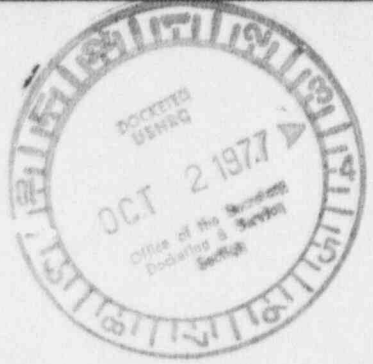

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ADMINISTRATIVE LAW JUDGE

In the Matter of	)	
	)	
Radiation Technology, Inc.	)	Byproduct Material License
Lake Denmark Road	)	No. 29-13613-02
Rockaway, New Jersey 07866	)	

STAFF'S RESPONSE TO LICENSEE'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

The Staff submitted its brief and proposed findings of fact and conclusions of law in the form of a memorandum and order on July 28, 1978 (Staff's Proposed Findings). Radiation Technology, Inc., the Licensee, submitted its proposed findings and conclusions of law on August 31, 1978. The Staff herein responds to the Licensee's proposed findings and conclusions of law in accordance with the instructions of the Administrative Law Judge at the close of the hearing on June 1, 1978.

In organizing this response, we treat first the six general "legal" points the licensee seeks to make in various paragraphs of its brief. Our response to these points is set out in sections A, B C, D, E, and F below. Next, our response deals, in section G, with each of the nine items of noncompliance.

A. Notice and Comment Procedures to Adopt Guidelines for Assessment Are Not a Required Predicate to a Valid Civil Penalty (L.P.* 2, 66).

The Licensee contends that the penalties imposed on it are illegal because the criteria used by the Commission to determine the amount of the civil penalty have not been adopted using the notice and comment procedures of 5 U.S.C. § 553. This contention is without merit.

All licensees have been on notice since 1969, when § 234 was added to the Atomic Energy Act, that violation of Commission requirements could result in the imposition of a penalty of up to $5,000.00 per violation.

The Atomic Energy Act, unlike some other statutes, does not specifically list factors to be considered in exercising the discretion for determining the amount of a civil penalty. The Act is noted for the amount of discretion which it grants to the Nuclear Regulatory Commission to carry out its responsibilities to protect the public health and safety in the licensing and control of the utilization of atomic energy. In Public Service Co. of New Hampshire v U.S. Nuclear Regulatory Commission, ___F2d ____, (1st Cir., 1978; No. 77-1419, decided June 21, 1978), the Court addressed the question of the breadth of the Commission's regulatory authority as follows:

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*/ "L.P." refers to "Licensee's Paragraph", using the paragraph numbers of the Licensee's submittal of August 31, 1978.

> "In a regulatory scheme where substantial discretion is lodged with the administrative agency charged with its effectuation, it is to be expected that the agency will fill in the interstices left vacant by Congress. See Phillips Petroleum Co. v. Wisconsin, 347 U.S. 672 (1954); Henry v. FPC, 513 F.2d 395, 402 (D.C. Cir. 1975). The Atomic Energy Act of 1954 is hallmarked by the amount of discretion granted the Commission in working to achieve the statute's ends. The Act's regulatory scheme "is virtually unique in the degree to which broad responsibility is reposed in the administering agency, free of close prescription in its charter as to how it shall proceed in achieving the statutory objective." Siegel v. AEC, 400 F.2d 778, 783 (D.C. Cir. 1968).

In fact the Commission has established standards for assessing civil penalties. In the published Statements of Consideration for the procedures for imposing civil penalties,[1/] the Commission set forth the criteria to be considered in determining the amount of a penalty once a violation brings a licensee within the authority of the Commission to impose penalties.

Since that time the criteria have been modified, most recently in 1974, when the Criteria for Enforcement Action were reissued[2/] with some revisions to the 1972 criteria, together with Categories of Noncompliance. Notice of the criteria was published in the Federal Register (40 FR 820, January 3, 1975); copies of the criteria were sent to all licensees of the Commission. Since that time all new licensees have received copies.

In addition to the published Criteria, the Office of Inspection and Enforcement has developed specific written internal guidance for the determination of the appropriate enforcement action consistent

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1/ 36 FR 16894, August 26, 1971.

2/ The Criteria for Enforcement Action was first issued in 1972 when it was noticed in the Federal Register (37 FR 21962, October 17, 1972) as being available to licensees and the public.

with the Criteria. This guidance is found in the Office of Inspection and Enforcement's Manual Chapter 0800 which contains guidelines for sanction selection and use, criteria for civil penalty determinations and enforcement procedures.

The Criteria and Manual Chapter 0800 constitute guidance to the Staff on how to carry out the civil penalty program. Under the Administrative Procedure Act (APA), 5 U.S.C. § 553(b), notice and comment procedures are not applicable to the establishment of such guidance even if they are considered "interpretive" rules.

The notice necessary under the APA for the documents at issue is found in the Freedon of Information Act, 5 U.S.C. § 552(a)(2)(C), which provides that administrative staff manuals and instructions to staff that affect a member of the public are to be made available for public inspection and copying. In accordance with this requirement, these documents have been made available in the Commission's Public Document Room. No further action is necessary or appropriate.

That these guidelines are just that--guidelines--and not formalized regulations in no way makes the imposition of a sanction such as a civil penalty defective. Courts have not required all agency actions to be taken only after the issuance of regulation. For example, an

> "agency may not have had sufficient experience with a particular problem to warrant rigidifying its tentative judgement into a hard and fast rule...the agency must retain power to

"deal with the problem on case-to-case basis if the administrative process is to be effective...And the choice made between proceeding by general rule or by individual ad hoc litigation, is one that lies primarily in the informed discretion of the administrative agency." SEC v. Chenery Corp., 332 U.S. 194, 202-204 (1947).

Moreover, the assessment of a penalty or sanction after the existence of a violation has been established, is a totally different process from the one employed to determine the existence of the violation. The latter involves an evidentiary process and a weighing of any conflicting evidence. The former involves the exercise of a discretionary grant of power. In reviewing that exercise of power, courts have held that the agency's decision shall not be reversed unless there has been an abuse of discretion. In Butz v. Glover Livestock Commission Co., 411 U.S. 182 (1973), the Supreme Court addressed the scope of proper judicial review of administrative sanctions. The Court stated:

"The applicable standard of judicial review in such cases required review of the Secretary's order according to the 'fundamental principle...that where Congress has entrusted an administrative agency with the responsibility of selecting the means of achieving the statutory policy "the relation of remedy to policy is peculiarly a matter for administrative competence."' American Power Co. v. SEC, 329 U.S. 90, 112 [67 S. Ct. 133, 146, 91 L.Ed. 103] (1946). Thus, the Secretary's choice of sanction was not to be overturned unless the Court of Appeals might find it 'unwarranted in law or... without justification in fact....' Id., at 112-113." (Emphasis added.) 411 U.S. at 185-6, 93 S.Ct. at 1458.

The Court concluded:

"The fashioning of an appropriate and reasonable remedy is for the Secretary, not the court. The court may decide only whether, under the pertinent statute and relevant facts, the Secretary made 'an allowable judgment in [his] choice of the remedy.' Jacob Siegel Co. v. FTC, 327 U.S. 608, 612 [66 S.Ct. 758, 760, 90 L.Ed. 888] (1946)." Id., at 188-9, 93 S.Ct. at 1459.

Thus, if the order of an administrative agency finding a violation of a statutory or regulatory provision or a license condition is valid, if the sanction imposed bears a reasonable relationship to the goal the legislation was intended to accomplish, and if the penalty fixed for the violation is within the limits of the statute, the agency has made an allowable judgment in its choice of remedy. Nowicki v. U.S., 536 F.2d 1171 (7th Cir. 1976), See also Brennan v. Occupational Safety and Health Review Commission, 487 F.2d 438 (8th Cir. 1973), Silverman v. Commodity Future Trading Commission, 562 F.2d 432 (7th Cir. 1977).

It has been suggested by commentators 3/ that if an agency action has a substantial impact on existing rights and obligations of affected persons, i.e., the rule imposes or alters rights or obligations of such persons, then "elementary fairness" requires the use of notice and comment procedures.

Even if this were what the law commands,4/ as opposed to what a distinguished legal scholar thinks the law should say, it does not apply

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3/ K. Davis, Admin. Law of the Seventies, Supplementing Administrative Law Treatise, 6.01-8 (1976).

4/ It should be noted that the case law advanced in support of this proposition is now quite suspect. To the extent the cases cited by Davis are read as requiring procedures beyond those required by the APA, the very recent Supreme Court decision in Vermont Yankee Nuclear Power Corp. v. NRDC, ___ U.S. ___, 53 L. Ed. 2d 460, 483 (1978), renders them useless, because of the Court's insistence that additional procedures are not required.

in the situation at hand because the establishment of criteria or factors to be used in determining the amount of a civil penalty in the above-mentioned documents did not alter any existing rights of licensees or impose any additional obligations. The factors to be used in assessing a civil penalty do not alter the basic obligations of a licensee to comply with the Commission's statutory requirements, regulations and license conditions. The only way the establishment of these Criteria and Manual Chapter 0800 could affect a right or obligation of a licensee would be if a licensee were entitled to know the amount of penalty it would receive once it violated one of the Commission's requirements (i.e., $5,000.00 or some lesser amount). The only reason such knowledge would be useful to a licensee is if it deliberately considers the economics of noncompliance in determining whether it will be in compliance with lawful requirements. The Staff submits that such consideration is inappropriate since deliberate noncompliance may result in a criminal sanction or be the basis for immediate suspension. Therefore, these documents clearly can not substantially impact the rights or obligations of the Licensee.

For the above reasons, some further procedural actions by the Commission is not a precondition for the valid assessment of civil penalties under section 234 of the Atomic Energy Act of 1954, as amended.

B. The Presence of the Director of the Office of Inspection and Enforcement at the Evidentiary Hearing Was Not A Necessary Precondition to the Valid Assessment of Civil Penalties.

(L.P. 3, 4, 5, 28, 70)

As the Licensee notes in its brief at paragraph 3, the Commission has delegated to the Director of the Office of Inspection and Enforcement the authority to, in the first instance, institute enforcement actions, including civil penalties, as necessary to assure compliance with NRC requirements.[5/] However, the Licensee has somehow developed the erroneous notion that once a hearing procedure has been initiated in a civil penalty action, the Director of the Office of Inspection and Enforcement must be present to "show the mitigating circumstances of the investigation" (L. P. 5 and 70). The Licensee's argument, apparently, is that the Director should be present to be questioned on how he considered all the so-called "mitigating" factors in arriving at the civil penalty he did and why he didn't give the weight to them which the Licensee feels should be given. Such exploratory expeditions into the decision-maker's methods and mental processes is inappropriate. U.S. v. Morgan, 313 U.S. 409 (1941).

5/ 10 CFR §§ 1.64, 2.205, NRC Manual Chapter 0127.023, 031.

The Director's initial decision to impose a civil penalty was set forth in the Notice of Proposed Imposition of Civil Penalties on January 5, 1977. The Licensee responded to this notice, detailing his view of the circumstances, including mitigating ones, involved in the case. After consideration of the Licensee's response, including the factors submitted in mitigation, the Director issued on March 14, 1977, the Order Imposing Civil Penalties accompanied by a detailed response to information presented by the Licensee in his letter of January 31, 1977. These two documents issued by the Director constitute a comprehensive statement of how the civil penalty in this case was assessed. Moreover, the process affords opportunity for the Licensee to present mitigating circumstances for the Director's consideration. Licensee availed itself of the opportunity.

The Staff did make available at the hearing Mr. Gen Roy, who was Chief of Field Coordination and Enforcement Branch in the Division of Field Operations in IE Headquarters in 1976 and early 1977, to explain the Staff guidelines for imposing civil penalties and why Radiation Technology fit within those guidelines.[6/] The Licensee declined to cross-examine. (Tr. 1780, 1994).

To allow the Licensee to probe the mental processes of the Director, the decision maker, at an evidentiary hearing on how he arrived at the

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6/ The Staff had originally presented Mr. Jordan to testify on the civil penalty process. The Administrative Law Judge indicated that Mr. Roy or Dr. Volgenau should be the witness rather than Mr. Jordan (Tr. 1737). The Staff excepted and requested an opportunity to brief the point. (Tr. 1737). This was granted. (Tr. 1737, 1739). During the extended recess it was decided that Mr. Roy would testify, thus alleviating the need to brief, at that time, the question of whether Mr. Jordan would be the appropriate witness.

decision to impose or the amount of the civil penalty would be not unlike a higher court allowing a party to question the trial judge on how he arrived at a penalty he imposed in that party's case.

As the Supreme Court stated in Citizens to Preserve Overton Park v. Volpe:

> "...inquiry into the mental processes of administrative decisionmakers is usually to be avoided. United States v. Morgan, 313 U.S. 409, 422 (1941). And where there are administrative findings that were made at the same time as the decision, as was the case in Morgan, there must be a strong showing of bad faith or improper behavior before such inquiry may be made." 401 U.S. 402, 421 (1970).

Contemporaneous findings were made by the Director, as noted above, and there has been no showing of improper behavior on the part of the decision-maker.

Moreover, once a Licensee requests a hearing, it becomes the responsibility and the duty of the Commission-appointed Judge or tribunal to decide the case anew. The Staff has the burden of presenting evidence to establish the existence of violation[s] for which civil penalties may be imposed; the licensee has the burden of establishing any mitigating circumstances not accounted for by the Staff. The Administrative Law Judge must then arrive at a decision on whether a penalty should be imposed and if so, what the amount of it should be. 10 CFR 2.205. 7/

7/ The Licensee contends that the absence of the Director resulted in the Licensee not being able to "defend his position before the proper witness". (L.P. 5). But once the hearing process begins, the Administrative Law Judge becomes the decision maker. There is nothing in the record to suggest that the Licensee did not have every opportunity to "defend his position" before the Administrative Law Judge. It is also clear, as noted above, that the Licensee had an opportunity to "defend his position" before the Director of I&E before his decision to impose a civil penalty was made.

The Director's considerations and decisions are not binding of course on the Administrative Law Judge nor conclusive evidence of what civil penalty must be imposed.

For all of these reasons, the Director of Inspection and Enforcement is not required to be present and to testify in a civil penalty proceeding.

C. The Regulations and License Conditions Cited Are not Ambiguous Nor Reasonably Subject to Misinterpretation. (L.P. 6, 7, 8, 15, 17, 45).

While there might be circumstances in which even the most unambiguous of terms could be interpreted in different ways, the standard for interpretations must be one of reasonableness. In this case, even the one purported "example" cited by the Licensee in paragraphs 7 and 8 of its Brief does not support its allegation of ambiguity. As we pointed out in the Staff Proposed Findings at paragraphs 69-73, occupancy is not a factor to be considered in determining compliance with § 20.105 of the Commission regulations. The required determination of acceptability of radiation levels in an unrestricted area under the conservative safety standards of § 20.105(b) is made by presuming an individual is "continuously present in the area". In fact, the witness did not testify that the dose could not be received [8/] but only that it was not likely. Thus, the Licensee's conclusion at paragraph 8 is doubly in error.

8/ Tr. 1659.

Moreover, the Appeal Board of the Commission has stated that regulations should be accorded the interpretation which more clearly fulfills its objectives, especially in safety matters. In Consumers Power Co. (Midland, Units 1 and 2), ALAB 152, 6 AEC 816, 818 (1973), they stated:

> "In the interpretation and application of an AEC regulation, however, we perceive no mandate to accord the language employed by the Commission the most restrictive reach which a lexicologist would find acceptable. Rather, where several alternative interpretations are possible, we should make that choice which comes closest to fulfilling the regulation's objectives. This is particularly so if the regulation is concerned, as in Appendix B, with activities having manifest safety implications."

The Appeal Board reiterated this view in Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-308, 3 NRC 20, 27 (1976), and stated further:

> "that it does no disservice to any regulation--whether inspired by safety considerations or not--to interpret and apply it with decent regard for the potential evil prompting its enactment and the precise purpose intended to be achieved."

The Staff's application of § 20.105 is fully supported by the Statement of Consideration for that part which provides:

> "...the sections limit levels of radiation and concentration of radioactive material which may be created in unrestricted areas by licensees, without special authorization from the AEC, to extremely low levels. These levels are believed to be sufficiently low to assure that there is no reasonable probability of individuals in unrestricted areas receiving exposures in excess of 10 percent of the permissible levels for restricted areas." 22 FR 548, Jan. 29, 1957.

D. There is No Factual Basis to Support the Allegations of Inaccurate Survey Readings.

(L.P. 9, 10, 27, 44, 53-60).

As was shown in detail in the Staff's Proposed Findings at paragraphs 50-68, there is no factual basis demonstrating the instrument readings were inaccurate. On the contrary, the evidence shows that the instruments were properly calibrated in accordance with established procedures and at frequencies of three months rather than the recommended standard of yearly. The possibility that contamination affected the readings is virtually nil since the survey meters read background in various areas of the facility and the amount of contamination required to measurably affect the readings was shown to be far in excess of any found at Radiation Technology. There is a presumption of regularity in these circumstances. This cannot be overcome by the rank speculation of the Licensee's President. (See further discussion at pages 41-44.)

E. The Inspection Report is Not on Trial

(L. P. 11, 12, 30, 32, 42, 43, 48)

The Licensee's contention that the information given in an inspection report is inadequate to allow reviewing authorities to evaluate a noncompliance situation appears to be an attempt to place some test of legal sufficiency on inspection reports written by NRC's field inspectors. Such an attempt misapprehends the process. The inspection report does not serve as the basis for a penalty action. The facts as established by the whole record serve as

the basis. The inspection report is one account of the facts. The Notice of Violation is another. The testimony of the inspectors is a further recounting of the facts. And the facts on this record show that the items of noncompliance set out in the Notice of Violation did in fact occur.

Inspection reports are written to present the material facts which explain why a situation constitutes an item of noncompliance. Any confusion which might occur in reviewing an inspection report is most likely to be caused by including too much extraneous information which does not affect whether or not an item of non-compliance exists. This was the case with what Dr. Welt characterizes as mitigating information concerning the location of the canister. There may have been a steep incline on one approach to the canister, but the way was passable. Moreover, there was another approach which was level and easily traversed. These two pieces of information, in the first place, do not alter the fact that the canister created impermissible radiation levels in an unrestricted area or that no constant surveillance or control was present. Furthermore, as possible mitigating or augmenting bits of information, they, in effect, cancel each other out. It is unnecessary to consider them in determining whether an item of noncompliance has occurred.

F. Licensee's "Conspiracy" Theory

(L. P. 13, 14, 67, 68)

The Licensee's continued unfounded assertions that the circumstances surrounding the inspection of October 27, 1976 are somehow "suspect" and "suggest a conspiracy" are contrary to the evidence.

Following our investigation into alleged health problems of former Radiation Technology employees, the Staff concluded that no cause and effect relationship existed between the allegations made and the operations at Radiation Technology. That does not mean, however, that the Commission did not have then or does not have now a continuing responsibility to be appropriately reactive and responsive to allegations of safety problems and to investigate any possible threats to the public health and safety which may exist.

In this case the Commission received allegations of concerns by ex-employees of health problems due to radiation, and equally importantly, an allegation that one of the NRC inspectors was not doing his job. This expression of public concern, the serious charge that one of the inspectors was not properly inspecting the facility and the fact that the most recent inspector felt he had some problems with his inspection, e.g., inability to review all the records, led the Commission to schedule an inspection.[9/] The inspectors' effort

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9/ Tr. 1565-1569.

was directed to determining the exact nature of these concerns, if there was any foundation for such concerns,[10] and, if possible, to allay these fears of members of the public.[11]

The presence of representatives from the State of New Jersey did not constitute any "conspiracy." State representatives are routinely called and periodically accompany NRC inspectors for training purposes or where there is evidence of public concern.[12]

The plain fact is that in the course of determining that no basis existed for the health concerns raised by others, the NRC discovered a disturbing number of items of noncompliance of a different sort from those originally raised.

The Licensee contends that "luck" seems to enter into an investigation (L.P. 13). When the Commission has a licensee with high pool water contamination, who shuts down the pool because of such contamination and then fails to report as required, there certainly is an element of luck involved in the Commission ever discovering that this high pool water activity occurred. This is especially true given our audit type inspection process and the fact that in this case the records showing the high pool water readings were kept with the Licensee's financial records for reasons which still remain obscure. When such a failure to provide required notification is discovered,

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10/ Tr. 539-541.

11/ Tr. 522, 541.

12/ Tr. 1577-78.

elevated enforcement action such as a civil penalty is clearly justified. Moreover, the Licensee's very use of the term "luck" and its "innocent until proven guilty" stance seem to bespeak an unhealthy attitude toward radiation safety.

G. The Items of Noncompliance Occurred

Item 1 - Failure to Report Results of Leak Tests as Required by License Condition 13. (L.P. 15, 16)

In an attempt to justify failure to report the results of a test sample of pool water reading 1.3×10^{-3} microcuries/ml, the Licensee's President advances the proposition that since he wrote the license condition, it means what he now--since the discovery by the Commission of his failure to report--contends that it means.

Contrary to Dr. Welt's contention, License Condition 13 was written by the Materials Branch of the Division of Materials Licensing of the then Atomic Energy Commission. The license was prepared on the basis of information submitted by the applicant. Some of the information submitted to explain procedures for leak detecting was incorporated by reference into the License Condition.[13/] The sections referenced speak only of 100 ml samples of pool water to detect leaks. Furthermore, the original application by the Licensee relied on the

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13/ Item 11 of Table II revised November 17, 1970, and Item H of Supplemental Information submitted letter dated November 3, 1970.

assaying of pool water to detect contamination from the Cobalt-60 source.[14/] In response to a request by the AEC to provide additional details on the leak detection methods[15/] the Licensee submitted the procedures[16/] subsequently incorporated into the license, which again spoke only of pool water samples.[17/] It is clear that, contrary to the Licensee's assertion that no "contrary understanding had ever been explored or ... agreed to by the Licensee," it has been the understanding of the Licensee and the Commission from the outset of this operation that leak detection will consist of pool water samples, and if these samples reveal greater than .05 uci/ samples, it is to be reported to the Commission.[18/]

A Licensee cannot be allowed to avoid a duty to report the results of a test sample which reveals an elevated level of cobalt activity in pool water by attempting to redefine for his own convenience the meaning of a leak test.

14/ Attachment 15, McClintock's testimony, License Application dated August 20, 1970, Sec. 2, p. 11 and 14.

15/ Attachment 6, McClintock's testimony, p. 3.

16/ Attachment 18, McClintock's testimony.

17/ If the Commission's understanding that pool water samples were to be the method of leak detection was incorrect, it could have been easily corrected by the licensee at that time.

18/ See Attachment 13, McClintock's testimony page 4, Item 22 and Attachment 14, McClintock's testimony page 6 for evidence that the Commission has always inspected against pool water samples in determining compliance with License Condition 13. See also Attachment 15, McClintock's testimony, License Application dated August 20, 1970, Sec. 2, page 14, where it states source encapsulation failure will be detected through pool water activity. Moreover, whether or not the Licensee discussed an additional procedure with Dr. Glenn for isolating a suspect pencil in a pipe to detect a possible leak, pool water samples are the leak detection procedures which are in fact referred to in license condition 13.

Item 2 - Failure to Report the Shutdown of Operations As Required by s 20.403(b). (L.P. 17-20).

The Licensee asserts three arguments to excuse his failure to report the shutdown of its R&D pool operations after contamination of the pool water occurred. The first is based on the Licensee's familiar tack of claiming that there is an "ambiguity" surrounding the word "incident" in the reporting requirement of § 20.403(b). For the Licensee to assert that it was misled into failing to report by the word "incident," when the evidence clearly establishes that the events of September 2 and 3, 1975 were "unexpected" and "abnormal" events (the Licensee's purported understanding of the term incident)[19/] is disingenuous at best.

As detailed in the Staff's Proposed Findings at paragraphs 40-42, the radiation levels on the diatomaceous earth filters increased 300 percent during a period of 4 hours on September 2, 1975,[20/] special precautions were instituted for entry into the R&D area,[21/] a source pencil was isolated in a pipe,[22/] and disposable cartridges were installed

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19/ Tr. 68.

20/ Tr. 1952-53, Smith's testimony, page 3.

21/ Haram's testimony, pages 4-5.

22/ Smith's testimony, page 3, Tr. 1962, 1954, 1063.

through which the pool water was circulated.[23] If the elevated radiation levels on the diatomaceous earth filters were not unexpected and abnormal, why were two pool water samples immediately taken and sent out for 24 rush analysis? [24] If the elevated radiation levels on the filters and elevated activity in the pool water were "expected and normal" why did the Licensee assert repeatedly throughout the hearing that he didn't know the cause of the activity? [25] The events at Radiation Technology constituted an "incident" within any reasonable definition of the term.

The Licensee's second argument is basically another variation on the "no incident" theme. He contends that although the pool was shut down, this was done because of cloudy water, not because of any incident involving licensed material. Such an argument is untenable in the face of the evidence presented.

Mr. Haram, who was the Radiation Safety Officer at the time, stated that the pool was shut down due to the activity in the pool water.[26] The various remedial measures noted in the paragraph above were implemented to determine the extent of the contamination of the pool water, to remove the activity from the pool water and to prevent further contamination of the pool or the facility. And the Licensee

23/ Haram's testimony, page 5.

24/ Licensee's January 31, 1977 response to Notice of Violation, Tr. 1962.

25/ Tr. 1981.

26/ Haram's testimony, pg. 2, Smith's testimony, pg. 3

himself even agreed in the mutual statement submitted to the Administrative Law Judge on December 9, 1977, the pool was shut down at least partly because of pool water activity.

The Licensee's erroneous allegation in paragraph 19 to a failure on the part of the Staff to produce Mr. Haram for direct examination is apparently an effort to discredit Mr. Haram's testimony regarding the cause of the pool shutdown. Contrary to the Licensee's allegations, the Staff introduced Mr. Haram's prepared affidavit as direct testimony to which Dr. Welt stipulated.[27/] Mr. Haram, although a former employee of the Licensee was called as a Staff witness [28/] after the Licensee hesitated and declined to call him despite repeated requests by the Administrative Law Judge and the Staff during the hearing.

On the other hand, the Licensee was willing to rely on Mr. Haram's testimony when it was convenient to his cause to do so.[29/] Particularly in view of the fact that Dr. Welt was not present when the pool was shut down and did not know for certain who ordered it to cease operations [30/] the conclusion is clear that the R&D pool was shut down, as Mr. Haram states, because of elevated activity levels in the pool water.

27/ Tr. 1869.

28/ A subpoena was issued to Mr. Haram as a Staff witness and the Staff intended to call him to the stand. Tr. 1861 et seq. The Licensee, not the Staff, chose not to cross-examine. Tr. 1869.

29/ Tr. 61.

30/ Tr. 61.

The Licensee's third argument is that operations in the R&D pool could have been conducted without any health and safety problems and therefore, "no incident had occurred that required a shutdown of the facility for more than 24 hours". Beyond the fact that arguing about such a hypothetical situation is irrelevant since the R&D pool was in reality shut down for more than a week because of high activity in the pool water, the Licensee mischaracterizes the Staff witnesses' testimony when it states that they testified operations of the Radiation Technology facility could have been conducted at any time without any health and safety problems.

Dr. Glenn testified that if a hypothetical situation existed where a licensee had increased activity in its pool water and no license conditions existed which required that leak tests be performed or required shutdown due to increased pool activity, then a licensee would not have to shut down operations and would not have to report under § 20.403(b).[31/] But this was not the situation that existed at Radiation Technology in September, 1975 and Dr. Glenn did not testify that these were the circumstances at Radiation Technology and that operations could have been conducted there without any health and safety problems. Dr. Welt repeatedly hypothesized situations which did not describe the actual circumstances at Radiation Technology. As Dr. Glenn testified, the increased pool activity did create out of the ordinary circumstances which had to be dealt with, e.g., a potential hazard in the form of a high radiation area in the R&D pool room near the demineralizer which

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31/ Tr. 1365-68.

read 1R/hr.[32/] Moreover, the fact that following the shutdown, the R&D pool was posted for entry only by authorization of the RSO and only if protective shoe covers and gloves were worn to handle anything in the room,[33/] indicates that a hazard requiring precautions existed.

Item 3 - Failure to Properly Train Employees in Radiation Protection Measures. (L.P. 21-26).

The Licensee's initial contention as to this item of noncompliance (paragraph 21) that NRC regulations do not define training is inaccurate and misleading. Section 19.12 of the Commission's regulations specifically delineates the topics of radiological safety in which employees are to be instructed. The standard for the extent of the instruction required is that which is "commensurate with the potential radiological health protection problems in the restricted area". The potential radiological hazard in an irradiator facility containing approximately 500,000 curies of cobalt-60 is real and significant.[34/] Consequently, the "commensurate" training which is required is extensive.

32/ Tr. 1340-41.

33/ Haram's affidavit, questions 20A and B.

34/ On September 23, 1977, when the interlocks were disconnected to the in-air irradiation facility, the operator entered without making a survey and received a dose of about 200 rads to the whole body.

The Licensee's contention in paragraph 22 apparently represents a misunderstanding of whose responsibility it was to present Mr. O'Rourke as a witness. The Licensee offered an affidavit of Mr. O'Rourke, to which the Staff objected [35/] as hearsay since Mr. O'Rourke was not present for cross-examination. Regardless, however, of the failure of Mr. O'Rourke to appear and submit to cross-examination in the proceeding, his affidavit offered by the Licensee did not even address the question of the adequacy of his training.[36/] The only point of disagreement he raised with Staff testimony was whether or not he had worked on the back shift as a helper under the direct supervision of qualified staff personnel.

Later testimony by Staff witnesses clarified that the direct supervision Mr. O'Rourke was working under was that of Mr. Andreano. They had worked together, alone, on back shifts. Mr. Andreano was not an authorized user of material under the facility license at the time and consequently, the "supervision" required by the license, i.e., the physical presence of an authorized user [37/] was not being provided.

The Licensee's reliance in paragraphs 23 and 25 on statements of the ability of workers to perform routine tasks at the facility as

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35/ Tr. 58.

36/ Tr. 58.

37/ See Staff's Brief of July 31, 1978, at paragraphs 178-183 for a statement of the extent of supervision required.

evidence of compliance with § 19.12 is misplaced. Section 19.12 is directed only to training of workers in the hazards involved in their work with radioactive material and in the proper use of protective devides. Evidence of knowledge of routine job functions is irrelevant to demonstrate compliance with § 19.12.

Contrary to the Licensee's assertion that wearing a film badge in a wallet does not indicate a lack of training (paragraph 24), carrying a film badge in such a manner demonstrates a lack of understanding of the need to wear a film badge in such a way that it can be readily placed in the area most likely to be exposed. It also demonstrates a lack of understanding of the possible adverse effects or spurious readings which can be created by body attenuation, moisture, pressure and heat.

It may indeed be proper procedure for an RSO to ask an employee where the film badge was worn in assessing a potential overexposure situation. But if the RSO does not know that badges are routinely carried in wallets, with all the additional calculations such placement necessitates in determining if an exposure occurred, then the routine processing of film badges and analysis of possible low-level exposures due to working in radiation areas, but not necessarily acute situations, may well result in failure to detect low-level exposures which are occurring. Moreover, the RSO would not know whether or not the film badge was being carried until after the exposure occurred.

The intention of the Licensee's concluding sentence in paragraph 24 is unclear. In any event there is no dispute that the film, without the holder, was carried in the back pocket [38/] and that Dr. Welt never instructed employees on the routine use of film badges.[39/] Nor does the safety manual provide information on the wearing of film badges.[40/]

The Staff testified that the employees working in the R&D room told them they relied solely on the alarm of the monitoring instrument in the R&D room to alert them to a possible radiation safety hazard.[41/] There is no dispute that the alarm was not working at the time of the inspection.[42/] Whether or not the instrument also gave a visual reading as the Licensee asserts in paragraph 26, such a feature is useless if no one bothers to look at it. And aside from speculation on the part of the Licensee, all the evidence presented indicated that, in fact, no one did.

38/ Tr. 42-45.

39/ Tr. 43.

40/ Tr. 44. Attachment 6 to McClintock testimony, pages 9-10. The safety manual is not part of the license. McClintock's testimony at 5.

41/ Smith's testimony at 5; McClintock's Redirect at 4.

42/ McClintock's testimony at 5a, Tr. 213.

Item 4 - Failures to Prevent Radiation Levels From Exceeding Regulatory Requirements. (L.P. 27, 28, 29, 30 and 31).

In an effort to avoid the plain fact that radiation safety limits were exceeded in at least two areas, the Licensee advances three propositions. First is the argument concerning the accuracy of the NRC's survey instruments. As was shown in detail in Staff Proposed Findings (at paragraphs 50-68), there is no factual basis demonstrating the instruments readings were inaccurate. On the contrary the evidence shows that the instruments were properly calibrated in accordance with established procedures and at frequencies of three months rather than the recommended standard of once a year.[43/] Moreover, the arguments made by the Licensee during the hearing to question the accuracy of the survey readings were inconsistent with other contentions put forth. For example, at one point Dr. Welt suggested contamination of survey instruments caused by placing them on the floor was severe enough to cause significant error in the readings.[44/] Elsewhere he contended that the contamination was a crack in the wall of perhaps an inch in diameter.[45/] In fact, the contamination found was nowhere near that

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43/ Tr. 407, 1691.

44/ Tr. 569-570.

45/ Tr. 251, 253, 366.

necessary to significantly affect the survey readings.[46/] There is a presumption of regularity in these circumstances. This cannot be overcome by the rank speculation of the Licensee's President.

Next, the Licensee's President suggests that he "was unable to present his case before the Director of Inspection and Enforcement in order to show mitigating circumstance". Such a contention is absurd in light of the explicit invitation in the Director's letter of January 5, 1977 to:

> "(b) demonstrate extenuating circumstances; (c) show error in the Notice of Violation, or (d) show other reasons why the penalties should not be imposed." (Appendix C).

If, however, what is meant here is that Dr. Volgenau did not appear in person at the hearing itself, that point has been answered in part B above. There is no requirement whatsoever, that the Director himself appear at the hearing.

Licensee's third point seems to be that since Mr. McClintock "was not aware of the time spent by any individual worker on any particular assignment in any particular area", this somehow vitiates the citation. This contention too, is wholly obfuscatory and beside the point. Section 20.105 does not require someone to actually be exposed before radiation levels are exceeded. The requirement is to maintain radiation levels

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46/ Tr. 1703.

such that "if an individual were continuously present in the area" the prescribed dose limits are not exceeded.

While the purpose of paragraphs 30 and 31 of the Licensee's brief is not entirely clear, one point that seems to emerge is the contention that the violation of section 20.105 of the regulations involved relatively low levels of radiation and small areas as the source of radiation. This attempt to justify clear violations on the grounds that nobody got hurt represents a disturbing attitude. It implies a certain contempt for established standards which is incompatible with safe operations under the license. If, as an individual who has been in the nuclear field since the early days, Dr. Welt is dissatisfied with the stricter radiation standards of the 1970's, his remedy is to provide some scientific basis for relaxing those standards to the Commission and get the rules changed.

The Licensee cites the fact that Dr. Glenn did not find any impermissible levels in unrestricted areas during the inspection on November 1, 1976, as some sort of evidence that the noncompliance of October 27, 1976 did not occur or should be mitigated (paragraph 30). But this contention fails to acknowledge the fact that clean-up activities were initiated following the October 27, 1976 inspection, in response to the inspection and a telephone conversation from the Director of Region 1.[47/]

47/ Attachment 2, p. 22, McClintock's testimony, exhibit 8, p. 19.

With respect to paragraph 31 of the Licensee's brief, it is certainly true that the violations by the Licensee in this case are related. That is one of the problems. Both individually and in concert they indicate sloppy and dangerous radiation safety practices that represent breakdown in control of the radiation safety program.

Item 5 - Failure to Store or Control Radioactive Material In Unrestricted Areas. (L.P. 32, 33, 34 and 35).

Section 20.207 of the regulation provides in paragraph (a) for radioactive materials "stored" in unrestricted areas. In paragraph (b) it provides for radioactive material "not in storage" in unrestricted areas. The container and drum which were the subject of the violation described in Item 4 were without contest in an unrestricted area.[48/] Moreover, whether they were "stored" or "not in storage", the undisputed facts show that they were neither "secured from unauthorized removal" nor "under the constant surveillance and immediate control of the licensee." [49/]

48/ Staff Proposed Findings, paragraph 75.

49/ Staff Proposed Findings, paragraphs 92-95.

The Licensee does not--as it cannot--really dispute these facts.[50/] Rather, the tack here is to suggest the presence of mitigating circumstances as a result of the following factors:

a. No member of the public is known to have been near the radioactive material,

b. workers who could have maintained the required constant surveillance "were going about their assignments" or were "interrupted from their scheduled activities by the NRC inspection", and

c. that if "everything had gone as planned" the cannister would have been removed from the unrestricted area.

On the issue of mitigating circumstances, it should be noted at the outset that although this one violation of a radiation safety regulation renders the licensee legally subject to a $5,000.00 civil penalty, the amount actually imposed was $750.00. Such a reduction more than

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50/ In paragraph 35 of its brief Licensee does contend "that there was evidence that controls were there (Tr. 664)" to prevent unauthorized removal of the radioactive material containers. It almost defies credulity that such a contention could be made in light of the Judge's statement at the very page cited, i.e., page 664 of the transcript, that "it is difficult to see a down chain as a barrier." And if the Licensee meant to contend that controls had at one time been there, that is irrelevant since none were present on the day of the inspection. As to the second container, an employee going in and out of an enclosed room adjacent to the area outside the facility where the resin column was located, with only the possibility of an occasional peek out a window, can hardly be considered the "constant control" required by the regulation.

adequately accounts for any mitigating circumstances. Beyond that, the so-called mitigating circumstances noted above amount in essence to saying: (a) we were lucky, (b) our people had better things to do than comply with your regulation, and (c) we only would have violated the regulation for a little while if everything had gone as planned.

Finally, the question of whether or not a survey of the containers was made, as the Licensee suggests in paragraphs 33 and 34, is irrelevant to a determination under section 20.207. But if in fact survey readings to determine the radiation levels on the two containers in question were made, then the Licensee deliberately chose to be in noncompliance with § 20.105 (Item 4) and § 20.207 (Item 5).[51/]

Neither the attitude represented by the Licensee's so-called mitigating circumstances, i.e., a careless inattention to the requirements of a safe radiation program, nor, if one believes the Licensee's assertion that a survey was made, its deliberate noncompliance with Commission requirements is acceptable or defensible conduct by a Licensee.

Item 6 - Failure to Post and Control Radiation and High Radiation Areas. (L.P. 36-44).

The Licensee asserts three arguments against the citation for failure to post radiation areas. The first contention (paragraph 36)

51/ Tr. 343-346.

that no factual evidence was presented regarding the posting of signs is patently erroneous.[52/] Section 20.203(b) requires that radiation areas be "conspicuously" posted. Both Mr. McClintock and Mr. Smith testified that there was no Radiation Area sign visible at the entrance to the open doors into the R&D room area.[53/] Nor did they see the appropriate "Caution--High Radiation Area" sign posted at the entrance to the receiving pool.[54/] They also both testified that no "Caution--Radiation Area" signs were posted on the East and West doors leading into the receiving pool room.[55/] Dr. Welt himself testified that no signs were posted on these latter two doors until after the inspection.[56/] Whether or not a "Caution--Radioactive Materials" sign was present on the far wall of the R&D room areas [57/] this would not meet the requirements of section 20.203(b).

The Licensee's second contention is that the conspicuous posting requirement was met by signs on the back of the doors. But the inspectors saw no signs on the doors because the doors were open and they were unable to close them.[58/] Tom Powell's statement that the doors were not

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52/ See Staff's Proposed Findings at paragraphs 112-123.

53/ Smith's testimony at 8, McClintock's testimony at 7, Tr. 267.

54/ McClintock's testimony p. 7, Smith's testimony p. 8, Tr. 715, 707.

55/ Smith's testimony at 8, McClintock's testimony at 7, Tr. 267.

56/ Tr. 77.

57/ The inspector did not see such a sign, Tr. 268.

58/ McClintock's testimony, p.7, Tr. 268, 299.

open consistently -- and that the doors were routinely closed [60] is contradicted by the statement he made to Mr. McClintock at the time of the inspection that the doors were in need of repair, had been that way for months, and it didn't make any difference since no one closed the doors anyway.[61] Moreover, Mr. Powell stated during the hearing that the doors were, in fact, open the majority of the time during working hours.[62] Even if the doors to the R&D pool area could be closed with difficulty if one knew how as the Licensee contends [63] the fact that they would have had to have been lifted up like a stuck car door certainly shows that the practice was in reality closer to that initially described by Mr. Powell at the time of the inspection.

Thirdly, the Licensee contends (in paragraph 48 under Item 8 in his brief) that no posting was required anyway. Such an argument demonstrates a misapprehension of the language and the purposes of the posting requirements. As the Staff discussed in Proposed Findings at paragraph 113, the requirement to post an area arises if radiation levels exist such that an individual could receive a certain level of exposure. The regulation does not say a licensee must post only if an exposure of a

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59/ Tr. 311.

60/ Tr. 303.

61/ McClintock's testimony p. 7, Tr. 298, 336.

62/ Tr. 306, 307.

63/ Tr. 300, 307.

certain magnitude is likely or probable, but rather if it is possible. In this instance, the amount of time spent in routine work in the R&D area was not the source of potential exposure. 64/ The potential for exposure in this situation is the nonroutine event. Given the location of the radiation levels,65/ i.e., accessible to personnel, and taking into consideration the history of operations at this facility--a leaking fuel element with its attendant clean-up operations--one cannot say that a nonroutine event is virtually impossible. Thus, the potential exists for individuals to work in these areas in a manner such that they could receive doses in excess of those given in the regulation.66/

Similarly, the Licensee's argument in paragraph 49 on the size of the source of radiation levels does not erase the fact that the reading on the drum required that the area in which it was located be posted as a radiation area.

Moreover, whether or not the inspectors would have cited for posting violations if they had observed the containers in the actual process of being moved (L.P. 40), there was in fact no evidence that the containers were being moved into the receiving pool.67/ No one gave any

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64/ Tr. 378

65/ See Staff Proposed Findings at paragraphs 106-108.

66/ Tr. 378-379.

67/ Tr. 329.

indication that the containers were "in transit" to that area.[68/] In any event, "in transit" as the inspector meant, e.g., visibly in the act of being moved, is far different than "holding in abeyance" for some indefinite period of time waiting for other canisters to be depleted.

As to the failure to properly control a high radiation area, the Licensee makes his now familiar charge of ambiguity in the requirements (L.P. 37). But contrary to the Licensee's assertion, the manner of control of a high radiation area required by section 20.203(c)(2) is not at all speculative. As the Staff discussed in its Proposed Findings at paragraphs 114-123, the regulation sets out specific enumerated ways to establish the necessary control over a high radiation area. Posting of a sign at the entrance to a high radiation area is not one of the accepted methods.[69/] Nor does the general legal principle that you have control and possession of what is located on your property apply in a situation where a regulation spells out what form of control is required.[70/]

The Licensee contends (paragraph 39) that material had been in storage in the receiving pool in the same manner since at least June, 1976 when Dr. Glenn conducted an inspection at the facility. Since Dr.

68/ Tr. 326-27.

69/ Staff Proposed Findings at paragraphs 121-123, Tr. 289-290.

70/ See Staff Proposed Findings at paragraphs 86-89.

Glenn did not cite for noncompliance with section 20.203(c)(2) at that time the Licensee now seems to suggest that it was either misled or the victim of biased inspection practices. At the outset it should be noted that this item of noncompliance is based on the circumstances found to exist by the inspectors on October 27, 1976, not on what may or may not have existed in June, 1976. But beyond that, during the June 1976 inspection Dr. Glenn was not told what levels of radiation existed at the bottom of the pool and the actual records of surveys were unavailable to him.[71/] The results of the surveys he made in the receiving pool room were about background.[72/] These results which were not a significant reading for the general area[73/] and conversations with Dr. Welt led him to conclude no controls were necessary. There was no attempt to mislead the Licensee. In hindsight, if any inference of misleading conduct could be drawn it would be that it was the inspector not the Licensee who was misled.

Item 7 - Failure to Properly Label Containers of Licensed Material. (L.P. 45-47).

The intent of the Licensee's statements in paragraph 45 is unclear. Those assertions regarding posting requirements have been dealt with in the preceding section.

71/ Glenn's testimony p. 9.

72/ Tr. 972, 978.

73/ Tr. 293.

As far as the citation for failure to properly label is concerned, Dr. Welt admitted at the hearing that the labels required by section 20.203(f) were not on the containers cited.[74/] As the Staff discussed in its Proposed Findings [75/] grease pencil markings do not meet the literal requirements of the regulation nor its basic intent to provide a readily identifiable notice that caution is required in handling the labeled materials.

The Licensee's contention that film badge records show no employees had been exposed to hazardous radiation levels in paragraph 45 is totally inapposite. Whether or not any radiation Technology employees have ever been exposed to radiation is irrelevant to a determination of compliance with the requirements of § 20.203(f). The labeling provisions are a separate requirement, part of the total regulatory scheme enacted by the Commission to assure that adequate precautions are taken to prevent employees and other members of the public from ever receiving exposures to radiation in excess of regulatory requirements.

As indicated above the citations at issue here were based on the situation found on October 27, 1976. The Staff has no evidence that the situation in June, 1976 was the same as in October 1976. Whether or not the situation was similar is not controlling because it would not in any way excuse the noncompliance found to exist in October.

74/ Tr. 48.

75/ Paragraphs 125-129.

Item 8 - Failure to Make Surveys Necessary to Comply With Part 20. (L.P. 48-62)

The Licensee's argument in paragraphs 48-50 is somewhat anomalous and surprising. By asserting that survey meter readings were made of the two containers in the unrestricted area, the Licensee is in effect admitting that it not only failed to make the evaluation required by § 20.201 to assure compliance with § 20.105, but knowing the levels on the containers it deliberately went ahead and put them in an unrestricted area in violation of § 20.105 requirements.

The inspectors determined, based on conversations with Radiation Technology's personnel [76/] and an assumption that a licensee would not deliberately go into noncompliance with § 20.105,[77/] that no survey of the canister had been made. The statement by the Inspector at Tr. 798 is merely acknowledging that now the Licensee states that the column had been surveyed. But if in fact a survey reading was made prior to placing the canister in the unrestricted area, then the licensee placed it there in deliberate noncompliance with the prohobitions of § 20.105. Moreover, as Mr. McClintock pointed out [78/] a "survey" within the meaning of 20.201 is an evaluation. It includes more than a mere physical measurement. A survey meter reading may well be part of such a survey,

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76/ Tr. 345, 808-809.

77/ Tr. 793, 344-346.

78/ Tr. 345.

but § 20.201 requires that an evaluation be made to assure compliance with Part 20. This includes assuring that radiation levels in excess of permissible limits are not established in unrestricted areas--which was not done.

As far as the contention in paragraph 50 that the Licensee expressed surprise at the NRC finding, the Licensee, in fact, verified that the drum was reading in excess of 2 mR/hr (the limit for an unrestricted area)[79/] and admitted that any survey reading which was made of the drum failed to pick up that dose rate.[80/] It is noteworthy that the Licensee did not bring forward Mr. Haram to testify on the questions involving surveys although Mr. Haram was apparently the one conducting the surveys.[81/]

The basis of item of noncompliance 8(c) was not that evaluations were not sufficient for normal operations but that the evaluation was not sufficient for the abnormal situation, i.e., when the pool water concentrations of cobalt activity rose to 1.3×10^{-3} in September 1975. (See Staff Proposed Findings, paragraphs 157-161). The Licensee's

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79/ Tr. 37.

80/ Tr. 37, see, in addition, Staff's Proposed Findings at paragraphs 143-145.

81/ Tr. 37.

analysis in paragraph 51 is insufficient to assure that no releases take place under such abnormal circumstances.

The Licensee's argument at paragraph 52 indicates it still does not recognize the intent and purposes of sections 20.301 and 20.201. Contrary to the Licensee's assertion, there is no allowable range for disposal. Section 20.301 requires that no licensed material shall be disposed of except by one of three authorized methods, none of which involve ordinary trash pick-up service. Dr. Welt admitted that contaminated material was found in the dumpster and that it read at contact no greater than .3mR/hr.[82/] The fact that the dumpster had not yet been emptied, and the inspector's survey prevented any violation of § 20.301 from occurring, does not mean that the survey requirements of § 20.201 were met. The Licensee contended the dumpster would have been surveyed before pickup occurred. But as Dr. Glenn explained, surveying a full dumpster with its nonhomogenous contents is not an adequate survey (see Staff Proposed Findings, paragraphs 162-168).

The Licensee's dispute with the accuracy of the survey readings made by the inspectors has no foundation in fact, but, as with the other contentions about the accuracy of the inspectors surveys, rests merely on speculation and conjecture.

For example, as the Staff demonstrated during the hearing [83/] and described in detail in its Proposed Findings at paragraphs 62-67, the

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82/ Tr. 47-48.

83/ Tr. 1690ff.

effect of any contamination which might possibly have occurred (though such an occurrence was unlikely) would have been negligible. It is not the general industry practice to cover survey meters in plastic, as the Licensee suggests in paragraph 57, unless there are large amounts of removable contamination, e.g., such as following the nuclear weapons test that the Licensee's military reference describes. As indicated above, such quantities of removable contamination were not present at the Radiation Technology site.

The Staff set forth in detail in paragraphs 50-68 of its Proposed Findings the evidence which establishes the accuracy of the survey readings made by the inspectors. In summary, the evidence presented demonstrates the following:

1) NRC survey instruments are calibrated quarterly.[84/] Standard references state that annual calibration of survey instruments is usually recommended.[85/]

2) The GM type survey instrument is considered quite stable and rugged.[86/] The inspectors during their years of experience have found them to be highly reliable, rugged and not subject to large changes in response due to voltage fluctuation.[87/]

84/ Tr. 407, 1691.

85/ ICRP Report at 20, ANSI Standard at 17.

86/ ICRP Report 20 at 14.

87/ Tr. 1157, 1159, McClintock's Redirect testimony at 5.

3) The survey instruments are stored in a cabinet under the supervision of personnel of the Materials and Safety Branch, signed out for each use, and carry a sticker indicating when they were last calibrated.[88]

4) The possibility that contamination of instruments occurred such that measurable error would be produced was extremely remote. If it had, background readings would not have been obtained in various parts of the facility.[89] Only one area of loose contamination was found; it would not transfer.[90] The demonstration conducted by NRC personnel during the hearing indicates that given the amount of contamination found in the facility, i.e., a maximum of 35,000dpm, the effect of any contamination of instruments which could have occurred was negligible.[91]

Finally, it must be noted that NRC inspectors are professionals. It is part of their daily function to use survey instruments in such a manner that they will give the most accurate readings possible. That means taking care that they are not dropped,[92] and if something does happen to an instrument which might render its readings suspect, bringing that fact to the attention of the appropriate personnel so it can be recalibrated, if necessary, not just placing an instrument

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88/ Tr. 405, 406, 416.

89/ Tr. 811, 878-79, 1168, 1176.

90/ Tr. 571, 574, 604-05.

91/ Tr. 1690ff.

92/ Tr. 1226.

back on the shelf. Inspectors daily rely on their instruments; they must have confidence in them. They are routinely at facilities where potential hazards are great. If they are called upon to inspect an accident situation, or even a routine situation with significant hazards, they do not want to have inaccurate survey readings to guide their conduct. Consequently, it is more than reasonable to expect that the necessary care is taken by the Commission and its inspectors to assure the accuracy of the survey instruments.

The Licensee's conclusion (paragraph 61) that it was very possible Mr. McClintock overreacted when he found contamination and various items of noncompliance during the October 1976 inspection ignores the clear thrust of the evidence. Mr. McClintock's response at Tr. 1681 that it was possible he overreacted was in the form of admitting that there is always the possibility an inspector can make a mistake. But he stated elsewhere that at the time of the inspection he felt that what he found was a serious problem, he continues to believe it was a serious problem [93] and that if he found a similar situation again he would have the same reaction and take the same actions.[94] Dr. Welt now suggests that after all one should expect contamination in an operation such as his[95] and that Mr. McClintock's concern on finding any was an overreaction. However, the Licensee stated in his application that

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93/ Tr. 1678.

94/ Tr. 1682.

95/ Tr. 1643, 1679.

pool water contamination was not anticipated and was considered a very unlikely event.[96/] Since doubly-encapsulated sources are the only authorized form for licensed material, there should be no source of contamination. Of course, if one deliberately removes the outer encapsulation as was done here and places a singly-encapsulated source in the source array in the pool, then one would be more likely to expect contamination of the pool water to occur.

The Licensee cites no authority for his assertion in paragraph 62 that the NRC had been aware of the daily contamination operation at Radiation Technology perhaps because there was no evidence presented to show that the NRC was aware of the problems ultimately discovered during the inspection of October 1976. All the NRC knew was that levels in the pool water had reached 10^{-5} in October of 1975 and that the licensee had attempted to reduce these levels.[97/] The Commission had had no indication before the October 1976 inspection that the contamination level in the pool had reached 1.3×10^{-3}, [98/] that the licensee had a leaking source and consequently had a much more extensive clean-up operation to perform.

96/ License application, August 20, 1970, p. 7, 8.

97/ Attachment 1, McClintock's testimony.

98/ Glenn's testimony, p. 1-5.

Regardless of Licensee's record prior to the October 1976 inspection--and it was not perfect--nine items of noncompliance, most of them representing failure to meet the standards for protection against radiation hazards established by Part 20 of the Commission's regulations were found to exist. The number and variety of these items of noncompliance suggest a serious breakdown in the Licensee's radiation safety program. The consequences of failure to maintain control of the radiation safety program at a facility such as this where hundreds of thousands of curies of Cobalt-60 are used are real and significant. The contention that no health and safety problems exist suggests a lack of understanding of the Licensee's obligations under the Commission's requirements to protect the public health and safety.

Item 9 - Failure to Restrict Use of Licensed Material to Authorized Users. (L.P. 63-65).

The Licensee has admitted that he allowed Mr. Andreano to use licensed material without the proper authorization.[99/] This occurred even though this License Condition had been the subject of a previous

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99/ Tr. 31, 1930, 1936.

Notice of Violation,[100] which had resulted in the Licensee acknowledging the necessity of seeking prior approval for authorized users. The Licensee contended during the proceeding and again in his brief at paragraph 64 that the addition of authorized users to the license is merely a pro forma matter and that other licenses do not have such a requirement but are simply given the authority to appoint operators according to established procedures.

Review of a submittal by Radiation Technology to authorize an individual to use licensed material is not a pro forma matter, particularly when the authorized use involves hundreds of thousands of curies of cobalt. Basic information on the training received by these individuals is required to be submitted and approved. The Licensee stipulated that the Licensing Branch had in the past raised questions about individuals proposed to be approved as authorized users.[101] It should be noted that the Licensee's reference to a seven-month delay (paragraph 64) in receiving approval refers to an amendment proposed in December 1977,[102] nearly a year following the inspection in question. Prior to the inspection and after the inspection with the exception just noted, amendments were approved within 2 months after receipt of the request. In any event, however, the Licensee knowingly allowed an individual to use radioactive material without the proper authorization. While it is the responsibility of the NRC to make a response to any request, it remains the responsibility of each licensee to assure that it is operating within the terms and conditions of its license.

100/ Attachment 11 to McClintock's testimony.

101/ Tr. 1946-47.

102/ Tr. 1933, 1935.

The Licensee's reference to the practices of other companies is inapposite and misleading. Licensees which approve their own users have had their training programs and procedures for certifying users reviewed and approved by the Commission prior to allowing such persons to use material. Radiation Technology had been on notice since February 14, 1975[103/] that his license required Commission approval before an individual could use licensed material unsupervised. Yet it was not until September 26, 1977, nearly a year following the second citation for violation of this requirement and the assessment of a civil penalty that the Licensee requested that he be permitted to set up a program to approve users himself.

The Licensee well knew that individuals were not to be allowed to use licensed material without the proper authorization. Instead of seeking to change a requirement it felt was unworkable and restrictive, however, it deliberately chose to disregard such requirement.

103/ Attachment 12, McClintock's testimony.

Conclusion

The inspection giving rise to the subject matter of this proceeding was conducted in routine response to citizens allegations. Although the specific allegations proved unfounded, nine other items of noncompliance were disclosed. These items while of differing significance individually, represent in concert a serious breakdown in radiation control practices.

The Licensee's response to the nine items of noncompliance consisted for the most part of charges of bias of inspectors, ambiguity of requirements, and a "misleading" inspection report. The Licensee throughout this proceeding has minimized the importance of compliance with the Commission's regulations and license conditions. It has failed to maintain the required meticulous attention to the Commission's health and safety requirements and failed to live up to its obligation with respect to the public health and safety.

In essence, this case presents the question whether a licensee may disregard the Commission's requirements and thereby conduct an inadequate radiation safety program which if permitted to continue uncorrected could have a serious potential for significant hazard to the health and safety of the public including the Licensee's employees.

There can only be one answer to that question. A licensee, especially a licensee possessing hundreds of thousands of curies of cobalt 60 may not do so.

The minimum sanction to achieve lasting compliance under the circumstances of this case is a civil penalty. The Atomic Energy Act of 1954, as amended, authorizes a civil penalty in the amount of $5,000.00 for each of the nine items of noncompliance. In light of the nature of the items and all of the surrounding circumstances, the Director imposed a civil penalty totaling $4,800.00 for all of the items of noncompliance. This decision is fully supported by the record in this proceeding.

The Staff respectfully submits for the reasons contained herein and in the Staff's Proposed Findings that the Director's decision should be affirmed.

Respectfully submitted,

Karen D. Cyr

Karen D. Cyr
Counsel for NRC Staff

James Lieberman
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 29th day of September, 1978.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ADMINISTRATIVE LAW JUDGE

In the Matter of	)	
	)	
Radiation Technology, Inc.	)	Byproduct Material License
Lake Denmark Road	)	No. 29-13613-02
Rockaway, New Jersey 07866	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of STAFF'S RESPONSE TO LICENSEE'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 29th day of September, 1978.

Hon. Samuel W. Jensch*
Chief Administrative Law Judge
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Martin A. Welt, President
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