

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD PANEL

LBP-04-24

Before Administrative Judges:
Michael C. Farrar, Presiding Officer
Dr. Charles N. Kelber, Special Assistant

DOCKETED
USNRC

In the Matter of

Docket No. 30-36239-ML

November 4, 2004 (2:10PM)

CFC LOGISTICS, INC.

ASLBP No. 03-814-01-ML

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

(Materials License)

November 4, 2004

SERVED November 4, 2004

MEMORANDUM AND ORDER

(Concerning Settlement Agreement and Further Proceedings)

We have before us a request that we grant formal approval to a Settlement Agreement entered into by certain of the participants in this proceeding, which involves the application of CFC Logistics (the Company) for an NRC materials license to operate an underwater cobalt-60 irradiator to process food and other substances at its cold storage facility just outside Quakertown, Pennsylvania. The license was opposed by a number of the facility's neighbors.

In Part I of this ruling, we cover the proceeding's procedural background. In Part II, we address the settlement process, scope, and terms, as a prelude to approving the agreement as presented to us.

That agreement by some of the facility's opponents to settle and to discontinue the litigation creates, in turn, the need to address the future role of other participants. They may choose also to settle; alternatively, if they have the legal standing to do so, they may elect to continue the litigation.

Depending on the situations of those remaining participants, and the choices they make, the future course of this proceeding can vary widely -- ranging from withdrawal of the litigation altogether, to an evidentiary presentation on the merits of particular concerns. In Parts III through VI, we provide the framework within which those choices are to be exercised, set out the standards and process for moving forward, and outline the timing and the nature of (and the limitations upon) the evidentiary presentations that may result.

I.
Procedural Background

After the Company filed its license application in early 2003, petitions were submitted to the Commission by a number of residents of the Quakertown area (the Petitioners) requesting a formal hearing to challenge the Company's proposal. Notwithstanding the pendency of the petitions, and as is permitted by NRC regulations, the NRC Staff issued the requested license on August 27, 2003, subject to the outcome of any hearing that might later be held.

In the meantime, the above-named Presiding Officer and Special Assistant had been duly appointed. As has been stressed here and elsewhere, we carry out our adjudicatory role independently of the NRC Staff, which, in the exercise of its customary regulatory duties, reviewed the Company's application before awarding the license.¹

On September 10, 2003, we heard the parties' oral arguments regarding: (1) the Petitioners' legal "standing" to proceed; (2) whether they had proffered any germane "areas of concern"; and (3) their motion to stay the Company's use of the then recently-awarded license. Two weeks later, we denied the stay motion (without prejudice), thereby allowing the Company to begin installing the cobalt sources. LBP-03-16, 58 NRC 136 (Sept. 23, 2003).

We subsequently found that at least three of the neighboring Petitioners (Kelly Helt, Tom Helt, and Andrew Ford) did have standing to proceed based on their proximity to the site (they lived within one-third of a mile of the CFC facility). LBP-03-20, 58 NRC 311, 317-22 (Oct. 29, 2003). We also found that some of the areas of concern they had proffered were indeed germane. *Id.* at 323-33.

¹ For the difference between our role and the Staff's, see Sept. 10, 2003 Tr. at 124-25; see also Private Fuel Storage (Independent Spent Fuel Storage Installation), April 8, 2002 Tr. at 2977-80, and LBP-03-04, 57 NRC 69, 92 note 28 (2003).

As we indicated at that point, there then appeared no practical reason to rule upon the standing of other Petitioners who lived farther from the facility.² Rather, we expected that the opposition of all of them, who had filed together through the same counsel, would be channeled through those who had been granted formal party status.³

After admitting the Helts and Mr. Ford as Intervenors, we issued a formal Federal Register notice of hearing⁴ (since the NRC Staff had elected not to do so), as required under the NRC Rules of Practice (10 C.F.R. § 2.1205(j)).⁵ This extended for an additional 30 days the time period for facility opponents to petition to intervene. A number did so, thus joining as pending Petitioners the earlier individuals who had not yet had their standing evaluated.

As noted above, at the time we determined that at least some Petitioners had standing to request a hearing, we admitted several germane areas of concern. The effect of that action was to establish that the Petitioners had pointed out relevant concerns with enough specificity to be permitted a later opportunity to make a written evidentiary presentation on the merits of those concerns. See 58 NRC at 326. Depending on developments, the time for full merits presentations on certain of those concerns may be upon us (see Part IV and pp. 26-27, below).

² Id. at 322-23; see also note 15, below.

³ In that connection, the Petitioners had the support of an organization known as the Concerned Citizens of Milford Township, which itself had the opportunity to seek to participate herein on the basis of its representational standing, but declined to do so. Thus, we noted on the first page of our first published decision that “[a]lthough for purposes of appearing in other venues the facility’s opponents have apparently coalesced in an organization called ‘Concerned Citizens of Milford Township’ (CCMT), that group as such has not yet sought to appear before us.” LBP-03-16, 58 NRC at 137 note 1. In our second published decision, we again emphasized this possibility, stating that the forthcoming Notice of Hearing “could lead to additional . . . entities” filing petitions to intervene and speaking of the “possibility that additional . . . organizations may later seek to join” LBP-03-20, 58 NRC at 323.

⁴ See 68 Fed. Reg. 62638 (Nov. 5, 2003).

⁵ All references herein to our Rules of Practice are to the version that existed before the adoption of the extensive amendments published in 69 Fed. Reg. 2181 (Jan. 14, 2004), which by their terms did not apply to pending proceedings like this one.

Two of these concerns are not to be addressed now. As to one -- the adequacy of the financial provisions made to assure that the facility could eventually be properly decommissioned (see 58 NRC at 333, ¶ 7) -- we hold later in this decision (see Part V, below) that, regardless of what course the proceeding follows, litigation on that concern is precluded by Commission regulation. As to the other concern, involving plant security, any determinations that may prove necessary as to the nature and extent of any litigation on that matter will abide a later ruling (see note 43, below).

In addition to ruling on standing and areas of concern, we set forth in LBP-03-20 the possibility of holding another site visit to the irradiator followed by a pre-hearing conference in the vicinity. See 58 NRC at 335. In line with the exhortations of the Commission (expressed in 10 C.F.R. § 2.759 and in adjudicatory decisions and policy statements), we also noted that those activities might foster the possibility of a settlement between the parties. Id. at 336.⁶

We and the parties indeed visited the irradiator facility on December 11, 2003, and later that day held a pre-hearing conference in Quakertown. Beyond touching on settlement possibilities (Tr. 415-24), that conference had two main purposes: to hear oral arguments on the Petitioners/Intervenors' renewed motion to "stay" the effect of the existing license and on their pending discovery request (Tr. 339-415), and to guide a discussion on narrowing and focusing the Petitioners/Intervenors' areas of concern (Tr. 428-58, 464-68).

Although the parties had previously briefed certain legal issues underlying the concern regarding the sufficiency of financial resources for decommissioning, we did not entertain oral argument on that issue at the December 11 conference because the NRC Staff, which was participating in that matter but not in others, was unable to be present. We subsequently (in

⁶ See also unpublished November 19, 2003, Prehearing Order (Scheduling Further Proceedings) at 4 (noting discussion during November 12 prehearing conference call of the possibility of settlement).

late February) asked for additional briefing on that matter. See unpublished February 17, 2004, Prehearing Order (Regarding NRC Staff Participation and Other Matters) at 3-4; and unpublished February 26, 2004 Order (Regarding Responses on Financial Assurances) at 1.

After hearing oral argument at the prehearing conference, we denied the renewed stay motion. See unpublished May 28, 2004, Memorandum and Order (Ruling on Requests for Stay and Related Relief). In denying the motion, we concluded, among other things, that the Petitioners/Intervenors had not demonstrated that they would suffer immediate and irreparable injury if the stay motion was not granted, and that the Company's actions did not warrant the sanctions the movants sought.

II. Settlement Process, Terms and Approval

We first mentioned the possibility of settlement to the parties during an early conference call (see Aug. 7, 2003 Tr. at 84-85), then focused on it again when we admitted the several Intervenors and their areas of concern. See LBP-03-20, 58 NRC at 336. After briefly discussing settlement again during another conference call,⁷ we made a special point at the December 11 prehearing conference of asking the parties whether they would be open to the idea of having a Settlement Judge (who has no role vis-a-vis the merits of the litigation) appointed in an effort to resolve this case amicably instead of through costly litigation. See Tr. at 415-24.

After some delay, the reasons for which need not be recited here, a Settlement Judge (our colleague Paul Abramson) was appointed on March 16, 2004. After both sides confirmed their willingness to enter into settlement negotiations, the parties began such discussions under the guidance of the Settlement Judge.

We are informed that among the active participants on behalf of the facility opponents in the settlement negotiations were not only Intervenor Kelly Helt but also others, including

⁷ See Nov. 12, 2003 Tr. at 271, 317-18.

Kimberly Haymans-Geisler and her husband Max Geisler, who although not Petitioners were leaders in CCMT. While Ms. Haymans-Geisler had her contributions noted here early on,⁸ neither she and her husband nor (as noted previously) the CCMT organization ever sought to petition to intervene formally in this proceeding (see note 3, above).

The Settlement Judge met with both sides, separately and together, on numerous occasions over an extended period of time in an attempt to reach a settlement agreement satisfactory to both sides. In response to the Settlement Judge's informing us that settlement then appeared likely, we issued in late June a detailed anticipatory notification indicating that if such a settlement were to be reached by those participating in the negotiations, all other Petitioners would then be called upon to express their approval or disapproval of it. See unpublished June 28, 2004, Memorandum and Order (Regarding Possible Settlement) at 6.

To that end, we directed that counsel for the Petitioners/Intervenors send his clients a copy of our June 28 alert to put them on notice that, if a settlement was reached, they would be provided a relatively short time to indicate either their approval of the settlement agreement, or their willingness to continue with the next stage of litigation. Id. at 5. We also asked the Petitioners' counsel to confirm that each Petitioner remained at his or her previously listed residence and was still interested in participating in the case. Id. at 6.

On August 23, 2004, the Settlement Judge submitted to us for approval an executed Settlement Agreement, attached hereto as Appendix A, coupled with an August 23, 2004 letter from the NRC Staff indicating that the facility changes outlined in that agreement were such that they could be implemented without NRC Staff review or approval.⁹ On behalf of the Company, the agreement is signed by its President, James Wood. For the erstwhile facility opponents,

⁸ See LBP-03-16, 58 NRC at 139 note 6; see also unpublished June 28, 2004, Memorandum and Order (Regarding Possible Settlement) at 4, ¶ 2.

⁹ See note 12, below (explaining the reasons that the issuance of such a letter advanced the settlement discussions).

the agreement is signed by the only remaining admitted Intervenors (the Helts)¹⁰ and by an individual who, we are advised, while not a Petitioner himself, has been providing material financial support to litigation on behalf of the Petitioners. By its terms, the Settlement Agreement provides that it is subject to our approval.

The Settlement Agreement addresses two matters reflected in the germane “areas of concern” Petitioners/Intervenors presented.¹¹ First, the Company agreed to install a backup generator to provide a continuous power supply for the pump which drives the air flow through the chamber containing the cobalt-60. In so agreeing, the Company did not make any representation that this step was indeed necessary to assure safety if the facility lost its regular electric power source. Second, to respond to the Petitioners/Intervenors’ concern about a “cask drop” accident, the Company also agreed -- again without any representation as to the necessity of this addition -- to install a light-beam trip-switch to trigger an audible and visual alarm if a cask containing a replacement cobalt source is positioned so that it will traverse over the existing sources.

In exchange for the Company’s agreeing to add these features to the facility, the other side’s signatories agreed to drop their opposition and to withdraw from the case. Additionally, they agreed not to support, in any manner, either CCMT or any individual in further pursuit of the issues raised here against the Company, with respect either to this irradiator or to any additional similar irradiators (with the same add-ons) that the Company may later wish to install at the same warehouse.

¹⁰ According to counsel, the other admitted party, Mr. Ford, has moved away and thus is no longer to be treated as an Intervenor in the case.

¹¹ If there is any inadvertent disparity between the terms of the Agreement itself and our description of it herein, the terms are, of course, controlling. In other words, nothing said here about the Agreement is in any way intended to alter the meaning and import it has as written.

Both sides to the agreement are bound by a standard non-disclosure clause that generally prevents them from revealing the content of any of the settlement discussions. The one exception is that the parties are not precluded from disclosing discussions relating to physical security at the irradiator facility. Additionally, the agreement contains several provisions regarding press releases and press conferences. The agreement contains a number of other standard provisions that we need not recite here.

As mentioned previously, for its part the NRC Staff -- which did not participate in the settlement discussions -- has indicated that the changes the Company is agreeing to make to its facility as a result thereof do not require Staff review or approval. Nor must they be incorporated in a formal license modification.¹²

The proposed Settlement Agreement reflects the Company's commitment to make changes to its facility that respond to certain of the safety concerns raised by the neighboring residents. The Company apparently holds the view that facility safety does not depend on those changes, but -- in recognition of the neighbors' belief that safety will be enhanced thereby -- is willing to undertake them.

Having reviewed the Settlement Agreement in that light, we hereby APPROVE its content. In doing so, we extend our compliments to both sides for their willingness to take up, under Judge Abramson's guidance, our suggestion that the matter seemed amenable to settlement. They are to be further commended for their commitment to exploring the matter in depth and to repeatedly considering and responding to the values and beliefs of the other side.

¹² In the Fall of 2003, the Petitioners/Intervenors challenged the Company about the manner in which it had replaced a valve in the irradiator. As previously discussed in more detail (see unpublished May 28, 2004 Memorandum and Order at 4-5), when the NRC Staff was advised that the change had been made, it decreed that changing the valve had safety overtones that required evaluation of the need for an amendment to the Company's license (in response to which the Company's contractor restored the valve to the original configuration). In contrast, the NRC Staff has assured us that the modifications proposed in the Settlement Agreement do not require further Staff analysis or approval.

As has been seen here, the Commission's policy of encouraging settlement not only can lead to reducing the costs and burdens of litigation, but can also bring more satisfying outcomes than those produced by litigation, allowing both sides to a controversy to reconcile their philosophical differences by reaching mutually agreeable practical resolutions. Unlike litigation, which can leave underlying disputes among the parties festering even after a decision producing "winners" and "losers" is rendered by an adjudicator, settlement produces a result shaped by, and acceptable to, the parties themselves. Because, by definition, both sides have agreed to abide by that result, a more harmonious future is in the offing for all involved.

III.

Participation by Remaining Petitioners

In terms of those who might oppose the facility, the Settlement Agreement of course binds only the three signatories -- the admitted Intervenors and the other individual referred to earlier. Although as indicated above we are advised that other individuals were also involved in the settlement discussions (our June 28 notice anticipated, incorrectly, that all of them and CCMT would endorse the settlement), nothing that may have taken place thus far in any way limits the options available to those whose petitions are pending and, for whatever reason, have not had the opportunity to support, or perhaps even to examine, the settlement agreement. In accordance with our June 28 directive, they are now to be given that opportunity, which they are to exercise with some dispatch.

A. Petitioners' Choices. All those with pending petitions now have to determine whether or not to accept the compromises made by the existing Intervenors. Although the pending Petitioners have not yet been granted formal Intervenor status (see pp. 2-3, above, and pp. 12-16, below), if they wish to accept the principles of the Settlement Agreement and withdraw from their role as Petitioners, they now have the opportunity to do so.

1. To that end, any Petitioner wishing to so follow that course need only sign the attached ELECTION form to that effect (see Appendix B, “Election to Not Continue Litigation”). Counsel will therefore need to supply them that document in short order.

By signing that document, a Petitioner will simply be withdrawing from the litigation and stating that he or she finds “that settlement agreement satisfactory.” Such persons would not be bound by any of the limiting terms of that agreement, which apply only to its signatories. In effect, though, they will be conceding the Company’s right to operate under its license (in return for the facility enhancements, described at p. 7 above, obtained from the Company through the settlement process).

2. Some Petitioners may decide not to accept the compromises embodied in the settlement. We can envision them falling into two categories:

(a). Some may no longer be interested in actively pursuing their opposition to the Company’s irradiator operations through this litigation, but may not be willing to sign, or to do, anything that could be taken as expressing approval of, or consent to, the Company’s current or future activities. As will be seen, any Petitioners in that category need take no action, for once the time periods (set out at pp. 24-25, below) for taking action expire, they will no longer be involved in this litigation (but they will not be considered as among those who affirmatively withdrew from the litigation as part of their support of the settlement).

(b). Others remaining opposed to the Company’s operations may wish to actively pursue that opposition by continuing with this litigation. They, too, can be thought of as falling into two categories:

(i). Some will live close enough to the facility to have the benefit of the “proximity-plus” doctrine that confers legal standing upon them, as it did upon the Helts and Mr. Ford (see p. 2, above). As we explain below (see pp. 13-16), we are today extending that “close enough” distance, from the 1/3 of a mile we used

when preliminarily addressing this issue, to 3/4 of a mile, thus multiplying by more than a factor of five the circular area around the plant within which residents will be granted automatic standing.¹³ As a result, any Petitioners still residing within 3/4 mile of the CFC irradiator need, initially at least, simply notify us (through counsel) that they wish to pursue the litigation. They will thereupon be admitted as Intervenors. As soon as the standing of any Petitioners outside that area is determined (see (ii), below), all Intervenors will be called upon to make their written presentations on the merits of the admitted concerns.

(ii). Any Petitioners residing more than 3/4 mile from the facility (which is too far, in our view, to take advantage of “proximity-plus” standing) must, if they wish to participate in the litigation, demonstrate their standing in the classic “injury-in-fact” fashion (see pp. 13, 15-16 and 25-26, below). Upon receipt of their written materials seeking to demonstrate their standing, we will decide that issue, very likely on the papers alone without calling for oral argument.¹⁴

In the above fashion, we will ascertain whether there exist any Petitioners with standing who wish to pursue the litigation.¹⁵ Once again, any such Petitioners will be admitted as Intervenors.

¹³ Specifically, the area around the facility within which residents will automatically have standing will go from some 0.35 square miles to slightly more than 1.75 square miles.

¹⁴ We recognize that the parties filed briefs on standing at an earlier stage. We think, however, that the focus of those briefs will now be sharpened (compare 58 NRC at 318-19) in light of our subsequent exposition of the applicable standing doctrines (58 NRC at 317-22).

¹⁵ As noted above, we had thought at the outset it would be efficient simply to let the litigation proceed, on behalf of all under the CCMT umbrella, through those Intervenors who lived closest to the facility. See LBP-03-20, 58 NRC at 322-23. As we explained further in our unpublished June 28, 2004, ruling:

Courts routinely follow a similar approach in this regard, finding it unnecessary to evaluate the standing of all participants on one side if one of them is found to have standing. See Env'tl. Action v. FERC, 996 F.2d 401, 406 (D.C. Cir. 1993); U.S. Dept. of Labor v. Triplett, 494 U.S. 715, 719 (1990); Nat'l Min. Ass'n v. U.S.

In that role, given the current stage and status of this litigation, the next step will be for the newly-admitted Intervenors, if any, to file their written evidentiary presentations detailing the full merits of the matters which they only briefly outlined in the “areas of concern” they filed at the outset. We set forth in Part IV below the matters those presentations should address.

B. Petitioners’ Standing. In LBP-03-20, 58 NRC at 317-22, we went into considerable detail to explain the principles which govern whether a petitioner has standing to participate in a proceeding. While we need not repeat what we said there, an overview of the law of standing is in order here, given the guidance we must now provide in this case.

In order to establish standing in the classic fashion, a petitioner must allege a concrete injury that would be caused by the challenged action, and could be redressed by a favorable decision in litigation.¹⁶ Under the Agency’s precedents, however, there are circumstances in which petitioners may be presumed to have standing based on their geographic proximity to the facility.¹⁷

In power reactor licensing proceedings, proximity alone is enough. But in proceedings involving non-power reactors or materials licensing, something more is needed.¹⁸ Specifically,

Dept. of Interior, 70 F.3d 1345, 1349 (D.C. Cir. 1995). The reason for this approach at the appellate court level is, of course, that analyzing the standing of the others may involve more difficult questions that will have no practical effect on the course and outcome of the appeal. A similar rationale guided our decision to limit our treatment of the standing issues before us.

Given that CCMT did not seek to intervene, and that the closest residents have since settled their concerns and withdrawn from the proceeding, it has now become necessary to address the question of the standing of other Petitioners.

¹⁶ See Georgia Institute of Technology (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 115 (1995).

¹⁷ See Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 note 22 (1994).

¹⁸ See Georgia Tech, 42 NRC at 116; see also International Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-98-6, 47 NRC 116, 117 note 1 (1998).

in those instances proximity must be coupled with a showing that the facility's activities involve a "significant source of radioactivity producing an obvious potential for offsite consequences."¹⁹ In other words, except for power reactors, for a neighbor to have presumptive standing depends upon three factors: (1) proximity to the facility; (2) the presence of a "significant source" of radioactivity at the facility; and (3) that source's "obvious potential" to cause offsite damage due to its radioactive properties.

Those not having presumptive "proximity-plus" standing are not necessarily to be turned away. Under traditional standing doctrines, they are entitled to demonstrate standing based on establishing a viable potential pathway for "injury-in-fact".²⁰ (In addition, they must show how the factors set out in 10 C.F.R. § 2.1205(h) come into play).

Applying these standing principles, we admitted the three Intervenor last October based on their living in close geographic proximity (in this case within 1/3 of a mile) to a facility which was seeking to operate with up to one million curies of cobalt-60. We reasoned that it was not too great a "stretch of the imagination" to envision that, with that amount of radiation, some injury could occur (however unlikely) within the vicinity of the CFC irradiation facility.²¹ We found that the combination of the short distance and the large sources made the Petitioners within 1/3 of a mile from the facility "significantly more susceptible to being affected by the CFC facility" than were petitioners who had been admitted in an analogous proceeding.²² We left open the possibility, however, that a petitioner who lived at a greater distance than one-third of a mile might be found to have standing, either based on geographic proximity or by establishing

¹⁹ Sequoyah Fuels, 40 NRC at 75 note 22 (citing Armed Forces Radiobiology Institute (Cobalt-60 Storage Facility), ALAB-682, 16 NRC 150, 153-54 (1982); Northern States Power Co. (Pathfinder Atomic Plant), LBP-90-03, 31 NRC 40, 45 (1990)).

²⁰ See Sequoyah Fuels, 40 NRC at 75 note 22.

²¹ LBP-03-20, 58 NRC at 320 (citing to and quoting from Georgia Tech, 42 NRC at 117).

²² See id. at 322.

a viable potential pathway for a release of radiation from the cobalt-60 sealed source to cause them injury.

In the course of that initial consideration of standing doctrines, the question had arisen as to whether, for purposes of determining the “obvious potential for off-site consequences,” we should view the source as in its protected condition or, as Company counsel aptly dubbed the alternative, in “splendid isolation,”²³ i.e., with no shielding or protective mechanisms to prevent radioactive or other releases. The Company argued that it makes no sense to analyze the sources in such “splendid isolation” because the manufacturer of the source assures that it is sealed according to NRC requirements (id. at 12-13) and because the sealed sources stay at the bottom of the pool except when in casks.

Upon analysis, we agree with the Company to this extent -- we think it permissible to take into account not just the raw size of the source but at least any passive shielding that is always present during installation, operation or removal of that source. Depending on circumstances, it may also be appropriate to consider the method of operation of the facility, and the nature of the equipment or shielding that surrounds the source during operations. We hasten to add, however, that the “obvious potential” aspect of “proximity-plus” standing is not a concept that can be applied with engineering or scientific precision, and that any attempt to fix a boundary, no matter how thoughtful, can be viewed by one side or the other as arbitrary.

In this instance, the “significant source of radioactivity,” the cobalt-60, is a solid, not a powder, and even if it escaped would not be soluble in water. In addition, any such escape is sought to be prevented by sealing the source: the cobalt-60 is nickel-plated, contained within

²³ See Aug. 7, 2003 Tr. at 79; see also the Company’s September 5, 2003 “Response to NRC Staff’s Brief on Standing and Petitioners’ Areas of Concern” at 11-12; and LBP-03-16, 58 NRC at 138-39 note 5. (Originally coined to refer to British Prime Minister Lord Salisbury’s late-19th-century attempt to avoid British alignment in European affairs, the “splendid isolation” phrase has since found widespread application in other fields, so that by now it has been used in such diverse contexts as by psychoanalyst Sigmund Freud, paleontologist George Gaylord Simpson, and pop singer Warren Zevon.)

two concentric stainless steel tubes. A further barrier to radiation release is provided by those sources being at all times either in a cask or under water, i.e., at the bottom of a tank filled with 22 feet of water.²⁴

We note, however, that while the Agency's "obvious potential" precedents are instructive as to distance, they do not set definitive restrictions (compare the three miles allowed for the Armed Forces panoramic irradiator with the 1/2 mile allowed for the Georgia Tech research reactor). And, as indicated above, we do not pretend that the new 3/4 mile range we are adopting herein is immune from any charge of arbitrariness. But in the circumstances of this proceeding, given the passive shielding afforded by the pool's underwater design, we are comfortable with limiting the distance which provides presumptive standing to considerably less than the three miles that was determined for the Armed Forces panoramic irradiator, even though the sources here are authorized to be three times larger.

Moreover, it is long past time to get to the merits of this case, if indeed it is to go to trial, and there is a large group of Petitioners who, their addresses suggest, live in a neighborhood at or inside a 3/4-mile distance from the facility. To be sure, they may find themselves satisfied with the settlement proposal. But if not satisfied they should -- given the time that has elapsed with their petitions pending and all the other circumstances of this case -- now be afforded the opportunity to present the detailed evidence underlying and supporting their concerns.²⁵ Accordingly, without attempting to establish a definitive "proximity-plus" distance reflecting the "obvious potential" for all underwater irradiators, we believe that a distance of 3/4 of a mile is appropriate here.

As indicated above, those residing beyond that distance are not necessarily to be denied standing, but they must make a more specific showing than those residing closer. To

²⁴ A safety monitor tracks for any presence of radioactive material in the tank.

²⁵ Likewise, the Company, which has expressed the desire to demonstrate the merits and safety of its irradiator's design, will now have the opportunity to make such a showing, if any Petitioners go forward with the litigation.

repeat, they must make a specific “injury-in-fact” showing under classic standing principles, and with express reference to the factors set out in our Rules of Practice, in order to participate.

Alternatively, if they cannot make such a showing, they are not precluded from providing financial, intellectual, logistical or other support to those who do have standing.

IV.

Presentations on the Merits

Any of the pending Petitioners who, in accord with Part III, wish to move forward with the litigation and have standing to do so, will be granted Intervenor status. They must then, as their next task, address the merits of the litigation. On that score, they must file, pursuant to 10 C.F.R. § 2.1233(a),

written presentations of their arguments and documentary data,
informational material, and other supporting written evidence

In the course of that submission, they must, pursuant to 10 C.F.R. § 2.1233(c),

describe in detail any deficiency or omission in the license application, . . . give a detailed statement of reasons why any particular sections or portion is deficient or why an omission is material, and describe in detail what relief is sought with respect to each deficiency or omission.

All this is to be done “at the time or times and in the sequence the presiding officer establishes by appropriate order.” 10 C.F.R. § 2.1233(a). We set forth those timing/sequencing directives in Section E of Part VI, below.

As to substance, we draw the Petitioners’ attention to the converse of what we said in admitting their areas of concern. At that juncture, we pointed out that triggering a Subpart L hearing was “a relatively simple process” involving a “minimal” or “very limited threshold pleading obligation.” LBP-03-20, 58 NRC at 323, 326.

The opposite is true now. For while it was relatively easy for Petitioners to say enough to obtain a ruling that their concerns were sufficiently germane to be considered, it is now much

more difficult to present evidence to establish that those concerns are so meritorious as to warrant our determining that the Company is not entitled to a license, or at least that its license needs to be conditioned in the interests of safety. At this juncture, vague allegations complying with norms for pleading will not suffice -- specific evidence meeting scientific/engineering norms will ordinarily be needed to have any chance of prevailing on the merits.²⁶

Such written presentations must be filed for each previously-admitted germane area of concern that the new Intervenors wish to pursue. As we now explain, prior consideration of those matters in this proceeding has helped refine the matters to be covered:

- After analyzing in LBP-03-20 all the proposed areas of concern Petitioners had submitted (in documents presumably still available to them),²⁷ we summarized our rulings. 58 NRC at 333 note 31. For the litigants' convenience, we reprint that summary in Appendix C.
- In that same decision, we provided brief comments on each of the areas we there found germane. 58 NRC at 329-33. These comments also bear repetition; a reprint is attached as Appendix D.
- During the December 11, 2003, prehearing conference, we discussed the areas of concern with the parties to determine whether the Petitioners/ Intervenors, who at that point had more information before them than they had had when the concerns were filed, were able to add more specificity or focus. After lengthy

²⁶ Because the pleading of "germaneness" requires so little specificity, we have chosen to have the Intervenors proceed first, presenting the evidence that will detail the nature of their challenges (see p. 26, below). To do otherwise would be to create the risk that the Company's written presentation would, inefficiently, not be able to focus on what will turn out to be the real challenges to the license. In effect, then, the burden of going forward is on the Intervenors, while the ultimate burden of proof remains with the Company.

²⁷ In those pleadings, the Petitioners furnished for each concern a statement of: (1) the "event" of concern; (2) the projected "impact" of that event; (3) "substantiation" in terms of a chain of causation that could be a trigger for, or the result of, the event in question; and (4) a "source" in terms of scientific literature or expert opinion.

discussion, in which the Petitioners/Intervenors' expert participated, we and the parties retailored the areas of concern to the extent it was feasible to do so at the time. The changes discussed are summarized in Appendix E.

Taken together, the material in Appendices C through E should provide useful guidance to any Intervenors as to how to focus their written presentations.

In addition, we have several questions that any Intervenors need to address in order to create a thorough record for decision (see 10 C.F.R. § 2.1233(a)(second sentence)). Those questions, attached as Appendix F, are to be answered in the course of the written presentations on the merits of the area of concern to which they relate.

Any Intervenors are, of course, free to elect, for whatever reason, not to pursue particular areas of concern. To the extent, if at all, that they wish to follow that course, they need simply notify us at the time of filing their written presentations that they are abandoning particular areas.²⁸

On the other hand, we must stress that the written presentation on the merits does not provide an opportunity to submit or to raise new areas of concern. That stage of this proceeding has long passed; once again, the process going forward is to examine in close technical detail the merits of the previously-raised germane concerns.

²⁸ For example, Petitioners may have become aware -- through document examination, site visits, or settlement discussions -- of facts that alleviated a concern originally expressed or convinced them that a concern was not meritorious. Or, for an area covered by the settlement, the changes agreed upon may have addressed the concern. Or there may be instances where they have found it not possible to document their concerns. In any of these or similar instances, withdrawal or non-prosecution of a concern could be appropriate; such action will, of course, have no negative impact upon their prosecution of other concerns.

V.
Resolution of Financial Assurance

The Settlement Agreement does not address the matter of financial assurance, one of the Petitioners' areas of concern that we held was germane. Because that matter raised legal issues distinct from the other concerns being raised, we directed the parties to file a series of briefs thereon.

Specifically, the concern was over the sufficiency of the decommissioning bond and the absence of a decommissioning plan for the facility. Earlier in the proceeding, we deferred deciding whether Commission regulations apparently on point -- particularly 10 C.F.R. § 30.35, which sets the amount of the bond -- were controlling in precluding us from considering the financial matters the Petitioners sought to raise in this proceeding. The principal motivation for that deferral was our concern that remediation developments at another Pennsylvania irradiator site, known as PermaGrain, might have a bearing on the matter before us. See LBP-03-20, 58 NRC at 333, ¶ 7.²⁹

Accordingly, at a prehearing conference call soon thereafter, we asked the parties for briefs on that and other aspects of the decommissioning issue (see unpublished Nov. 19, 2003 Memorandum and Order, at 3). The parties duly submitted those initial briefs within the next month. Finding that those briefs left certain questions unanswered, we later called for further

²⁹ We said there that we wanted the parties "to address the significance, if any, of (1) the apparently multi-million-dollar cost recently incurred under NRC and Environmental Protection Agency auspices to remediate a site elsewhere in the Commonwealth on which was located an abandoned cobalt-60 irradiator [citing "Radioactive Material Removed from Bankrupt Central Pa. Site," NRC News Release, September 29, 2003, and the related September 29 news release issued by the Pennsylvania Department of Environmental Protection] and (2) an apparently impending NRC rule change regarding the size of decommissioning bonds."

briefs and responses (see unpublished February 17, 2004 Memorandum and Order at 3-4);³⁰ the last of those briefs was submitted in early April.

Throughout that briefing process, we foresaw the possibility that information relating to the remediation of the PermaGrain irradiator might, if the situation was analogous to that of the CFC irradiator, provide the “special circumstances” that would justify us in certifying the issue to the Commission for review. We are now able to say that such similarities do not exist, and that nothing about the financial assurance concern would lead us to do anything but apply the regulation as written.

On that score, the general rule is that a party may not challenge a Commission regulation in a licensing proceeding. See 10 C.F.R. § 2.1239(a). In most instances, those regulations thus provide us the law that governs our proceedings. A party may, however, petition that such a regulation not be applied in certain instances. See 10 C.F.R. § 2.1239(b). To avoid a regulation’s ordinary impact, a party must demonstrate that “special circumstances exist so that application of the regulation to the subject matter of the proceeding would not serve the purposes for which the regulation was adopted.” Id. A “special circumstance” may be established, for example, by a petitioner’s demonstrating that facts unique either to the applicant or the facility were not contemplated in the regulation’s adoption, and thus that the regulation should not apply in that instance.³¹

³⁰ There, we noted that the critical matters were “(1) what had transpired on that other site during its lifetime that had brought about the need to incur decommissioning expenses that are so disproportionate to the amount of the initial bond sought of the Company here, and (2) what are the similarities, if any, between that site/facility and the site/facility before us.” Id. at 4 note 6.

³¹ See Public Service Company of New Hampshire, et al. (Seabrook Station, Units 1 and 2), CLI-88-10, 28 NRC 573, 597 (1988), reconsideration denied, CLI-89-3, 29 NRC 234 (1989).

The Petitioners/Intervenors attempted to argue here that the “unique, prototypical design” of the CFC irradiator generated “special circumstances”: because of the new design, and general security risks, the Petitioners/Intervenors believe that the facility is at high risk for a serious accident and an unusually expensive cleanup that would warrant the Board certifying the issue to the Commission.³²

The situation at the PermaGrain facility initially seemed to us to lend credence to the Petitioners/Intervenors’ arguments that neither the \$75,000 bond the Company has already posted nor the increased \$113,000 bond the Company will eventually post (under a regulation amendment) would be sufficient to assure cleanup of the facility. On its face, the situation -- involving an apparently similar irradiator, located in the same State, requiring clean-up expenditures some 25 times larger than the amount of the CFC bond -- demanded further inquiry.

As it turns out, that inquiry has served to put the matter to rest, based on the additional facts the inquiry brought to our attention. In its submission, the Company pointed to several factors that distinguish the two Pennsylvania facilities’ irradiators from each other.

As the Company puts it, PermaGrain’s irradiator operated under “different site-specific conditions, types of contamination, and activities.”³³ That irradiator site required additional decommissioning costs because of the prior uses that occurred there. The PermaGrain irradiator pool, for instance, had been used to house research reactor pool assemblies containing uranium-235, which led to residual contamination in the irradiator assembly.³⁴

³² See Intervenors’ Reply to Supplemental Briefs of NRC Staff and CFC Logistics on Area of Concern Regarding Decommissioning Financial Assurance (Apr. 2, 2004) at 1.

³³ See Reply of CFC Logistics, Inc. to NRC Staff’s Supplemental Brief on Area of Concern Regarding Decommissioning Financial Assurance (Mar. 12, 2004), Exh. A, Affidavit of Sharon Turner at ¶ 10.

³⁴ See *id.* at ¶ 11.

Additionally, the PermaGrain facility had a license covering residual contamination and source material left at the site by prior tenants, so the site had various materials, including strontium-90 and cobalt-60, located in the “six on-site hot cells, isolation rooms, radiochemistry laboratory, decontamination laboratory, fan room, stationary overhead transport system, waste-water holding tanks, waste-water treatment plant, and other miscellaneous areas.”³⁵

The PermaGrain facility also used unregistered cobalt-60 sources. Because the sources were unregistered, they could not be re-used by the source supplier and had to be packed in a transportation cask along with the other residual contaminants and shipped for disposal at a low-level radioactive waste facility in South Carolina.³⁶

None of these types of problems, and their concomitant remediation costs, can be encountered at the CFC facility as presently licensed. The CFC irradiator assembly will use only cobalt-60 as the irradiation source,³⁷ so the contamination seen in the PermaGrain pool would not be seen in the CFC pool. Additionally, CFC will use only registered cobalt-60 “sealed sources.”³⁸ Because the sources are registered, they can (and are expected to) be reused by the source supplier and will not require the same costly transportation and disposal fees that the PermaGrain sources required.³⁹ Finally, CFC is not employing any of the complex of features, mentioned above, that had to be decontaminated at the PermaGrain facility,⁴⁰ nor will

³⁵ See id. at ¶ 15.

³⁶ See id. at ¶ 20.

³⁷ See id. at ¶ 11.

³⁸ See id. at ¶ 20.

³⁹ See ibid.

⁴⁰ See id. at ¶ 15.

the facility deal with any source material other than the cobalt-60 “sealed sources” installed in the irradiator’s plenum.⁴¹

Thus, the Company concludes, the differences between the two facilities should preclude either drawing any adverse conclusions about CFC’s financial assurance arrangements or referring the issue of financial assurance to the Commission.⁴² In short, the Company claims, the original use of the research reactor at the PermaGrain facility created a type of residual contamination that led to the extraordinary cleanup costs at that facility. No such use has taken place, and no such contamination would be possible, at the CFC site. Additionally, the sources used at the PermaGrain facility did not comply with current NRC registration requirements, and the nature and condition of those sources created disposal problems, further escalating the costs of decommissioning. These factors, which significantly drove up the cost of decommissioning at PermaGrain, do not exist and will not be encountered at the CFC facility, asserts the Company, and thus do not bear on any financial assurance issues there.

We agree in substance with the Company’s reasoning. To establish a “special circumstance” warranting certification to the Commission, a petitioner must be able to point to unusual facts that make the situation at hand peculiar enough to take it out of the regulation’s contemplation. Although upon superficial initial comparison there were certain apparent similarities between the CFC facility and the PermaGrain facility, closer examination has highlighted significant differences between the two, leaving us satisfied that the CFC irradiator -- unlike the PermaGrain one -- is embraced within the category of facilities contemplated during the formation of the decommissioning bond regulations reflected in 10 C.F.R. § 30.35.

⁴¹ See id. at ¶ 9.

⁴² See id.(Brief) at 12.

In this regard, we find convincing the fact that CFC does not begin its irradiator operation burdened with the residual contamination from prior operations found at the PermaGrain facility. Additionally convincing is the fact that the cobalt-60 pencils to be used at the CFC irradiator -- with their uniform, regulation-conforming configuration -- may, after use there, be transported by normal means back to the supplier without requiring later disposal at a costly waste facility.

We find, therefore, that the Petitioners have failed to present the "special circumstances" required by 10 C.F.R. § 2.1239(b) to justify a certification to the Commission regarding the potential waiver of 10 C.F.R. § 30.35. Having been fully briefed by the parties on the legal issues that are controlling in this matter, and with no dispute existing about the relevant factual setting of the two facilities, we not only DENY the Petitioner's request for certification but also DISMISS from further consideration herein the area of concern regarding decommissioning financial assurance. This concern is not, then, to be addressed in the merits presentations.⁴³

VI. Establishment of Time Periods

A. Providing Notice. Because the individuals named in the two petitions filed with us were represented by counsel in those filings, we are directing their counsel to send a copy of this Memorandum and Order promptly to each of the Petitioners, including those whose intervention we approved and those (from both the first and second Petitions filed) whose intervention we did not previously pass upon. In that fashion, presumably aided by a brief explanatory cover letter highlighting their options, they will each be PUT ON NOTICE that they must act promptly if they choose to remain in this litigation.

⁴³ Nor will we at this point take up the pending concern about physical plant security. On that score, there is some dispute about the extent of the matters over which we have jurisdiction (see LBP-03-16, 58 NRC at 143), and the hearing of any matters would have to be conducted in a manner that would protect certain information from disclosure. Depending upon whether it becomes necessary to do so, we will address the process for litigating the physical security issue in a separate order.

Counsel may find it appropriate to omit such Notice to those Petitioners who have previously advised him that they are not in position, or lack the interest, to proceed. This can be done because, pursuant to our directive, counsel informed us as to the nature of the responses he had received from his clients to an inquiry we had posed. Specifically, they were asked by him at our instance whether they remained both (1) resident in the same location they had at the outset and (2) interested in pursuing the litigation if a settlement involving others opposing the license were to be approved. Counsel advised us that only eight of the Petitioners had responded by that time, all of whom indicated their residence had not changed; five of them indicated they would be interested in pursuing the litigation and three indicated they would not.⁴⁴ At his option, counsel for the Petitioners may omit contacting those who, before or since his report to us, responded negatively to either portion of the residence/interest inquiry and who can thus, without more, be taken as not intending to continue with the litigation.

B. Declaring Interest. Counsel for the Petitioners has TWO WEEKS from the date of issuance of this order to notify the Board as to whether each of his clients does or does not wish to go forward with this litigation. In so notifying us, counsel must state the distance that each petitioner wishing to proceed lives from the facility, if that information has not previously been provided.⁴⁵ Any Petitioners about whom no notification of desire to proceed is received within the time period allotted will be DEEMED TO HAVE WITHDRAWN from the litigation by virtue of non-prosecution.

C. Briefing Standing of Petitioners. On behalf of any Petitioner wishing to pursue the litigation who lives outside the 3/4-mile radius within which presumptive standing exists, briefs addressing their standing are to be filed TWO WEEKS after counsel notifies us that some such Petitioners wish to pursue this litigation. In effect, then, counsel has a total of **FOUR WEEKS**

⁴⁴ See p. 4 of August 16, 2004 letter from counsel to the Presiding Officer.

⁴⁵ Compare the table of addresses and distances attached to the original Petitioners' August 14, 2003, filing, with the less precise locations associated with some of the new individuals listed in the December 4, 2003 Petition for Leave to Intervene.

from the time this Memorandum and Order is issued to file any necessary briefs on standing. Company counsel will thereafter have TWO WEEKS to respond to any briefs on standing that the Petitioners may file. In total, then, the maximum time for putting the standing question before us for decision will be SIX WEEKS from this date.

D. Dismissing Proceeding. If it turns out that no Petitioner has both the interest and the standing to proceed, no interventions will be recognized and this matter will be dismissed.

E. Presenting Merits of Concerns. If one or more interventions do go forward, then in line with the time periods previously discussed (see Dec. 11, 2003 Tr. at 468-69; Aug. 5, 2004 Tr. at 593-94), the Intervenors' written presentations on the merits will be due SIX WEEKS after the Board rules on standing, if any such ruling is necessary.

Of course, if no one outside the 3/4-mile "presumptive standing" radius wishes to pursue the litigation, no ruling on standing will be necessary. In that event, the six-weeks time set by this Section for filing the merits presentation will begin to run from the time (two weeks from now) that counsel for the Petitioners initially responds to the Board that only Petitioners with presumptive standing wish to proceed.⁴⁶

In any event, the Company's reply written presentation will be due SIX WEEKS after the filing of the Intervenors' written presentation.⁴⁷ In that response to whatever written material the Petitioners may present to support their concerns, the Company will have full opportunity to put forward its various arguments that those concerns lack merit, arguments we have held were premature at earlier stages (see, e.g., LBP-03-20, 58 NRC at 329-30, ¶¶ 1.1 and 1.4).

⁴⁶ Once again, Petitioners wishing to proceed are under no obligation to pursue all the pending areas of concern; they may choose whatever areas of concern they wish to litigate.

⁴⁷ The Staff's original election not to participate in the proceeding having been reinstated (see LBP-03-16, 58 NRC at 148), the hearing will, barring further developments, involve only the Company and the Petitioners. It is likely, however, that if and when we address the security concerns (which as indicated in note 43 above will be the subject of a separate Order if this matter goes forward), we will consider directing the Staff to participate as to both the legal issues and the factual aspects related to that matter. See 10 C.F.R. § 2.1213 (last sentence).

Under Subpart L, our consideration of the merits will, at least initially, be based on the written presentations only. See 10 C.F.R. § 2.1233 (a). If, after review of those presentations, we find we need more information, we will seek it by invoking the live witness procedures provided for in our Rules. See 10 C.F.R. § 2.1235(a).

In sum, for the reasons expressed, the Settlement Agreement recommended to us by Judge Abramson, the product of extensive negotiations which he guided, is hereby APPROVED. Those who participated in the negotiations have our appreciation for working diligently to resolve the controversy between the Company and the community in which it is located. Further proceedings involving the remaining participants shall be as directed herein, with the request for certification to the Commission for an exception to 10 C.F.R. § 30.35 DENIED and the area of concern regarding decommissioning financial assurance DISMISSED.

It is so ORDERED.

BY THE PRESIDING OFFICER



Michael C. Farrar
ADMINISTRATIVE JUDGE

Rockville, Maryland
November 4, 2004

Attachments:

- Appendix A: Executed Settlement Agreement
- Appendix B: ELECTION Form
- Appendix C: Reprint -- List of Germane and Non-Germane Areas of Concern
- Appendix D: Reprint -- Analysis of Germane Areas of Concern
- Appendix E: Summary of Prehearing Discussion of Germane Areas of Concern
- Appendix F: Questions to be Addressed in Written Presentations

Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) CFC Logistics; (2) Petitioners/Intervenors; and (3) the NRC Staff.

APPENDIX A

Executed Settlement Agreement

[five separately-numbered pages]

SETTLEMENT AGREEMENT
dated as of August 23, 2004

This Settlement Agreement is entered into as of the date first above written by and among CFC Logistics, Inc. (hereinafter referred to as the "**Company**"), Mrs. Kelly Helt and Mr. Tom Helt, of 1742 Red Bud Road, Quakertown, Pa. (hereinafter referred to as the "**Petitioners**"), and Mr. Robert Jones (hereinafter referred to as "**Petitioner Supporter**").

Reference is made to that certain matter, identified as Docket No. 30-36239-ML, ASLBP No. 03-814-01-ML, and commonly referred to as "In the Matter of CFC Logistics, Inc. (Materials License)", being litigated before an Atomic Safety and Licensing Board (the "**Board**") of the United States Nuclear Regulatory Commission's (hereinafter referred to as the "**CFC Litigation**").

WHEREAS, Petitioners were, together with Mr. Andrew Ford, formerly of 1730 Red Bud Road, Quakertown, Pa., the sole petitioners admitted by the Board to conduct the CFC Litigation; and

WHEREAS, the Petitioners were supported in conducting the CFC Litigation by Petitioner Supporter; and

WHEREAS, the Company, being desirous of addressing the concerns of the Petitioners which gave rise to the CFC Litigation, and Petitioners and Petitioner Supporter, being desirous of working with the Company to address their mutual concerns, have held extensive discussions and negotiations in an effort to resolve the CFC Litigation outside the forum of the formal proceedings being conducted before the Board; and

WHEREAS, Petitioners, Petitioner Supporter and the Company (each being hereinafter referred to as a "**Party**" and collectively as the "**Parties**") have agreed to a complete settlement of the CFC Litigation, subject to the terms and conditions hereinafter set forth;

NOW THEREFORE, the Parties hereby agree, in consideration of the mutual agreements hereinafter set forth, the receipt and sufficiency of which is hereby acknowledged, as follows:

1. **Agreements of the Company.** The Company, in consideration of the agreements of the Petitioners and Petitioner Supporter set forth below, agrees as follows:
 - A. To add to its irradiator facility, without making any representation whatsoever regarding whether or not such additions make any additional contribution to the safety thereof, the following:
 - i. A backup power supply, through the use of a generator, for the pump which drives the air flow through the chamber containing the NRC-licensed and approved sealed sources (hereinafter referred to as the "**backup power supply**"); and
 - ii. A light beam trip switch which will be designed and implemented for utilization during loading and unloading of sealed sources (hereinafter referred to as the "**light beam trip switch**"). If the cranes which carry the sealed source cask are near a point where they would traverse over the sealed sources, the light beam trip switch will automatically trigger an audible and visual alarm prior to the cask being traversed over those sealed sources.

- B. The backup power supply will be installed by the Company at the earlier to occur of (i) the time it adds a general backup power supply for its emergency lighting for its facility, currently estimated to occur in November of 2004, or (ii) December 31, 2004.
 - C. The light beam trip switch will be implemented by the Company by the earlier of (i) completion of the next source loading or (ii) December 31, 2004.
 - D. If, at some future date the Company shall determine to add an additional irradiator to its facilities which is substantially similar to the current irradiator, the Company will make additions to that additional irradiator which are substantially similar to those described above in Clause A of this Section 1.
2. **Agreements of the Petitioners.** Petitioners agree, in consideration of the agreements of the Company set forth above, to withdraw from the CFC Litigation, and that, for their part, the CFC Litigation shall be deemed to be irrevocably settled in full immediately upon approval of this Settlement Agreement by the Board.
3. **Agreements of Petitioners and Petitioner Supporter.** Petitioner Supporter and each Petitioner agrees, in consideration of the agreements of the Company set forth above:
- A. not to support (whether financially, through provision of work product or labor, or by consultation or any other means) or encourage any other person or entity (including, without limitation, those other persons who have entered requests to become parties to the CFC Litigation) to carry out or pursue against the Company, through any means whatsoever, any of the topics or assertions made heretofore in the CFC Litigation; and
 - B. not to support (whether financially, through provision of work product or labor, or by consultation or any other means) or encourage, and, to the extent they are practically able, to discourage, Concerned Citizens of Milford Township from continuing or pursuing against the Company, through any means whatsoever, any of the topics or assertions made heretofore in the CFC Litigation.

The foregoing agreements: (i) do not limit, in any manner whatsoever, the rights of Petitioners or Petitioner Supporter to seek, through the legislative or other public process, regulatory reform or changes regarding nuclear licensing procedures, regulations, safety or security as required by the NRC or its Agreement States, or to speak out publicly regarding perceived issues regarding this or other irradiators or the regulatory system to which they are subject ; and (ii) will not apply in the event that there is a proposal to make a material change to the irradiator as currently licensed; and (iii) will not apply to additional irradiators at the facility which are materially different from the current irradiator.

4. **Agreements of the Parties.**
- A. **Non Disclosure Of Confidential Settlement Discussions:** In consideration of the agreements set forth above, each of the Parties hereby agrees that it shall not discuss or make available, and it shall use its reasonable efforts to cause its consultants and attorneys not to discuss or make available, in any forum or to any person whatsoever, any information which was exchanged among the Parties during the discussions which lead to this Settlement Agreement; provided, that each Party may disclose discussions relating to security at the irradiator facility.
 - B. **Press Releases Regarding this Settlement Agreement.** Without limiting the agreement set forth in Section 4 A of this Settlement Agreement, each party may, after approval of this Settlement Agreement by the Board as discussed in Section 6A hereof, prepare and issue, after delivery of draft copies thereof to the other Parties and receipt of their

prior written approval, press releases regarding this Settlement Agreement. This Settlement Agreement may be released by either Party after the Company (on the one hand) and the Petitioner and the Petitioner Supporter (on the other hand) have each had the opportunity to issue a press release regarding this Settlement Agreement; and toward that end, the Parties agree to use their reasonable efforts to cause such press releases to be released simultaneously, in which case, a copy of this Settlement Agreement may be released simultaneously therewith.

- C. Press Releases and Press Conferences Regarding the CFC Litigation. Except as provided in Clauses B and D of this Section 4, no Party shall issue any press release regarding the CFC Litigation or any part thereof, nor shall any Party hold a press conference relating to any of the subject matter of the CFC Litigation.
- D. Press Conferences Regarding the Settlement Agreement. No Party shall hold a press conference relating to this Settlement Agreement unless the other Parties are given prior written notice thereof and offered an opportunity to be present at such press conference.
- E. Agreement Regarding Changes to Irradiator Facility. Each Party acknowledges and agrees that the implementation of the backup power supply and the light beam trip switch are not deemed by the Company to, in any manner whatsoever, be necessary for, or improve, the safety of the irradiator facility, and that they are being implemented solely to accomplish this Settlement Agreement.

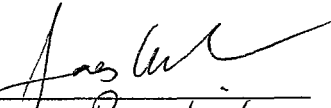
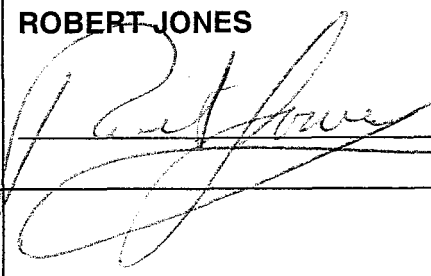
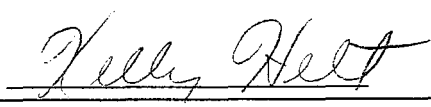
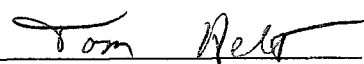
5. Mutual Release. The Company, each Petitioner and Petitioner Supporter hereby irrevocably and forever release and discharge each other of, from and against any and all claims, damages and suits of any nature whatsoever arising out of, or in any manner relating to, the CFC Litigation; provided, that the foregoing release and discharge shall not affect the right of any Party to seek to enforce its rights (or the obligations of another Party) under this Agreement.

6. **General Provisions**

- A. Approval by the Board. The Parties acknowledge and agree that, because the effect of this Settlement Agreement would be to terminate the CFC Litigation insofar as it involves the Petitioners, Petitioners and the Company will deliver to the Board a copy of this Settlement Agreement for approval by the Board. That approval process will require time, and the Parties acknowledge and Agree that this Settlement Agreement will not be effective until (and unless) it has been fully approved by the Board.
- B. Entire Agreement . Each Party declares and represents that: (a) no promise, representation, inducement or agreement not expressed in this Settlement Agreement has been made to either of them in respect of the subject matter of this Settlement Agreement; (b) it is not relying on any promise, representation, inducement or agreement in entering into this Settlement Agreement except as expressly set forth in this Settlement Agreement; (c) this Settlement Agreement contains the entire agreement among the Parties relating to its subject matter, and supersedes any prior agreements and contemporaneous oral agreements, of the Parties concerning its subject matter.
- C. Advice of Counsel. Each Party acknowledges and agrees that it has had the full opportunity to consult with counsel of its own choosing prior to entering into this Agreement; and that the terms of this Agreement are contractual and not mere recitals.

- D. Successors and Assigns; No Third Party Beneficiary. This Agreement shall be binding on and inure to the benefit of the successors or assigns of any of the Parties. In all other respects, this Agreement shall not create third-party beneficiary rights in any nonparty hereto.
- E. Authorized Signatory. The person executing this Settlement Agreement on behalf of the Company represents and warrants that he has full and complete authority to do so, and to bind the Company to the promises and agreements set forth in this Settlement Agreement.
- F. Amendments. No amendment or modification of this Agreement or waiver of any right hereunder shall be binding on any party hereto unless it is in writing and is signed by all of the parties hereto.
- G. Notices. All notices, demands, requests or other communications which may be or are required to be given, served or sent by any Party to any other Party, shall be in writing and shall be deemed sufficiently given (i) if delivered personally to a Party (or to an office of that Party) to whom the same is directed, (ii) if sent by certified mail, return receipt requested, with postage prepaid, (iii) if sent by a nationally recognized express mail service which requires a receipt from the recipient, or (iv) if sent by telecopy or facsimile transmission and the recipient has verified receipt, and, in any case, addressed to the recipient Party at the address given in writing by such Party to the other Parties. Such notice shall be deemed received upon signature by the Party or its duly authorized employee or agent for of same. A Party may change the name or address for the giving of notice provided above by written notice to the other Parties.
- H. Further Assurances. Each Party agrees to execute and deliver to the other Parties such documents, instruments and agreements as shall be necessary to give full effect to the agreements set forth herein.
- I. Severability. To the extent a provision of this Settlement Agreement is unenforceable, that provision shall be modified to reflect the Parties' intention to the maximum extent permitted by applicable law. All remaining provisions of this Agreement shall remain in full force and effect.
- J. Headings. Section headings have been inserted in this Agreement as a matter of convenience for reference only, and it is agreed that such section headings are not a part of this Agreement and shall not be used in the interpretation of any provision of this Agreement.
- K. Counterparts. This Agreement may be executed in any number of counterparts and by the different parties hereto on separate counterparts, each of which, when so executed and delivered, shall be an original, but all such counterparts shall together constitute but one and the same instrument.
- L. Governing Law. **THIS SETTLEMENT AGREEMENT AND ANY OTHER DOCUMENT OR INSTRUMENT EXECUTED AND DELIVERED IN CONNECTION HERewith AND THEREWITH, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA.**

IN WITNESS WHEREOF, the Parties have caused this Settlement Agreement to be duly executed by their duly authorized representatives as of the day and year first above written.

CFC LOGISTICS, INC. By:  Title: President	ROBERT JONES 
KELLY HELT 	
TOM HELT 	

APPENDIX B

ELECTION Form

[one un-numbered page]

CFC Logistics Litigation
ELECTION TO
NOT CONTINUE LITIGATION

Reference is made to that certain matter, identified as Docket No. 30-36239-ML, ASLBP No. 03-814-01-ML, and commonly referred to as "In the Matter of CFC Logistics, Inc. (Materials License)", being litigated before an Atomic Safety and Licensing Board (the "**Board**") of the United States Nuclear Regulatory Commission's (hereinafter referred to as the "**CFC Litigation**").

I am one of the individuals who was indicated as a potential petitioner in the CFC Litigation. I have read the settlement agreement reached between the Company and the admitted petitioners (a copy of which is attached hereto), and I hereby notify the Board that I find that settlement agreement satisfactory and do not intend to pursue the CFC Litigation further. Therefore, I hereby withdraw from my request to become a party to that litigation.

Name (print): _____

Signature: _____

Street Address: _____

City/town: _____

State and Zip: _____

Date: _____, ____, 2004

APPENDIX C

Reprint -- List of Germane and Non-Germane Areas of Concern

Our recap in LBP-03-20, 58 NRC at 333 note 31, listed the "*germane* areas of concern" as including the following:

- 1.1 (pool cracking);
- 1.3 (waste collection);
- 1.4 (rod mishandling);
- 1.5 (electricity loss);
- 1.6 (air-line damage);
- 1.8 and 6 (untested design);
- 2.1, 2.2, and 5.2 (security planning);
- 4 (neighbors' water);
- 5.1 (transportation accidents); and
- 7 (decommissioning bond/plan).

That same footnote went on to list the "*non-germane* areas" as follows:

- 1.2 (air circulation);
- 1.7 (ozone dispersion);
- 2.1 (inadequate regulation); and
- 3 (worker exposure).

[The area numbered 2.1 was underlined to indicate that a portion was found germane and another portion non-germane.]

APPENDIX D

Reprint – Analysis of Germane Areas of Concern
[single-spaced material reprinted from LBP-03-20, 58 NRC at 329-33]
[footnotes re-numbered from original]

We introduced the Petitioners' first set of concerns by pointing out they were grouped under an "Air Dispersion" heading, presumably referring to radioactive material or gamma radiation. This is what we had to say about those we found germane:

1.1. Vessel Cracking. In the circumstances of late document disclosure, we read this concern about cracking of "the vessel containing the cobalt-60" from "loss of coolant" as fairly embracing a concern about an accident -- for example, one caused by dropping a heavy weight (such as a transfer cask) while it is suspended above the pool -- damaging the structure of the pool holding the water in which the cobalt-60 sources would sit, possibly releasing the pool water into the ground and thus affecting the surroundings (while also losing the pool water's capacity to shield the surroundings from the sources' gamma radiation). That the Company believes this scenario far-fetched (and thus defeatable on the merits) does not make it non-germane. The NRC Staff believes it germane, and we agree.⁴⁸

1.3. Radioactive Waste. This concern is about radiation emission from "storage of radioactive waste at the facility." Although the Company urges that no waste as such will be "stored" there, the concern is framed broadly enough to cover emissions from materials collected periodically during "water chemistry controls," which will take place as part of the facility's operation. As so understood, the concern is germane, as the Staff agrees.

1.4. Rod Mishandling. Concern about the mishandling of the cobalt-60 sources during transportation, loading and removal is plainly germane, as the Staff agrees. The Company's arguments to the contrary are entirely merits-based and thus not cognizable at this juncture.⁴⁹

⁴⁸ For the Staff's views on each of the areas of concern, see Staff Brief at 5-11.

⁴⁹ We should note that our earlier ruling on the stay motion required us to take the standard look at whether the Petitioners had carried the heavy burden of demonstrating "probability of success on the merits" and "irreparable injury." As we indicated then (LBP-03-16, 58 NRC at 144-45,148), no conclusions we reached there against the Petitioners are determinative on the questions now before us, dealing with whether they have carried the less rigorous burden of demonstrating "germaneness."

1.5. Electricity Loss. In expressing concern about a loss of power, the Petitioners mistakenly refer to "a bell containing cobalt-60" being stuck underwater with damaging consequences. As they learned thereafter, including during the facility visit the day of oral argument, the immersible bells contain only the food and other products to be irradiated, while the cobalt-60 sources remain at the bottom of the pool. The Company argues that the specific problem is thus not applicable or relevant to the application for this irradiator. But there are other problems that could stem from the concern about loss of facility electricity, and on this basis we find that broad concern germane (as does the Staff), subject to its being stated more specifically at the proper juncture

1.6 Air-Line Damage. We discussed in LBP-03-16 the role of the air lines, both of which are subject to damage. 58 NRC at 146. Although we there accepted the Company's arguments about the lack of sufficient showing of probability of success on the merits or of irreparable injury, that is not the test here . . . , and we agree with the Staff that concerns about damaged air lines are germane.

1.8. Untried Installation/Assembly. The Company believes its design is state-of-the-art and thus should present less concern to nearby residents than older designs. The Petitioners see the converse: an untried design. Although this concern is lacking in particulars, Petitioners point to the difficulty and delay they encountered in obtaining trade secret material -- a view we have already indicated we share (see LBP-03-16, 58 NRC at 143 n.13) -- that they needed to review in order to be more precise in their pleadings. On that basis, we are unwilling at this juncture to find this concern lacking in germaneness. We note, however, that a challenge to the facility design as untried or untested, uncoupled with a claim that the design fails to meet the applicable regulations, might be viewed as an impermissible collateral attack on NRC regulations. 10 C.F.R. § 2.1239. If so, it would not be within our jurisdiction to entertain, and accordingly would not be germane to the proceeding before us. In any event, to the extent this matter does move forward, it should be combined with concern 6, below.

We then moved on to the Petitioners' second category, "Neighbors' Security," under which they advanced two specific concerns. We covered those in this fashion:

2.1. [Untitled]. To the extent this concern puts forward an overly-generalized claim of "inadequate regulation," it seems to present a challenge to the Commission's regulations that may not be entertained in our proceedings. 10 C.F.R. § 2.1239. Accordingly, this concern is not germane to any issues that can be addressed, or to any relief that can be granted, in this proceeding. To the extent, however, that this concern mentions security planning, it is germane, but should be combined with 2.2 and 5.2, below.

2.2. Security Plan Inadequacy. Notwithstanding the opposition of the Company, this concern, on which the Staff is willing to defer judgment, is plainly germane. The lack of specificity accompanying it was due to the Petitioners' inability to obtain the relevant documents -- which were being withheld under various and changing claims of secrecy -- in timely fashion. As with concern 2.1, above, this concern should be combined with 5.2, below, whose precise contours remain to be defined (see p. 332, below, and LBP-03-16, 58 NRC at 145).

The Petitioners' fourth category (the third was found non-germane) had but a single concern. We had this to say about it:

4. Neighbors' Water. Petitioners express concern over possible cobalt-60 contamination of the public water system, particularly in light of the alleged closeness of the local water table to the surface. At oral argument, they expressed concern that the largely underground pool could be damaged in some kind of accident, releasing its (possibly contaminated) water into the water table, thus contaminating local wells. And in their pleadings they referred to prior incidents in which contaminated pool water was introduced into the public sewer system. The Company's and the Staff's protestations that such accidents and incidents elsewhere are not credible given the facility's design go to the merits, not to the germaneness, of the concerns, and we will therefore allow them to be considered.

With respect to their fifth category, styled "Transportation Hazards," we observed that the Petitioners had focused on both accidental and deliberate causes hazards associated with transporting the cobalt-60 sources. This was how we described them:

5.1. Accidents. Petitioners note the absence in the application of emergency procedures for responding to loading and unloading accidents. The Company's and Staff's objection that the concern is stated in generalized fashion is not adequate to defeat the obvious germaneness of this concern, particularly in light of the difficulties and delays encountered by Petitioners in obtaining documents related to the application.

5.2. Sabotage or Terrorism. As indicated in 2.2 above, this concern is germane and the two should be addressed together.

The sixth area of concern covered but a single area. We had only the following to say at the time:

6. Experimental Design. Although the Staff did not agree that the similar concern already discussed in 1.8 above was germane, it does concede that the Petitioners' concern that this irradiator is "atypical, . . . experimental and unprecedented" is sufficiently germane. We agree with the Staff here and will direct that the two concerns be considered together.

An outgrowth of this concern, based on later-discovered documents, became the basis for the Intervenors' second stay motion, which we denied in an unpublished decision earlier this year. May 28, 2004 Memorandum and Order (Ruling on Request for Stay and Related Relief). The allegations made there, and our interim decision thereon, should be examined for the bearing they have on the litigation of the merits of this concern.⁵⁰

The petitioners' final area of concern, too, covered only one topic, financial assurance. Because we have dismissed that concern, we do not repeat what was earlier said about it.

⁵⁰ This concern also formed the backdrop for the Petitioners' financial assurance concern, which we have now dismissed (see p. 24, above). The "experimental design" concern remains in the case, however, for other purposes. We point out, though, that any written presentation on its merits needs to address the analysis thereof that was contained in our denial of the renewed stay motion, which motion relied on an analogous argument. See unpublished May 28, 2004 Memorandum and Order (above), at 3. See also note 51, below.

APPENDIX E

Summary of Prehearing Discussion of Germane Areas of Concern

The matters discussed at the December 11, 2003, prehearing conference may be summarized as follows:

(1.1) Vessel Cracking. The Petitioners/Intervenors clarified that their concerns with vessel cracking involved both the potential cracking of the pool and the potential cracking of the source material should a heavy weight, such as a transfer cask, fall into the pool. Tr. at 435. After some discussion on how the Petitioners/Intervenors could perform the transfer cask calculations to determine if a dropped cask would crack the vessel, the Board suggested that the Petitioners/Intervenors perform the necessary analysis using the data available for the heaviest potential cask the company could use. Id. at 440-41.

After the Petitioners/Intervenors further clarified their position on vessel cracking, the Board decided that the concern about (4) Neighborhood Water should be combined with that of (1.1) Vessel Cracking because both subjects involve the potential cracking of the pool structure. Id. at 465.

(1.4) Rod Mishandling. After some discussion, the Petitioners/Intervenors stated that they did not wish to narrow this issue. Tr. at 448. The Board made clear, however, that this issue was admitted solely for the purpose of challenging the Company's compliance with Commission regulations as to the handling of rods, and does not involve security issues. Id. The Board suggested, and the Petitioners/Intervenors agreed, that transportation and rod mishandling should be combined to the extent that they overlap. Id. at 466.

The Board further noted that, regarding transportation, the parties should be prepared to address whether the Board had jurisdiction over any transportation concerns involving non-parties, that is people who are not employed by the company. Id. at 468. The Board also asked that in preparing their presentations, the parties analyze only accidents involving Type-B casks so as not generate unnecessary analysis. Id. at 468.

(1.5) Electricity Loss. The Petitioners/Intervenors explained that two specific problems could arise from a loss of electricity to the facility. The first involves cooling the cobalt-60. We asked that the evidence on that subject include the necessary detailed calculations to support the allegations that the Staff's calculations on cooling are inaccurate. Tr. at 452. Furthermore, we asked that the evidence be self-contained, that is, that the Petitioners/Intervenors include, reference by reference, the source of all the material constraint correlations and other parameters they relied upon in making the calculations. Id.

The second issue the Petitioners/Intervenors raised was whether the cobalt-60 would be dispersed in the pool if the facility lost its electricity, and whether this possibility creates a safety concern rather than the mere business concern of loss of product. Id. at 456. The Petitioners/Intervenors explained that a loss of electricity to the facility raises various concerns about pool cleanup and product cleanup. One such concern was that without electricity the pool pumps would stop working, resulting in a loss of air pressure, and potentially leading to water entering the bell. Id. at 457.

We concluded that because (1.5) electricity loss also covered (1.6) airline damage, these topics should be combined. Id. at 458.

(1.8) Untried Installation/Assembly. We also observed that (1.8) Untried Installation/Assembly and (6) Experimental Design had previously been combined. Tr. at 458.⁵¹

⁵¹ This topic was the subject of the Intervenors Renewed Motion for Stay, filed on November 10, 2003. In that motion, the Intervenors argued that the irradiator was a "prototype" and that its experimental design made the irradiator's safety doubtful. They also argued that the Company's action in altering, and then restoring, a part of the irradiator demonstrated that the irradiator's design was unsafe. Argument on the stay motion took up a considerable part of the December 11th pre-hearing conference, and led us to request a series of new briefs. The matter culminated when we denied the motion on May 28, 2004, concluding -- for purposes of the decision on the stay -- that the "prototype" classification of the irradiator was for contractual purposes only, and not demonstrative of any deficiency in radiation safety. We also found satisfactory, for purposes of the stay decision, the Company's explanation that the change to the irradiator was made to enhance production performance, not to remediate a safety problem. That we ruled this way for purposes of the stay motion does not preclude the Petitioners from attempting to convince us otherwise on the merits, but their burden appears heavy on this point.

APPENDIX F

Questions to be Addressed in Written Presentations on the Merits of Respective Areas of Concern

Vessel Cracking (1.1/4.0)

1. For each "cask" handling event, what is the probability of dropping a cask from the crane?
2. To avoid having to deal with a wide variety of Type B Casks, in answering the following questions, represent the cask as a right circular cylinder of the same diameter as the smallest dimension of a food irradiation pod, and mass W . Further assume the cask is dropped from a height of three feet above the pool with its normal water level. Use a drag coefficient of 1.0.
 - A) Assuming the supporting soil is clay, what is the minimum value of W to cause a crack to occur through the entire pool lining (both steel liners and the intermediate concrete)?
 - B) How does that value of W compare with the mass of typical Type B Casks?
 - C) What is the size of the leak, and what is the leak rate from the pool into the soil?
3. During cask loading and unloading the plenum is removed and the cobalt-60 rods placed in the "source rack" at one side of the pool. Under these conditions:
 - A) What is the value of W required to deform the source rack if the rack is normally oriented?
 - B) What is the value of W required to deform the rack if it is horizontal?
 - C) How do these values of W compare with the mass of a typical Type B cask?
4. What is the value of W required both to deform the rack and to cause a crack in the pool liner, potentially allowing contaminated water to leak into the soil?
5. If a "cask" is dropped, what is the likelihood of it striking any part of the rack in its descent, based on an analysis of trajectories in the water?

Radioactive Waste (1.3)

1. What type and amount of radiation would be emitted from the resin beds under normal operation?
2. Using the limits on operation prescribed in the license, how much cobalt-60 (in curies) would be required to be present in the circulating water to approach these limits?
3. Given that the cobalt-60 is insoluble in water, how much cobalt-60 (in curies) would be present in the resin beds if operation halts as a result of approaching the permissible limits?
4. Under either normal or accident conditions, are there any other potential sources of radiation present?

Rod Mishandling (1.4)

1. How many rod handling accidents have occurred at Type III irradiators using Type B casks?
2. If a rod is mishandled to the point that cobalt-60 is exposed, how much radiation (in curies) will be deposited in the water?
3. If cobalt-60 particles are released into the water, where do they go?
4. Given the number of irradiator transfers between source racks and casks, and the number of events listed in the answer to Question 1, what has been the historic frequency of rod mishandling per transfer event?

Electricity Loss (1.5/1.6)

1. For the following questions, assume there is a complete loss of all electricity to the site, and a full load of cobalt-60.

A) Assuming that 90% of the radiation is absorbed in the water, how long does it take to evaporate enough pool water to lower the water level to the top of the plenum?

B) If ten percent of the radiation is assumed to be absorbed within the cobalt-60 rods or the cooling air, at what rate does the air temperature rise in the plenum, assuming normal heat transfer by conduction through the plenum wall to the water.

C) How long does it take for the air to reach a temperature sufficient for the air line to fail?

2. For the following questions, assume there is electricity to the site, but that the air circulation pumps fail.

A) How long does it take for natural circulation of the air to occur, if the line is not blocked?

B) Under these conditions, what is the maximum temperature of the air?

3. If the air line is blocked, but there is electricity to the site, what is the maximum temperature of the cooling air, and how long does it take to reach that temperature?

4. Assume that, during electricity loss, water enters a food bell and that some food particles thereby enter the water.

What would inhibit the clean-up of the resin bed pre-filters, if:

A) The source rods have been removed from the pool?

B) The source rods have not been removed from the pool?

Experimental Design (1.8/6.0)

1. Enumerate the functional and/or physical aspects of the design that are "experimental" or "untried" as compared with other Type III irradiators licensed to hold a mega-curie of cobalt-60.

- A) Which of these design aspects are not covered by current regulations?
- B) Which of these design aspects pose a high risk of failure ($>10^{-4}$ /year)?
- C) What would be the consequences of such a failure?

Transportation Accidents (5.1)

1. How many transportation accidents have happened with Type B Casks?
2. How many of the above have resulted in the release of radioactive material?
3. Using the answers to questions 1 and 2 above, compare the accidents leading to a release of radioactive material with the total number of Type B cask transports to estimate the likelihood of a radioactive release consequent to transport of a Type B cask.

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