

Facility (MOX Facility). It has not met its burden of coming forward with specific facts demonstrating that there is a genuine issue of material fact within the scope of the admitted Contentions.¹ GANE has not shown that “the factual record, considered in its entirety, [is] enough in doubt . . . that there is reason to hold a hearing to resolve the issue.”² As a result, GANE has provided no basis to deny DCS’ “Motion for Summary Disposition on Contentions 1 and 2” (May 9, 2003) (DCS Motion), or to postpone ruling on DCS’ Motion.

GANE filed two Contentions with the Board based upon the admitted absence in the original CAR of any design basis information on MC&A or physical protection and upon ill-informed notions regarding the MOX Facility design process. While not conceding that such information is legally required in the CAR, DCS undertook to revise the CAR to include its design bases for MC&A and physical protection. It has also clearly demonstrated that MC&A and physical protection considerations are being addressed in the design process. In doing so, DCS has mooted the Contentions.

GANE has not availed itself of opportunities to amend its Contentions to reflect the existing circumstances. Instead, in an effort to salvage the Contentions, GANE ignores the record as it now stands and presents arguments that go beyond the scope of the Contentions and that raise non-litigable issues. There is no genuine issue of material fact that DCS has now provided its MC&A and physical protection design bases and is taking those considerations into account in the MOX Facility design. For the reasons set

¹ 10 CFR § 2.749(b).

² Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2), LBP-83-46, 18 NRC 218, 223 (1983).

forth below, DCS again respectfully requests that the Atomic Safety and Licensing Board (Board) grant summary disposition on GANE Contentions 1 and 2.

II. SUMMARY OF DCS MOTION AND NRC STAFF RESPONSE

DCS' Motion demonstrated, primarily through the sworn affidavits of three experts in the fields of MC&A and physical protection, that it has now included MC&A and physical protection-related design bases in the CAR, and that it is taking these considerations into account in designing the MOX Facility. The NRC Staff, in its "Response to Motion for Summary Disposition Submitted By Duke Cogema Stone & Webster" (June 5, 2003) (Staff Response)," fully supports DCS' Motion. The Staff Response includes affidavits from two NRC Staff experts. In those affidavits, the NRC experts, Mr. Thomas Pham and Mr. Edward Johannemann: (1) express their full agreement with the opinions and statements expressed in the DCS expert affidavits; (2) concur that DCS is adequately taking MC&A and physical protection considerations into account in the MOX Facility design; and (3) agree that DCS has provided sufficient detail on MC&A and physical protection-related design bases in the CAR.³

III. SUMMARY OF GANE'S OPPOSITION

GANE makes three fundamental arguments in opposition to DCS' Motion – two on procedural grounds and one on substantive grounds. First, and only with respect to

³ GANE's cites Louisiana Power & Light Co. (Waterford Steam Electric Station, Unit 3), ALAB-812, 22 NRC 5, 56 (1985) for the proposition that "[i]n resolving disputed safety issues, the ASLB must, as a practical matter, rely on the NRC Staff's safety review." GANE Opposition at 7. The Appeal Board in Waterford, 22 NRC at 56 (emphasis added) stated that "[w]e would be less than candid were we to deny that the adjudicatory boards have traditionally found it useful and desirable to rely on the Staff's expertise for an evaluation of contested issues, especially technical issues."

Contention 2, GANE argues that the Board should deny or postpone ruling on DCS' Motion because the NRC Staff "has not yet made a safety finding regarding the completeness or adequacy of the revised CAR with respect to physical security."⁴

Second, and only with respect to Contention 1, GANE argues that the Board should deny or postpone ruling on DCS' Motion because GANE has "not yet been able to conduct discovery that is likely to produce evidence supporting the existence of a genuine issue of material fact."⁵

Finally, with respect to both Contentions, GANE argues that DCS has "failed to demonstrate that there is no genuine and material disputed issue of fact."⁶ Each of GANE's three fundamental arguments is addressed in the following sections.

IV. GANE'S ASSERTION THAT THE NRC STAFF HAS MADE NO SAFETY FINDING ON PHYSICAL PROTECTION DOES NOT JUSTIFY DENYING DCS' MOTION

GANE argues that the NRC Staff "has not made a safety finding regarding the adequacy of DCS' proposed design with respect to physical security" and that it has "postponed making such a finding until after the Design Basis Threat ("DBT") has been revised." It states that "[w]ithout knowing what the DBT is, there is no way for the Staff to evaluate the issue that is in dispute between GANE and DCS: whether the security-related information submitted by DCS is complete enough to permit a safety finding

⁴ GANE Opposition, section IV.

⁵ *Id.*, at section V.

⁶ *Id.*, at section VI.

under 10 C.F.R. § 70.23(b).”⁷ To support this argument, GANE relies exclusively upon statements in the original draft Safety Evaluation Report (DSER)⁸ and the revised DSER⁹ that NRC is comprehensively reviewing the DBT as a result of the September 11, 2001 events and will make a “determination” regarding the effects of the review on the MOX Facility design “when [that] review is completed.” GANE notes that Orders have now been issued by the NRC to two other “Category 1” nuclear fuel cycle facilities as a result of the new DBT.¹⁰ There are several fundamental reasons why GANE’s assertions do not raise a genuine issue of material fact regarding Contention 2.

First, GANE is now raising, for the first time, new issues that clearly go beyond the scope of Contention 2. There is no mention in either the Contention itself, or its Basis Statement (both prepared prior to September 11, 2001) of the NRC DBT, revisions to the DBT, the potential impact of those revisions on the MOX Facility design, or the NRC’s review of the DBT.¹¹ Nor did GANE make any effort to amend its Contention when DCS released the revised CAR containing its design basis information or when the NRC announced its intention to revisit the DBT. DCS then submitted two rounds of interrogatories to GANE on Contention 2. In its responses to those interrogatories, the only reference to the DBT is a single statement by GANE that its ability to evaluate the information in the revised CAR is “limited” because it is not “privy to the design basis

⁷ *Id.*, at 8. (Of course the NRC Staff is well aware of the characteristics of the new DBT).

⁸ *Id.*, Exhibit 6 at 13.1-1

⁹ *Id.*, Exhibit 7 at 13.1-1

¹⁰ *Id.* at 8, n. 5.

threat . . . or any post-9/11 guidance from the NRC revising the design basis threat.”¹² Similarly, in Dr. Lyman’s deposition, he never mentioned GANE’s newly articulated position that the NRC Staff has postponed making the requisite safety findings pending revision of the DBT.

As noted above, the NRC Staff has issued two DSERs, both of which afforded GANE the opportunity to amend its existing Contention or to file a new contention to address what it now apparently sees as significant issues associated with the application of the NRC’s new DBT to the MOX Facility. Again, GANE failed to avail itself of those opportunities. Thus, GANE is now simply trying to throw up a new set of accusations outside the scope of the Contention itself in the hopes of defeating DCS’ Motion.

Second, and of equal importance, GANE’s assertion that the NRC Staff has not made what it views as the requisite safety finding on physical security and that there is “no way” that the Staff can evaluate the issue in dispute between GANE and DCS “[w]ithout knowing what the DBT is” is an impermissible attack on the Staff’s review process that is barred by well-established NRC precedent. As this Board recognized in denying admission of a proposed GANE contention on “Inadequate Licensing Review by NRC Staff”:

¹¹ Georgians Against Nuclear Energy Contentions Opposing a License for Duke Cogema Stone & Webster to Construct a Plutonium Fuel Factory at Savannah River Site, at 10-13 (August 13, 2001).

¹² GANE Proprietary Answers to Interrogatories (December 20, 2002) at 4. (The language quoted above is not proprietary).

“[A] contention will not be admitted if the allegation is that the NRC Staff has not performed an adequate analysis” because “the sole focus of the hearing is on whether the application satisfies NRC regulatory requirements, rather than the adequacy of the NRC staff performance.” Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,171. Therefore, “contentions must rest on the license application, not on NRC Staff reviews,” Baltimore Gas & Electric Company (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 349 (1998), and “the issue for decision is not whether Staff performed well, but whether the license application raises health and safety concerns.” Curators of the University of Missouri (Trump-S Project), CLI-95-8, 41 NRC 386, 396 (1995); see Louisiana Power and Light Company (Waterford Steam Electric Station, Unit 3), ALAB-812, 22 NRC 5, 55-56 (1985); Pacific Gas and Electric Company (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-728, 17 NRC 777, 807 (1983).¹³

In both versions of the DSER, the Staff has stated:

The staff concludes that the Applicant has provided adequate commitments to submit, as part of its application for a SNM possession and use license, a physical security plan that will meet the applicable physical protection requirements in 10 CFR Part 73.¹⁴

It is clear that the Staff believes that it has performed the necessary review and made the necessary findings on physical protection to permit issuance of the CAR. GANE’s argument is thus a direct and impermissible challenge to the Staff’s review process and conclusions.

Third, GANE attempts to support its assertions regarding the new DBT with an Affidavit of Dr. Edwin Lyman. In paragraphs 10-16 of the Affidavit, Dr. Lyman

¹³ Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 03, 432-33 (2001).

¹⁴ GANE Opposition, Exhibits 6 and 7, at 13.1-1. This conclusion is essentially repeated in the expert affidavit of the NRC Staff physical protection expert. See Johannemann Affidavit at ¶ 4.

speculates about the impacts of the new DBT on the MOX Facility.¹⁵ Dr. Lyman references the Orders recently issued by the NRC to two operating Category 1 fuel cycle facilities to revise their DBTs. He speculates that the NRC “cannot possibly grant construction approval for this facility without mandating a wholesale revision of the design to take into account the post-9/11 DBT for Category 1 FCFs [fuel cycle facilities].”¹⁶ He predicts “severe consequences for the MFFF project”¹⁷ and “significant project risks”¹⁸ and asserts that DCS “has not taken the revised DBT into account.”¹⁹

Aside from the fact, as described above, that these allegations are beyond the scope of the existing Contention, they clearly fail to raise any genuine issue of material fact. GANE itself recognizes that, to date, the new DBT has not yet been formally imposed as a requirement on DCS for the MOX Facility.²⁰ The NRC Staff has stated:

[T]he DBT to be addressed by the physical security and safeguards contingency plans DCS will be required to submit is no longer the DBT set forth in 10 C.F.R. § 73.1

The NRC Staff intends to seek Commission approval to send the revised DBT to DCS, for use by DCS in preparing its physical security and safeguards contingency plans that would be part of any future DCS application for a license to

¹⁵ The remaining paragraphs of Dr. Lyman’s Affidavit (paragraphs 1-9) merely state his credentials, describe his involvement in the preparation of GANE’s case, summarize GANE’s Contention, raise irrelevant issues regarding the international MOX program, and seek “detailed design specifications” that clearly go beyond the “design bases” that are the subject of the CAR proceeding.

¹⁶ GANE Opposition, Exhibit 4 at ¶ 10.

¹⁷ *Id.*, at ¶ 12.

¹⁸ *Id.*, at ¶ 13.

¹⁹ *Id.*

²⁰ GANE Opposition at 8, n. 5.

possess and use special nuclear material at the proposed MOX Facility.²¹

The Staff has thus made clear that it has not yet even been authorized to send the new DBT to DCS “for use,” and that when it is so authorized, it expects that DCS will utilize this information in the development of its physical security and safeguards contingency plans to be submitted as part of its “future” application for a possession and use license.

Dr. Lyman offers an entirely unsupported allegation that “wholesale revisions” to the MOX Facility design will be needed as a result of the new DBT. He is simply wrong. DCS is attaching a Supplemental Affidavit of Mr. Scott Johnson in which Mr. Johnson states that DCS is not only aware of the new NRC DBT, but has analyzed it and concluded that the existing MOX Facility design envelopes the DBT. As a result, there is no genuine dispute of material fact on this issue and GANE’s first procedural argument does not justify denial of DCS’ Motion.

V. GANE’S ASSERTION THAT IT HAS NOT YET BEEN ABLE TO CONDUCT DISCOVERY AGAINST THE NRC STAFF ON MC&A ISSUES DOES NOT JUSTIFY DENYING DCS’ MOTION

GANE next argues that summary disposition should not be granted on Contention 1 because it has not yet been afforded the opportunity “to conduct discovery against the NRC Staff regarding its safety review of [MC&A] features of the proposed MOX Facility design.”²² In order for the Board to postpone ruling on DCS’ Motion on

²¹ Staff Response at 3. (emphasis added). This language makes clear that the Staff position has not postponed its findings on the CAR as GANE alleges, but has simply stated its expectation (subject to Commission approval) that DCS will utilize the new DBT in developing its physical security and safeguards contingency plans.

²² GANE Opposition at 2 (emphasis added).

this basis, it must conclude (as GANE itself has recognized)²³ that GANE has demonstrated through its Affidavits that “discovery is necessary and likely to produce evidence supporting the existence of a genuine issue of material fact.” As the Commission held in Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-92-8, 35 NRC, 145, 152 (1992), a “party asserting that it needs discovery to respond to a summary disposition motion must identify by affidavit what specific information it seeks to obtain.”

Further, the Appeal Board in Wisconsin Electric Power Co. (Point Beach Nuclear Plant, Unit 1), ALAB-696, 16 NRC 1245, 1263 (1982) held that:

[I]f the Board determines that there are no genuine issues of material fact, it may grant summary disposition even before discovery is otherwise completed if the opposing party cannot identify what specific information it seeks to obtain through further discovery.

GANE has clearly failed to meet its burden.

GANE is attempting again to significantly modify the scope of its Contention and to raise a non-litigable issue regarding the adequacy of the Staff’s review process. While the Contention focuses on the alleged lack of MC&A design bases in DCS’ CAR and DCS’ alleged failure to consider MC&A in designing the MOX Facility, GANE is now attempting to shift the focus to the quality of the NRC Staff’s review process and perceived deficiencies in that review process.

²³ *Id.*, at 9, citing Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-86-11, 23 NRC 577, 582 (1986).

GANE states:

[T]he nature, completeness and quality of the Staff's review is a relevant consideration.

The record of the Staff's safety review . . . is so confusing and apparently contradictory, [that the] representations by the Staff regarding the nature, completeness and quality of [the] review should not be accepted until GANE has had [the] opportunity to question the Staff in discovery.²⁴

GANE goes on to discuss the Staff findings in the April 2002 and April 2003 DSERs and to raise questions about these findings. As discussed in section IV above, GANE may not challenge the Staff's review process.

Furthermore, the Seabrook and Shoreham cases cited by GANE make clear that to defeat a motion for summary disposition, GANE must, by affidavit, demonstrate that discovery is necessary to produce evidence supporting the existence of a genuine issue of material fact.²⁵ A review of Dr. Lyman's Affidavit regarding Contention 1, however, shows that GANE has not met that burden.

That Affidavit contains 23 paragraphs, only one of which (the last) addresses GANE's allegations regarding the need for discovery against the NRC Staff. That paragraph states that Dr. Lyman finds the Staff's conclusions "puzzling," and that "[b]efore [Dr. Lyman] can give any opinion about the nature, completeness, or quality of the NRC Staff's review," he requires answers to specific questions from the NRC Staff

²⁴ *Id.*, at 9, 10.

²⁵ Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), CLI-92-8, 35 NRC 145, 152 (1992); *see also* Shoreham, 23 NRC at 581-82. GANE has provided no indication that it intends to seek any further discovery against DCS regarding its design bases. Instead, it relies exclusively on its stated desire to obtain discovery against the NRC Staff.

about its review process. No specific facts are alleged and Dr. Lyman's possible opinion on the sufficiency of the Staff's review would not be evidence of a genuine issue of material fact. As a result, GANE has not provided a sufficient basis for denying DCS' Motion based upon its second procedural ground.

VI. DESPITE GANE'S OPPOSITION, THERE IS NO GENUINE ISSUE OF MATERIAL FACT ON CONTENTIONS 1 OR 2

Finally, GANE makes several arguments in an effort to demonstrate the existence of a genuine issue of material fact. Each of these is addressed below.

A. DCS Has Correctly Characterized the Scope of the Contentions

GANE argues that DCS has erroneously characterized the scope of the two Contentions by suggesting that "the only matter that can legitimately be in dispute is whether DCS has included MC&A and physical protection design bases in the CAR."²⁶ In doing so, GANE implies bad faith on DCS' part and carries DCS' position to a ridiculous extreme, by alleging that it is DCS' position that design bases comprised of "even . . . a single sentence" would be "sufficient to moot Contentions 1 and 2."²⁷

DCS recognized that a good faith effort to include a reasonable set of design bases in the CAR was appropriate under the circumstances and, obviously, did not attempt to rely upon "a single sentence" in addressing GANE's Contentions. GANE is attempting to cast DCS' position in an extreme light that does not comport with the indisputable facts as evidenced by the actual contents of the revised CAR.

²⁶ GANE Opposition at 13, citing DCS' Motion at 11 (emphasis in original).

²⁷ *Id.*, at 13.

GANE then draws a distinction between “completeness” and “adequacy” of DCS’ design bases. DCS’ position was clearly stated in its Motion and recognized by the Board in the April 18, 2002 teleconference transcript previously cited by DCS²⁸ -- GANE may not and did not challenge the content of DCS’ design bases because the Contentions were filed before any such design bases were ever included in the CAR. GANE made no effort to amend the Contentions after inclusion of the design bases in the revised CAR.

Even if one accepts GANE’s distinction between “completeness” (i.e., a “sufficient amount of detail . . . to allow the NRC to make a determination of compliance”)²⁹ and “adequacy” (i.e., the finding to be made by the NRC Staff after review of DCS’ information), there is no genuine issue of material fact. DCS included substantial and concrete design basis information in the revised CAR. The NRC Staff has made clear in its expert Affidavits that such information is sufficient to allow it to render the requisite findings. And GANE never amended its Contentions after the design bases were included in the CAR to identify any areas where those design bases were “incomplete” or insufficient for Staff review. Under the circumstances, GANE’s argument about the “completeness” of the design bases is no more than another challenge to the Staff’s review process.³⁰

²⁸ DCS Motion at 9-11.

²⁹ GANE Opposition at 13.

³⁰ GANE cites Duke Power Co. (William B. McGuire Nuclear Station, Unit 1 and 2), LBP-77-20, 5 NRC 680, 681 (1977) for the proposition that “[w]here the Staff’s review is unavailable or incomplete, the ASLB must dismiss or postpone resolution of a motion for summary disposition,” GANE Opposition at 7. In McGuire, a non-binding Licensing Board decision in which the NRC Staff opposed the Applicant’s motion for summary disposition, the Staff had neither issued the SER nor reached a conclusion on the safety issues in question. In (continued).

B. GANЕ Continues to Argue that the Contentions Require Consideration of the Details of the MOX Facility Design

GANЕ next argues that it is “simply not possible to evaluate the adequacy of design bases at any level of specificity, without also knowing the details of the proposed design” and that DCS must provide “some detail about the nature of the structures, systems or components that are supposed to perform [the] functions” defined in the design bases.³¹ GANE characterizes as “absurdly narrow” DCS’ position that the applicable regulations do not require the provision or consideration of design “details.”³²

GANЕ’s position is essentially a restatement of its rejected position that DCS was required to provide all of the information called for in an application for a license to possess and use radioactive material in order to receive a Construction Authorization.³³ Furthermore, it is illogical. The whole purpose of seeking “design bases” at the CAR stage is to ensure that the “details of the proposed design” (which GANE believes should be in the CAR) will conform, at a later date, to those design bases.

C. Dr. Lyman’s Affidavits Do Not Demonstrate That There Is A Genuine Issue of Material Fact

GANЕ’s final argument is that:

As set forth in the attached declarations of Dr. Edwin S. Lyman, there are many aspects in which the design for MC&A and physical security remain seriously incomplete,

this case, the Staff has issued two consistent DSERs and submitted definitive affidavits on the contested issues.

³¹ GANE Opposition at 18.

³² *Id.*

³³ Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility, (CLI-02-07, 55 NRC 205 (2002).

such that they could not form a basis for an NRC finding of adequacy to comply with NRC regulations.³⁴

Some of the information in Dr. Lyman's Affidavits has already been addressed above. Nevertheless DCS is providing below a summary of the results of its review of those Affidavits. In DCS' view, a close examination of the Affidavits reveals they do not raise any genuine issues of material fact.³⁵

1. Dr. Lyman's MC&A Affidavit

Paragraphs 1-4 of Dr. Lyman's MC&A Affidavit describe his qualifications and experience, and his participation in preparation of GANE's case on Contention 1, and summarize the Contention.³⁶ Paragraphs 5-6 raise irrelevant issues of "international credibility" and alleged impacts on the Russian MOX program.³⁷ Paragraph 7 cites the alleged record of MC&A "problems" at other operating facilities and implies, without regard for the information in DCS' expert Affidavits, that DCS is not applying "proper attention to MC&A considerations in plant design. . . ."³⁸ Paragraph 8 essentially restates GANE's premise that the CAR does not provide sufficient detail.³⁹ Paragraph 9 extends

³⁴ GANE Opposition at 19.

³⁵ DCS also believes that the record is clear that Dr. Lyman is simply not an expert in MC&A or physical protection and that therefore his statements in his Affidavits should be accorded little if any weight. Dr. Lyman has no educational (*see* Lyman Deposition at 137:06-137:15; 138:04-138:12; 139:11-139:22; 142:02-142:09; 143:13-144:06) or practical (*see* Lyman Deposition at 25:09-25:21; 51:06-51:08; 99:17-100:10; 138:13-139:10; 140:01-140:11) experience with either MC&A or physical protection of a nuclear facility. Moreover, he is largely unfamiliar with relevant NRC regulations. *See* Lyman Deposition at 100:11-100:20; 106:19-107:02. Relevant deposition pages are attached.

³⁶ GANE Opposition, Exhibit 3 at 1-2.

³⁷ *Id.*, Exhibit 3 at 2.

³⁸ *Id.*, Exhibit 3 at 2-3.

³⁹ *Id.*, Exhibit 3 at 3.

DCS position to extremes not consistent with the record.⁴⁰ It also expresses Dr. Lyman's position that the level of detail in the design bases is inadequate,⁴¹ despite the fact that GANE has acknowledged that the "adequacy" of the design bases is not at issue.⁴² Paragraph 10 expresses Dr. Lyman's view that "for consistency" DCS should have "carr[ied] out the MC&A portion of the [safety analysis] in an analogous manner to the rest of the" safety analysis.⁴³ He has pointed to no requirement or basis for why his proposed methodology should be utilized.

The crux of Dr. Lyman's Affidavit is set forth in paragraphs 11-17, which assert that the correct level of detail needed for the NRC Staff to make a decision on the adequacy of DCS' MC&A design bases is provided by the "Design Information Questionnaire" (Questionnaire) published by the International Atomic Energy Agency (IAEA).⁴⁴ In this regard, Dr. Lyman continues to improperly advocate the need for detailed design information. In addition, he uses an IAEA document to assert that there are deficiencies in DCS' compliance with NRC requirements, despite the fact that under applicable NRC regulations, only licensees subject to 10 CFR Part 75 are required to submit the Questionnaire to the NRC, only "in response to a written request from the

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*, at 16.

⁴³ *Id.*, Exhibit 3 at 4.

⁴⁴ *Id.*, Exhibit 3 at 4-6.

Commission.” and only for installations “identified under the [US/IAEA Safeguards] Agreement.”⁴⁵

Furthermore, as reflected in the attached Supplemental Affidavit of Mr. Donald Joy, the IAEA Questionnaire is not intended to be used to assess the adequacy of MC&A design.⁴⁶ Instead, it is intended to be used to obtain facility-specific information to aid IAEA in designing and implementing an inspection and monitoring program and in determining what types of IAEA surveillance equipment will be needed for the particular facility. As Mr. Joy also states, the level of detail of MC&A-related information called for by the IAEA Questionnaire is well below the level of detailed information required for inclusion in DCS’ Fundamental Nuclear Material Control Plan to be submitted at the possession and use license application stage.

Paragraph 17 raises irrelevant matters regarding another NRC-licensed facility.⁴⁷ Paragraphs 18-21 discuss Dr. Lyman’s concerns regarding “holdup” issues, but do not recognize the undisputed fact that the NRC regulations do not require management or

⁴⁵ 10 CFR § 75.11(a) and (d). Dr. Lyman acknowledged in his deposition that the MOX Facility is not presently identified for IAEA inspection. See attached excerpts from Deposition of Edwin S. Lyman (April 7, 2003) at 35-36.

⁴⁶ Supplemental Affidavit of Donald Joy (June 16, 2003) at ¶ 4.

⁴⁷ GANE Opposition, Exhibit 3 at 6.

measurement of holdup.⁴⁸ Mr. Joy attested to those facts in his original Affidavit⁴⁹ and Mr. Thomas Pham, the NRC Staff expert, expressly concurred with Mr. Joy's position.⁵⁰

Paragraph 22 takes issue with Mr. Joy's statements that almost no scrap will be produced by the MOX Facility, but ignores the dispositive fact that, even if unanticipated amounts of scrap are produced, DCS has included "scrap control program" design bases in the CAR.⁵¹ As Mr. Pham stated in his Affidavit, "while an active scrap control program will most likely not be needed . . . DCS has properly identified in the revised CAR adequate 'scrap control' design bases which . . . would apply to DCS if it becomes a licensee . . . and detects facility conditions requiring implementation of its scrap control program."⁵²

Finally, as stated earlier, paragraph 23 simply takes issue with the basis for the NRC Staff's findings in the DSER and does not raise a litigable issue.⁵³

2. Dr. Lyman's Physical Protection Affidavit

Paragraphs 1-4 of Dr. Lyman's physical protection Affidavit describe his experience and qualifications, his participation in GANE's case on Contention 2, and summarize the Contention.⁵⁴ Paragraphs 5-6 raise irrelevant issues of "international

⁴⁸ *Id.*, Exhibit 3 at 6-7. Dr. Lyman, in his Affidavit at ¶ 20, acknowledged that "these may not be explicit regulatory requirements."

⁴⁹ Affidavit of Donald Joy (May 5, 2003) at ¶¶ 10, 18.

⁵⁰ Affidavit of Thomas Pham (June 4, 2003) at ¶ 10.

⁵¹ GANE Opposition, Exhibit 3 at 7-8.

⁵² *Id.*, at ¶ 13.

⁵³ *Id.*, Exhibit 3 at 8.

⁵⁴ *Id.*, Exhibit 4 at 1-2.

credibility” and potential impacts on the Russian MOX program.⁵⁵ Paragraphs 7-8 merely state Dr. Lyman’s unsupported opinion that the CAR does not contain a sufficient level of detail,⁵⁶ while paragraph 9 calls for “detailed design specifications” that are not appropriate or required at the CAR stage.⁵⁷

The balance of Dr. Lyman’s physical protection Affidavit relies on his concerns over DCS’ alleged failure to consider the new NRC DBT and the potential impacts of the new DBT on the MOX Facility design.⁵⁸ This is the basis for his opinion that there is insufficient information in the CAR. DCS has addressed in Section IV above, why Dr. Lyman’s concerns with respect to the DBT do not raise any genuine issues of material fact.⁵⁹

⁵⁵ *Id.*, Exhibit 4 at 2.

⁵⁶ *Id.*, Exhibit 4 at 2-3.

⁵⁷ *Id.*, Exhibit 4 at 3.

⁵⁸ *Id.*, Exhibit 4 at 3-5.

⁵⁹ DCS also concurs with the NRC Staff that the “quality of the evidentiary support provided in affidavits at the summary disposition stage is expected to be of a higher level than at the contention filing stage” (Staff Response at 6, quoting 54 Fed. Reg. 33168, 33171 (Aug. 11, 1989) and that “[n]othing in the record to date shows that the physical protection systems . . . and the MC&A programs . . . would have any role in protecting against natural phenomena and the consequences of potential accidents” (Staff Response at 6). This is an alternative basis for granting DCS’s Motion.

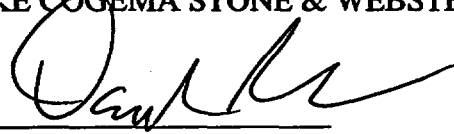
VII. CONCLUSION

GANE has failed to demonstrate that there is any genuine issue of material fact within the scope of its Contentions. For the reasons stated above, DCS' Motion for Summary Disposition on GANE Contentions 1 and 2 should be granted.

Dated: June 16, 2003

Respectfully submitted,

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

Before Administrative Judges:
Thomas S. Moore, Chairman
Charles N. Kelber
Peter S. Lam

In the Matter of)	
)	June 12, 2003
DUKE COGEMA STONE & WEBSTER)	
)	Docket No. 070-03098-ML
(Savannah River Mixed Oxide Fuel)	
Fabrication Facility))	ASLBP No. 01-790-01-ML
)	

SUPPLEMENTAL AFFIDAVIT OF DONALD JOY

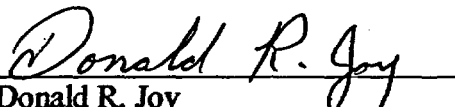
City of Conway)	
)	
State of South Carolina)	

Donald Joy, being duly sworn, states as follows:


1. I currently am a Nuclear Safeguards Consultant with JAI Corporation, and have served in that capacity since 1996. My qualifications and experience are set forth in my Affidavit submitted along with DCS' May 9, 2003 Motion for Summary Disposition.
2. The purpose of this Supplemental Affidavit is to respond to some of the arguments made by GANE in its June 5, 2003 Opposition to DCS' Motion and by Dr. Edwin Lyman in his Affidavit.
3. Dr. Lyman states in his Affidavit that DCS should have provided a level of detail on its material control and accounting (MC&A) design bases that is commensurate with the level of information called for by the International Atomic Energy Agency (IAEA) Design Information Questionnaire (Questionnaire). I disagree.

4. The purpose of the Questionnaire is not to assess design adequacy, but rather to obtain facility specific information to aid the IAEA in designing and implementing an inspection and monitoring program and determining what types of IAEA surveillance equipment are needed for the particular facility in question. Furthermore, the information called for in the Questionnaire is considerably less than the level of detailed information needed for an NRC-required Fundamental Nuclear Material Control Plan (that must be submitted as part of a license application for a facility subject to Part 74, Subparts C, D or E). One should also keep in mind that any IAEA design criteria would be in the context of optimizing the ease and ability to conduct international safeguards surveillance, rather than complying with domestic regulatory requirements.
5. Finally, on an administrative note, in my original Affidavit dated May 5, 2003, on page 15, note 10, I stated that there was a typographical error in 10 CFR § 74.59(h)(2) regarding scrap control. I have since determined that the NRC corrected the error in a December 23, 2002 Federal Register notice (67 Fed. Reg. 78130, 78149 (Dec. 23, 2002)).

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information, and belief.


Donald R. Joy
JAI Corporation
215 Candlewood Drive
Conway, SC 29526

Subscribed and sworn before me this 12th day of June, 2003.


Notary Public

My Commission Expires: 11/20/2011

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

**Before Administrative Judges:
Thomas S. Moore, Chairman
Charles N. Kelber
Peter S. Lam**

In the Matter of)

June 12, 2003

DUKE COGEMA STONE & WEBSTER)

Docket No. 070-03098-ML

(Savannah River Mixed Oxide Fuel
Fabrication Facility))

ASLBP No. 01-790-01-ML

SUPPLEMENTAL AFFIDAVIT OF SCOTT JOHNSON

City of Erwin)


State of Tennessee)

Scott Johnson, being duly sworn, states as follows:

1. I am the Security Operations Manager for MOX Security with Nuclear Fuel Services Incorporated ("NFS"), a DCS contractor. My qualifications and experience are set forth in my Affidavit submitted along with DCS' May 9, 2003 Motion for Summary Disposition.
2. The purpose of this Supplemental Affidavit is to respond to some of the arguments made by GANE in its June 5, 2003 Opposition to DCS' Motion and by Dr. Edwin Lyman in his Affidavit.
3. Dr. Lyman states in his Affidavit that DCS has not taken the new NRC Design Basis Threat (DBT) into account in designing the MOX Facility. Dr. Lyman is incorrect.

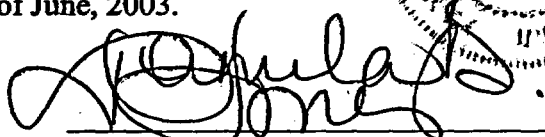
4. The DCS security design team participated in two preliminary NRC DBT meetings, held at NRC headquarters on January 10 and February 14, 2003. DCS (through its affiliation with NFS) obtained and commented orally on the draft DBT issued by the NRC on January 2, 2003. Furthermore, the DCS security design team (through its affiliation with NFS) obtained a copy of the revised NRC DBT, issued on April 29, 2003. Even before September 11, 2001, however, the DCS security design team anticipated that there might be modifications to the DBT for the MOX Facility. The "Risk Assessment Form" dated November 9, 1999 which is attached to GANE's Opposition and is discussed in paragraph 12 of Dr. Lyman's Affidavit is in fact an excellent example of that early consideration. As a result of these efforts over several years, the MOX Facility design satisfies the criteria set forth in the NRC's revised DBT dated April 29, 2003. DCS has conducted a vulnerability assessment using the JCATS assessment tool in February of this year which confirmed the sufficiency of the MOX Facility design to the (then anticipated) DBT revisions. DCS, however, intends to continue its validation activities into the future.

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information, and belief.



Scott Johnson
Nuclear Fuel Services, Inc.
1205 Banner Hill Road
Erwin, TN 37650

Subscribed and sworn before me this 13th day of June, 2003.



Notary Public

My Commission Expires: 9-13-06

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1 information in the Erkkila paper.

2 A Largely. That's the major source for our
3 discussion of that issue and the fact that it is
4 required in DOE orders to perform such assessments.
5 That's mentioned in the Erkkila paper that I think
6 is a clear indication that it's used as a tool in
7 best practices for designing facilities that handle
8 special nuclear material.

9 Q Do you have any experience with the actual
10 performance of a vulnerability assessment?

11 A No.

12 Q Are you familiar with some of the
13 techniques that are used to perform vulnerability
14 assessments?

15 A Just from broad reading I understand that
16 often there are computer programs, some of which
17 were developed by Sandia, which are used as tools
18 to perform that kind of gaming I described. That's
19 in the physical protection arena, I believe. But
20 again, I have no detailed experience with utilizing
21 those tools.

22 Q Are you familiar with whether

1 A I don't know. The last time I inquired
2 from NRC, no decision had been made, but that was
3 several months ago.

4 Q Have you ever reviewed the eligibility
5 list?

6 A Not in its entirety, not recently.

7 Q I just want to make sure I understand what
8 your position is. You have no idea at all whether
9 the MOX facility is on the eligibility list but
10 believe it's on there, but you're not certain?

11 A I have no information indicating that it
12 is at this point. It's a question for NRC. But
13 the point being that as far as part 75 requires
14 that if the plan is put on the eligible list and
15 the IAEA selects it, that the application of
16 international safeguards and IAEA verification be
17 facilitated.

18 And the Erkkila paper makes a point that
19 that requires design elements and adequate space
20 for IAEA, independent verification equipment, as
21 well as the provision for independent
22 instrumentation of that equipment, which are design

1 features.

2 Q Has the MOX facility been designated for
3 inspection by IAEA?

4 A Well, until the U.S. puts it on the
5 eligible list, the IAEA doesn't have the option for
6 inspection. I certainly have not heard or seen any
7 indication that that has occurred yet.

8 Q And it's my understanding -- well, I'll
9 ask you a different question. You referred to some
10 requirements in part 75 for provision of design
11 information to the IAEA. Is the provision of that
12 information to the IAEA a condition of granting
13 construction authorization, to the best of your
14 knowledge?

15 A No, it isn't.

16 Q Now, I asked you, going back a few
17 questions, to give us your best sense of how one
18 would go about considering MC&A issues in the
19 design of a facility like the MOX facility. I'm
20 not sure I got everything that you mentioned, but
21 you talked about space requirements, designation of
22 material balance areas. Is that correct?

1 have a common understanding. And I'm familiar
2 with -- actually, now that I recall a paper that I
3 saw given by a French, perhaps MOX plant expert at
4 a conference where these terms were introduced and
5 these distinctions made.

6 But I don't believe -- again, I'm not
7 familiar with terms of art that are widely accepted
8 internationally. I would have to check if even
9 that distinction is made in the IAEA safeguard's
10 glossary, which I think is the definitive one. I
11 think there's enough -- I don't see what pinning a
12 particular -- I simply don't know if those are
13 terms that are widely accepted or if you talk to
14 two experts from two different countries, they
15 would give you the same understanding of what those
16 terms mean. I think a practical or functional
17 definition is more useful.

18 Q Thank you. Are you familiar with the term
19 physical inventory as that term is used in part 74?

20 A Yes.

21 Q Can you explain that to me?

22 A Physical inventory, at a time when you

1 then physical protection would have been a design
2 consideration.

3 If there were adequate protection from an
4 air attack, then there would have been by inference
5 adequate safety protection against an accidental
6 crash. I'll put it that way.

7 Q But the basis for the ASLB decision was an
8 accident analysis issue, not a physical protection
9 issue.

10 A That's correct. I believe they're related
11 in that case, in the way I just stated.

12 Q Understood. I apologize if I asked you
13 this before. I don't think I did. Are
14 vulnerability assessments required to be performed
15 by NRC regulations?

16 A No, not to my knowledge.

17 Q Are you familiar with a method of
18 performing a vulnerability assessment with the
19 acronym SAVI?

20 A No. Actually, I'm not.

21 Q Are you familiar with a vulnerability
22 assessment technique with the acronym ASSESS? I

1 can give you the full names if you need them.
2 These are acronyms. It's just a question of
3 whether you're familiar with that or not.

4 A No, not specifically.

5 Q Are you familiar with a vulnerability
6 assessment technique with the acronym JCATS?

7 A I've heard of it.

8 Q Do you know anything more about it than
9 you've heard of it?

10 A No.

11 Q I want to talk about the NRC MC&A
12 regulations again. It's my understanding that the
13 regulations, and this is part 74 we're talking
14 about, distinguish between scrap and recycle
15 material. Are you familiar with that distinction?

16 A Actually, no, I wasn't, but I know there's
17 a practical difference.

18 Q So you're not familiar with the NRC reg
19 per se.

20 A Right.

21 Q But you understand there is a practical
22 difference.

1 by the context, recycle material is suitable for
2 continued processing without appropriate recovery
3 operations. I find that ambiguous.

4 Q If you have a material that would require
5 chemical impurities to be removed before it could
6 be reinserted, if you will, back into the
7 manufacturing process to produce product, would you
8 consider that to be scrap or would you consider
9 that to be recycle material?

10 A Well, again, unsuitable for continued
11 processing, I read that unsuitable as an economic
12 term. For instance, what makes it unsuitable to
13 feed it back into the existing process? I don't
14 know. It's too vague, actually, when I read it.
15 So unless you can get a more specific definition
16 from the NRC on that, it looks like an ambiguity to
17 me.

18 Q I think I asked you this before, but I'm
19 not sure I got the answer. Do you understand what
20 the purpose is of defining scrap and distinguishing
21 it from recycle material in the part 74
22 regulations?

1 A Well, no, I don't, because I don't know
2 what recycle material means in part 74.

3 Q So you wouldn't have an opinion on whether
4 that has anything to do with the ease of
5 measurement for MC&A purposes of the material?

6 A Well, unless you can find the definition
7 of recycle material that specifically states that.
8 I know that scrap in particular is singled out as
9 an item that needs special treatment in the
10 regulations.

11 Q Are you referring there to the scrap
12 control requirements?

13 A Yes. I believe so.

14 Q And those would be the requirements that
15 are in 10 CFR 74.59H?

16 A Yes. So I suppose as a functional matter,
17 and again, this is speculation --

18 Q I'm sorry. Was that a yes to my question?

19 A Yes. As a functional matter, scrap, the
20 way it seems to be interpreted here, may be
21 material that is put aside for later recovery or
22 it's not routinely recovered. And the NRC, the

1 physics from Cornell and a Ph.D. from Cornell.

2 Q And what years did you receive those,
3 please?

4 A The bachelor of arts was 1986, the
5 master's was '90, and the Ph.D. was '92.

6 Q During your undergraduate studies, your
7 bachelor of arts, what courses did you take that
8 addressed NRC MC&A requirements?

9 A None.

10 Q And during your master's program?

11 A None.

12 Q While you were working on your Ph.D. did
13 you take any courses that addressed NRC MC&A
14 requirements?

15 A No. But as a physicist in training one
16 learns basic theory of measurement and experiment,
17 which is broadly relevant to issues having to do
18 with material and control accounting.

19 Q So what kind of courses did you take that
20 actually gave you this kind of background?

21 A Well, particle physics and experimental
22 physics, which provides training in the basic

1 statistical techniques that are relevant to
2 understanding something about the measurement of
3 radiation.

4 Q Have you taken any of the courses offered
5 by the National Labs that concern MC&A?

6 A No, I haven't.

7 Q And you mentioned earlier I think in your
8 testimony that hold up measurement is in part the
9 expertise of a chemical engineer. Have you taken
10 any chemical engineering classes?

11 A I was saying hold up minimization. No,
12 not chemical engineering.

13 Q What training or experience have you had
14 in the design of nuclear fuel fabrication
15 facilities?

16 A I've had no design experience.

17 Q What training or experience have you had
18 in designing an MC&A program?

19 A No experience in designing MC&A programs.

20 Q Have you ever conducted or supervised a
21 physical inventory at a nuclear facility?

22 A No.

1 Q Have you ever designed or developed a
2 nuclear process monitoring system for the purpose
3 of detecting abrupt losses?

4 A No.

5 Q Have you ever designed or developed a
6 measurement control program?

7 A No.

8 Q Have you ever designed or developed a
9 scrap control program?

10 A No.

11 Q Back to your undergraduate studies, did
12 you take any courses regarding physical protection
13 principles or practices?

14 A No.

15 Q During your master's program?

16 A No.

17 Q While working on your Ph.D.?

18 A No.

19 Q Have you taken any of the courses offered
20 by any of the National Labs regarding physical
21 protection in nuclear facilities?

22 A No, I haven't.

1 Q What training or experience have you had
2 in designing a physical protection program for a
3 nuclear facility?

4 A None.

5 Q Have you ever designed or developed a
6 protection plan for a nuclear facility?

7 A No.

8 Q Have you ever designed or developed
9 detection or surveillance alarm systems for a
10 nuclear system?

11 A No.

12 Q I believe we may have asked you this, but
13 bear with me. Have you ever conducted a
14 vulnerability assessment for a nuclear facility?

15 A I would say I have analyzed and assessed
16 vulnerabilities. I wouldn't say I've conducted a
17 formal vulnerability assessment, but my experience
18 over the last ten years has involved assessment of
19 various issues having to do with either material
20 control problems or physical protection
21 vulnerabilities in facilities, and the various
22 technical and policy issues associated with that.

1 vulnerability of the plant's design and operation.

2 Q Have you taken any of the courses that DOE
3 offers on the ASSESS computer program?

4 A No.

5 Q The JCATS computer program?

6 A No.

7 Q Have you received any training on any
8 other vulnerability assessment tools?

9 A No.

10 Q During your undergraduate studies, did you
11 focus on any particular area of discipline within
12 the field of physics?

13 A No. Undergraduate is general physics.

14 Q What about during your master's program?

15 A Master's and Ph.D. was theoretical
16 particle physics.

17 Q You'll have to forgive me. I'm not a
18 physicist. Does that have any relationship to MC&A
19 and physical protection?

20 A Well, insofar as MC&A involves the
21 measurement of radiation from nuclear processes, a
22 general background in particle physics is

1 familiarity with the processes by which radiation
2 occurs and how it is measured. So in a sense, the
3 training gives you the broad tools and ability to
4 understand rather specific applications such as
5 MC&A.

6 Q What was the subject of your Ph.D. thesis?

7 A It was on theoretical particle physics.

8 Q And again, does that have any relationship
9 to MC&A?

10 A The subject of my thesis, no.

11 Q Or to physical protection?

12 A No.

13 Q During your collegiate or postgraduate
14 education, did you write or publish any papers or
15 reports that specifically related to the NRC
16 requirements governing MC&A?

17 A You mean through my Ph.D.?

18 Q At any time during your education.

19 A No.

20 Q During your education, collegiate or
21 postgraduate, did you write or publish any papers
22 or reports specifically related to the NRC

1 requirements governing physical protection?

2 A No.

3 Q During that time, did you write or publish
4 papers or reports that specifically related to
5 nuclear fuel fabrication facilities?

6 A No.

7 Q Are you familiar with the NRC regulations
8 in 10 CFR part 74?

9 A Broadly, yes.

10 Q Have you had an opportunity to review the
11 MC&A design bases included by DCS in its revised
12 CAR?

13 A Yes.

14 Q I think it may be repetitive. I
15 apologize. Are you familiar with the NRC
16 regulations in 10 CFR part 73?

17 A Yes.

18 Q And you've had an opportunity to review
19 the revised CAR?

20 A Yes.

21 Q What professional societies do you belong
22 to that relate to MC&A or physical protection at a

D

CERTIFICATE OF SERVICE

I hereby certify that copies of "Duke Cogema Stone & Webster's Reply to Georgians Against Nuclear Energy Opposition to Motion for Summary Disposition of GANE Contentions 1 and 2," dated June 16, 2003, and all its attachments were served this day upon the persons listed below, by e-mail and first class mail.

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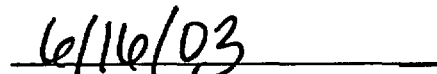
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Marjan Mashhadi



Date