenging the alleged's knowledge of concrete pouring and by noting that the QA documents show that the forms were removed after 24 hours.

The allegation is that forms for these pours were often pulled the very next day (Tr. Dec. 6, pp. 19,22), i.e., in some cases, the morning after a pour on the previous afternoon, and that this was not recorded by QA inspectors (Tr. Dec. 6, pp. 23-24). William Muselar, the assistant project manager, testified under cross examination at the protestors trial (Tr. Dec. 7, pp. 83-89,105) that the field inspectors inspected the concrete within 24 hours after stripping of the forms. Thus, the field inspectors were not present during the stripping of the forms, and the time of stripping noted in their reports was based only upon statements by the foreman on the job. The alleged stated that the foreman on the job regularly contravened the QA requirements. Thus, the NRC reliance on the QA records is insufficient to respond to this allegation. The NRC did not conduct any actual testing of the placements on which the identified foreman worked.

Allegation No. 4

The findings here attempt to rebut a detailed eyewitness account of improper patching of concrete defects (Tr. Dec. 6, pp.23-33) by discussing what the proper procedure should have been. If cracks and honeycombing were being concealed, it would certainly have been done without objection from the QA inspectors and without triggering a labor dispute between trades. The findings are also inconsistent: on one hand, it was the usual practice for the QA inspectors to check a pour up to 24 hours after the forms were stripped; on the other hand, the report quotes cement finishers as saying that the inspectors would be there as soon as the forms were raised.

Allegation No. 5

The allegation here is that in many instances faulty (loose) cadwelds were encased in the concrete pours. To refute this, the NRC investigators rely solely on what the proper procedures should have been, and upon the completeness and accuracy of the cadweld inspection records. The NRC itself previously cited LILCO for failure to keep in-process cadweld inspection records and for failure to follow in-process cadweld procedures (Inspection Report No. 74-02; LILCO letter of May 6, 1974). These violations occurred during the time period of the allegation and may therefore be deemed to substantiate the allegation.

Allegation No. 1

In responding to the allegation of cracks in the main steam lines for the reactor system, the NRC noted that the QA documents showed 58 instances of pipe defects found by the contractor's inspection group. From this, the NRC concludes that no further defects remain.

However, this allegation concerns cracks in the main steam lines which were not documented and repaired. The NRC concedes that it has inspected only one of the four main lines and some of the exposed areas. No attempt was made to inspect the other three lines in areas which are not exposed.

It should be noted that during a previous random inspection, the NRC found that LILCO had failed to document thin wall deficiencies in the steam piping. The NRC required LILCO to fill out the required nonconformity reports and to send sections of the piping back to the vendor for repair. Thus, the NRC's reliance here on LILCO QA documents is misplaced, and it should have actually inspected the steam lines in responding to this allegation.

Allegation No. 2

From a review of temperature records in the curing reports, the investigation found nine instances of noncompliance which substantiate this allegation that the heaters used for curing the critical concrete placements for the containment walls were not properly maintained. Six previous N&D (nonconformity) reports were also found.

In the third subparagraph on page 17, the report states that temperature readings were taken daily at not less than 6-hour intervals. Presumably, longer intervals occurred between some readings. A temperature reading the next day would not necessarily show whether the heaters had been kept on during the night.

Although the investigators state that exposure of the surface of the concrete to freezing temperatures would have caused chipping or flaking, there is no indication how diligently or extensively they checked for such flaking or for patching over the flaking.

Allegation No. 3

The NRC responded to the allegation that the forms for pouring were stripped from the concrete less than 24 hours after

necessary to make the safe construction of Shoreham an issue real to itself and to LILCO. To give you a background to the investigation, we provided Dr. Gallina with relevant court transcripts, news clippings, magazine articles, and abstracts of disclosures from confidential sources describing construction problems at Shoreham alleged by at least 16 present or former workers at the site. We also arranged personal interviews with two of the workers and provided contacts for reaching others. We advised Dr. Gallina of our belief that other workers would not come forward with information unless they were convinced that the investigation would do something substantive for the safety of the reactor, that their identities would be protected, and that they would not be prosecuted if they informed the NRC of wrongdoing in which they were implicated. We further advised him that the issue of construction defects might be associated with the controversial trial of anti-nuclear protestors out of which it arose, was a sore point with the unions whose workers are employed there, and had been referred to in an ABC television documentary on drug abuse and lax security at the Shoreham site.

Rather than dealing effectively with these circumstances, the investigation was conducted in a manner which precluded any meaningful assessment of the problems alleged. Leads were not followed, we were effectively excluded from participation, the perception of routine NRC inefficacy was not overcome, and little was done to provide the kind of assurances and protective atmosphere which would encourage workers to disclose information. Approval of a written form of confidentiality agreement was stalled until the investigation was many weeks underway, and even after was not used in the interviews with workers at the site. The posting of notices on-site and running one-inch ads in the backpages of the local newspaper gave the investigation only minimal visibility and little or no credibility. Quite simply, the alleged defects could not be substantiated because the NRC took no effective measures to create the context in which that was possible.

With respect to the allegations which were specifically raised, the NRC findings display a propensity for discounting the direct testimony of workers who witnessed the defects and relying instead upon LILCO's paperwork and written procedures whose reliability is far from established, and which the NRC itself cited for deficiency on numerous occasions, and (as a last resort) by accepting the blandishments of LILCO employees, contractor and subcontractor personnel, and other biased opinions. The substance of the allegations is that defective work at Shoreham is being concealed or overlooked, and it will not be found by relying upon the sources which have prevented its discovery. Summarized below are my comments on the deficiencies in the findings of the investigation: