

Dragon, Karen E. (CDC/NIOSH/EID)

From: DanMcKee!
Sent: Monday, October 07, 2013 11:45 AM
To: Katz, Ted (CDC/NIOSH/OD); NIOSH Docket Office (CDC); danmckeel; Ziemer, Paul (CDC/NIOSH/OD); pl.ziemer@comcast.net; josiebeach@charter.net; wimunn@aol.com; j-poston@tamu.edu
Cc: ; Hinnefeld, Stuart L. (CDC/NIOSH/DCAS); Neton, Jim (CDC/NIOSH/DCAS); Allen, David (CDC/NIOSH/DCAS)
Subject: GSI SEC-105 AR Addendum with SEC/Appendix BB Issues Matrices
Attachments: GSI SEC AR_ADD_matrix.pdf

Ted Katz, ABRWH DFO
ABRWH current members
TBD-6000 WG NIOSH staff members
NIOSH Docket 140 office

October 7, 2013

Attachment: <GSI SEC AR_ADD_matrix.pdf> 330K

Dear Mr. Katz, ABRWH and NIOSH TBD-6000 WG members, and the NIOSH Docket 140 Office,

Enclosed please find an ADDENDUM to the GSI Administrative Review of SEC-00105 previously submitted as an entry under Docket 140, and as a Discussion paper for the 10/11/13 TBD-6000 work group meeting. The number of errors cited in the AR has been expanded to include the period from the final Board vote on SEC-105 on 12/11/12 until today. The paper also includes a listing of 19 GSI SEC-105 and Appendix BB Rev 0 matrix Issues that have not been fully closed out by the TBD-6000 WG.

Ted Katz, please distribute this paper to all current Board members.

NIOSH Docket Office: please consider this submission for posting under Docket 140 (GSI) and as an additional Discussion paper for the TBD-6000 WG meeting scheduled for Oct. 11, 2013.

Thank you.

Sincerely -- Dan McKeel 10/7/13

Daniel W. McKeel, Jr., MD
GSI SEC-105 co-petitioner

**GSI SEC-00105 ADMINISTRATIVE REVIEW:
LISTING OF 44 ORIGINAL AND 20 POST BOARD FINAL VOTE ERRORS;
With Still Open Appendix BB and SEC-105 Matrix Issues**

-- Daniel W. McKeel, Jr., MD --

(October 6, 2013)

The full 185 page AR was posted on the DCAS website
by the NIOSH Docket office on 10/02/13
URL: <http://www.cdc.gov/niosh/ocas/pubmtgs.html#oct11>

PART 1A. KEY ERROR CATEGORIES HEADINGS

- (1a) Battelle/NIOSH refused to designate GSI an 83.14 SEC.
- (1b) Missing GSI data burned except for 3 file cabinets. [a-e examples]
- (2) Personal legal animus to DWM Jr and by NIOSH, ABRWH, and SC&A members: [a-g examples]
- (3) NIOSH and SC&A source models (Betatron, Co-60, Ra-226) failed to incorporate real, measured data for proper validation. [a-d examples]
- (4) Anti-GSI and derogatory Board comments about workers not deserving SECs.
- (5) Factual errors that adversely affected claimants. [a, b examples]
- (6) Factual omissions that adversely affected claimants DR and POC percentages. [a, b, c examples]
- (7) Inadequate and poor scholarship, "failure to locate," and "errors of omission" caused by this inadequacy; NIOSH was not assertive in locating highly pertinent data. [a-j examples]
- (8) Failure to interview key GSI workers with knowledge about incompletely characterized source terms and radiation safety issues at GSI.
- (9) Misrepresentation of non representativeness of GSI film badge data.
- (10) Failure to comply with OCAS-IG-003.
- (11) Failure to settle all SEC matrix issues; instead transferring them to Appendix BB matrix based on faulty scientific interpretation. [3/28/12 TBD-6000 WG meeting].
- (12) Failure to weight eye witness testimony properly [a, b examples].
- (13) Uncritical acceptance of GSI management statements about the GSI radiation safety program.
- (14) NIOSH hiding captured data that caused GSI operational period start date to be changed in December 2012 by DOL from 1/1/53 to 10/1/52.
- (15) Failure to bound all source terms with sufficient accuracy before the full Board voted on 12/11/12; violates OCAS-IG-003. [a-h examples]
- (16) Deliberate misrepresentation of the benefits of AWE sites being awarded SECs.

- (17) Deliberate misrepresentation by DCAS (Dave Allen) and TBD-6000 WG members Beach and Ziemer to full ABRWH on 12/11/12 that all GSI workers would be assigned 12 to 15 REM dose per year under "highest dose" exposure scenario (not true for Appendix BB Rev 0).
- (18) Deliberate SEC delays caused by prioritizing SEC work based on political heat (GSI assigned a deliberate "low" by Board DFO).
- (19a) Dave Allen and DCAS/NIOSH's use of "throw them a bone" method to confuse SC&A and work groups from fully investigating NIOSH dose reconstruction methodology.
- (19b) There is added evidence that Mr. David Allen of DCAS engaged in another highly questionable practice. (writing two different surrogate data reports, one for NIOSH the other for the WG)
- (20) Improper use of surrogate data at GSI that conflicted with Board SD criteria
- (21) Failure of SC&A to verify NIOSH bounding of Ra-226 doses inside of the building 6 radiography room.
- (22) Failure of SC&A to verify NIOSH bounding of Ra-226 dose outside of the 6 bldg. radiography room because they believed this scenario was "unlikely."
- (23) Failure of Board, SC&A and NIOSH for 3-4 years to recognize and act upon the fact that GSI "plumb bobs" were Ra-226 NDT sealed sources that leaked and generated radon gas.
- (24) Failure of NIOSH to locate GSI film badges for 10/1/52 through 1962.
- (25) Failure of NIOSH and DOE to locate any GSI shot records, NDT reports or check lists MCW required of film readers, calibration records, leak test records, air sampling data, Betatron dose monitoring data, or radon data.
- (26) No real (measured at site, surrogate, or from the scientific literature) GSI-generated data was available to validate Betatron computer models, using MCNPX and ATILLA code, for photons, beta (electrons) and neutrons (see error #27) during the operational period.
- (27) No relative biologic effectiveness determined experimentally for GSI neutrons (RBE can vary between 2 and 20).
- (28) NIOSH concluded that New Betatron external photon, neutron and beta doses, by extrapolation, also bounded Old Betatron doses without actual measurements of photons, beta or neutrons for either facility.
- (29a) Board member Griffon resigned from the TBD-6000 work group, and was so uninformed (about) GSI basic documents that he stated on 12/11/12 that he was assessing the FUSRAP 1993 remediation report in "real time" (read "first time for me").
- (29b) On 12/11/12, the petitioner's learned for the first time that Board member Bradley Clawson, according to his testimony, had been an NDT radiographer "for 10 years."

- (29c) Fourth present TBD-6000 work group member Dr. John Poston missed an unusually large numbers of meetings and parts of GSI related meetings to the extent his scientific contributions to WG deliberations in 2011 and 2012 were very limited.
- (30a) Final dose "bounding" assignments were not established with clarity by the end of the 2/21/13 TBD-6000 work group meeting on GSI Appendix BB and SEC-105 still open matrix issues that should have been clarified and correctly closed before the full Board denied the SEC on 12/11/12.
- (30b) The use of the word "such" in §7384n(c,d) of the EEOICPA Act, according to Richard Miller (former GAP advisor and Congressional staff member), in a statement he made to the ABRWH on 2/11/2010, precludes the use of surrogate data in determining SEC outcomes and in NIOSH EEOICPA dose reconstructions. NIOSH and HHS OGC disputed this contention.
- (31) Co-petitioner McKeel's 38 white papers to the TBD-6000 work group and full Board were not sent to NIOSH Director Howard or to HHS Secretary Sebelius with the Board's (SEC) recommendation letter dated 1/31/12.
- (32) The SEC (administrative) review process is faulty because hard copies of all 15 TBD-6000 WG transcripts were not provided to NIOSH Director Howard and to HHS Secretary Sebelius before HHS decided on SEC-105.
- (33) GSI radiographers wore GSI film badges to operate and perform NDT inspections on GSI castings at American Steel Foundry in Granite City, IL, using the ASF 1 million KVP x-ray machine and iridium-192 sources.
- (34) The TBD-6000 WG ignored and failed to act of chairman Ziemer's revelation on 10/12/10 that radium sealed sources often leaked, the reason that leak tests were mandated, and that radium daughter products including RADON gas were given off. This real possibility was ignored.
- (35) NIOSH's SEC Counselor and DFO failed to keep the GSI SEC primary petitioner in the notification loop for meetings and new white papers in a timely way for months and years during the SEC-00105 Board and WG deliberations.
- (36) NIOSH failed to do further research and investigation on radiation overexposure incidents as mandated by 42 CFR §83.9.
- (37) Dr. Robert Anigstein of SC&A improperly consulted with his colleague at SC&A, Ed Zlotnicki, a conflicted former Landauer VP, about GSI badges.
- (38) NIOSH never modeled external doses in the busy outside area at GSI that lay between the Old and New 24-25 Mev Betatrons. This was an SEC error in and of itself. [a-d examples]
- (39) Lavon Rutherford and NIOSH never told the TBD-6000 work group or the full Board how many individuals would be potential class members with and without presumptive cancers if SEC-00105 were awarded.
- (40) ABRWH Chairman James Melius erred on December 11, 2012, by making a single motion for the Board to take only one vote for the GSI operational and residual periods (1953-1992). Moreover, he omitted having the vote extend to the entire operational period that by then including October 1, 1952, to December 31, 1952.

- (41) Improper Privacy Act of 1974 redactions, including deceased individuals, of FOIAs and Public Comments and white papers: [a-e examples]
- (42) In the entire GSI SEC-00105 full Board and TBD-6000 work group deliberations, the Iowa Ammunition Plant (IAAP) SEC that involved four radiographers who worked in the 1948-49 period failed to be considered.
- (43) TBD-6000 work group (WG) member Dr. John Poston missed many crucial WG meetings 2010-2013, and was absent at the final vote on 12/11/12.
- (44) **"We close this request with a compelling and serious sense of uneasiness that the SEC-00105 TBD-6000 work group deliberations have a dark "secret" force operating behind the scenes at NIOSH and the Board and SC&A since before October 2010."**

Ten (10) EXHIBITS were submitted in support on 4/13/2013 by SEC-00105 petitioner and co-petitioner Dan McKeel. The final AR request for GSI SEC-00105 was 185 pages long. HHS approved the AR on 5/17/13.

PART 1B: ERRORS ADDED POST 12/11/12 (date of ABRWH 9 to 8 final vote)

- 45. NIOSH failed to *discover* and use NYO-4699 and its Supplement 1. That task was fulfilled by Dan McKeel, GSI SEC-00105 co-petitioner.
- 46. NIOSH fails to *acknowledge, review* and *act* on McKeel [2] Discussion papers for the TBD6K 10/11/13 WG. One paper concerns NYO-4699 and its Supplement 1; the other paper is Allen and DCAS's August 2013 GSI dose estimates in which McKeel identified many errors of omission and facts.
- 47. Paul Ziemer, chair of the TBD-6000 WG, *refuses to task SC&A* to review NYO-4699 and its Suppl. 1. This is the only extant, identified, measured 22-25 Mev Betatron photon & neutron and film badge data with which to validate the NIOSH and SC&A Attila and MCNPX computer models of 2008 and 2012. It is **scientifically irresponsible and negligent** to ignore these most relevant measured data. Dr. Ziemer's response to Dan McKeel to as to why he declined to task SC&A to review these key papers was not informative or sufficient.
- 48. NIOSH and SC&A and TBD6-1000 WG ignore [3] literature REFS provided to them by McKeel that peer reviewed published MCNPX models & measured data agree within ± 2 to 20%.
- 49. NIOSH makes no attempt to bound external and internal doses w/sufficient accuracy for extended GSI operational period 10/1-12/31/1952.
- 50. Despite Dave Allen's and Josie Beach's remarks to Board 12/11/12 during the run-up to the GSI-105 final 9 to 8 vote to deny, as of 10.6.13 final internal and external doses HAD NOT been agreed to by all parties. That is, Dave Allen misrepresented the truth prior to the Board vote.
- 51. By 10/6/13, all **open issues from the 11/26/13 SC&A GSI Appendix BB issues matrix (Part II), and from the 12/5/12 GSI SEC issues matrix (Part III), had not been addressed or settled** by the Board, SC&A and NIOSH, despite assertions to the contrary.

52. Re item [#51]: nor had the petitioner's input been sought on the 11/26/13 Appendix BB open issues. In fact, the TBD-6000 WG had not directly addressed this APPENDIX BB issues matrix from 12/11/12 to 10/6/13 (10+ mo.).

53. The ABRWH and NIOSH have refused to inform DWM how PER-24 was handled despite having SC&A provide public PER review summaries for other sites.

54. The DOE facility database was taken off line from 8/23/13 to 9/24/13. The latter date was an announced goal of DOE HSS (Steve Kirchoff to DM phone call). First date missed: second target date of 9/30/13 also missed. Database not back online as of 10/5/13 (fifth day of U.S. government shutdown).

55. Both DR subcommittee chairs--Mark Griffon and David Kotelchuck--have refused to have the DR subcommittee review any of the 4 GSI completed DRs, including 2 that SC&A marked as having serious methodological flaws. Dr. Kotelchuck explained to Dan McKeel the reason why was that he had been advised a revised Appendix BB would render those evaluations moot. MCKEEL STRONGLY DISAGREES and feels this explanation is trivial and ignores and mocks the very central core mission of this standing ABRWH subcommittee.

56. McKeel learned from the St. Louis Testing Labs NRC license ended in "02" rather than "03" as stated in the NRC FOIA 2012-0012 material from GSI. The latest renewal was "02-36" -- McKeel passed this info along to NRC and DOE, who still were unable to locate the early AEC licenses for 1963-1966 when the StLTL Co-60 and Ir-192 sources were used for GSI NDT work. said the Ir-192 source was used 25 to 50 times, and the Co-60 source only once for one week + 1 day exposure of a large casting out of doors near Bldg. 10 at GSI. NIOSH erred in not insisting these early license records be found. They could have communicated with St. Louis Testing Labs directly. photographed the C-60 and Ir-192 sources at the StLT Lab facilities during 2013. NIOSH could have participated in this endeavor, and they could have re-interviewed just as and DWM did to uncover this new information. Basically, they demonstrated no initiative/interest in doing so.

57. Paul Sinn also revealed there was a *second 100 mrem/hr perimeter, in addition to the 2 mrem/hr outer perimeter* known to have frequently been breached, that the AEC/NRC mandated be set up and CONTINUOUSLY MONITORED BY STLTL at GSI during NDT inspections. NIOSH and the Board/TBD-6000 WG completely ignored this new information during 2013.

58. NIOSH and the Board and SC&A ignore, and pretend to be unaware of, peer reviewed accelerator decommissioning literature references supplied by McKeel showing that concrete and multiple internal accelerator parts, including betatrons and cyclotrons, become activated with chronic use. The internal activated parts include solder ($t_{1/2} = 100$ years) and other metal based parts that must be disposed of carefully during decommissioning.

59. The Board and NIOSH failed to observe that failure to properly decommission the GSI Betatron heads (one at least was buried and uncovered by a cable crew in 1994 - contractor worker testimony) was an example of inadequacy (reckless actions) of the GSI radiation safety program.

60. The DFO posted "GSI site profile review" on the preliminary agenda for the October 16-17, 2013, Denver ABRWH meeting. Mr. Katz responded when asked by Dan McKeel about the meaning of this item, replied "just in case the TBD-6000 work group" achieves closure on Appendix BB at the Oct. 11, 2013 TBD-6000 WG meeting." McKeel cites error #44 and suspects there is a hidden

agenda for rapidly closing Appendix BB issues and revising it, which NIOSH may already have done. Dan McKeel asks two questions on 10/6/13:

QUESTION 1: Has NIOSH already drafted Rev 1 of Appendix BB?

QUESTION 2: If the answer is affirmative, has the draft been shared with the Board, the TBD-6000 work group, or with SC&A?

• **Footnote:** CDC employees may be on furlough during the US government shutdown that began at 12:01 AM 10/1/13, the first day of the new federal fiscal year.

61. Dan McKeel was at first told that ABRWH WG "technical call meetings" were "not tracked," while investigating the "first ever" TBD-6000 WG technical call about GSI matters on 5/28/13. McKeel proved some aspects of technical were tracked, citing an ABRWH meeting transcript in which Bob Anigstein's e-mail memo was inserted into the Board-only BRS (Board Review System) non-public database by Steve Marschke of SC&A. Wanda Munn inserted URL links to the BRS in several 2013 Powerpoint presentations she made on behalf of the Procedures Review subcommittee to the full Board.

62. McKeel expressed his belief the 5/28/13 GSI technical call summary provided by DFO Ted Katz to him was too brief (2/3rds of a page) and did not accurately reflect the full scientific deliberations of NIOSH and SC&A on a "square wave intake function." McKeel also expressed to the Board that Ted Katz's active participation (asking questions) about scientific aspects of the GSI 5/28/13 technical call was improper. This was especially so, given the fact that Paul Ziemer, chair of the TBD-6000 WG, listened in as a silent, non-participating observer. Dr. Ziemer approved of McKeel listening in to the 5/28/13 technical call, but this was quashed and overturned by ABRWH DFO Ted Katz, saying it would set a bad precedent. McKeel strongly objected on the record to the TBD-6000 WG about this further censorship directed at him. McKeel believes that this was but one more example where Ted Katz exceeded his authority and proper role as Board DFO. Also, Mr. Katz is conflicted, as he is a CDC employee who serves both as SC&A contract officer and Board DFO.

63. McKeel protested not being able to access Microsoft Live Meeting software at WG meetings. The software is used by ABRWH work groups with Ted Katz's approval. On 9/28/13, McKeel asked DFO Ted Katz for the Board to please consider granting SEC petitioners access to Live Meeting during WG meetings about their sites. Katz stated the public can use Live Meeting to access ABRWH face meetings, including the Oct. 16-17, 2013 Denver meeting.

64. Dave Allen's DCAS August 2013 white paper on "Summary GSI Dose Assignments" contained many factual errors and omissions that were clearly pointed out by Dan McKeel in his 8/30/13 rebuttal white paper. Paul Ziemer denied McKeel's request to have SC&A review this paper prior to the 10/11/13 TBD-6000 WG meeting and the 10/16-17/13 ABRWH meeting. McKeel is awaiting release of the SC&A review of this paper on Oct. 6th, only 5 days prior to the next scheduled TBD-6000 WG. Very late releases of white papers is a hallmark of SC&A participants in the TBD-6000 work group of the ABRWH.

PART II. APPENDIX BB Issues Matrix "Open" Items

• SC&A identified the following items as still being open on the last issued Rev 3 Appendix Issues Matrix dated 1/26/2012. Note: The timeline provided on pages 2-5 of this issues matrix completely omits mention of the dozens of GSI-related white papers submitted to Docket 140 and to the TBD-6000 work group by SEC-00105 co-petitioner Dan McKeel. This was an important additional serious error of omission: the GSI matrix record is thus grossly incomplete.

The Status Summary on page 5 of Rev 3 Appendix BB SC&A 11/26/12 issues matrix documents the following open issues (from the document itself):

- Issue 1 (data sources): *Open*.
- Issue 2 (period of covered employment): *Open*.
- Issue 3 (betatron beam intensity): SC&A recommends that this issue be *Closed*.
- Issue 4 (underestimate of stray betatron radiation): *Open*.
- Issue 5 (other radiography sources): *Open*.
- Issue 6 (skin dose): *Open*.
- Issue 7 (residual radiation from betatron apparatus): SC&A recommends that this issue be *Closed*.
- Issue 8 (work hours): *Closed*—Dr. Ziemer noted that the Work Group, NIOSH, and SC&A are in agreement.
- Issue 9 (work practices): SC&A recommends that this issue be *Closed*.
- Issue 10 (dose rates from uranium): *Open*.
- Issue 11 (doses to other workers): *Open*.
- Issue 12 (surface contamination and resuspension): *Open*.
- Issue 13 (incorrect units): *In Progress*, pending completion of revised Appendix BB.

McKeel Comment on Part II. Issue 8 is the only one marked fully Closed.

McKeel notes that although an average work week at GSI of 65 hrs/week (3250 hrs annually) was agreed to at a SC&A worker outreach meeting in October 2007, and this number of hours has been used in multiple NIOSH/DCAS and SC&A white papers and memos, all completed GSI dose reconstructions have utilized the lower number of average hours (46/week) in Appendix BB Rev 0 (June 2007). This omission alone has caused serious financial harm (lower calculated doses and lower assigned POCs) to GSI claimants for many years (2007-2013).

• SC&A recommends closing Issues 3, 7 and 9. Issue 13 is In Progress (Rev 1 not issued 10 months later by 10/5/13). **Dan McKeel disputes closure of Issue 3** because the relevant NYO-4699 (Suppl. 1) report data has not been considered by the TBD-6000 work group members, and Dr. Ziemer declined to task SC&A to review this key paper. **Dan McKeel disputes closure of Issue 7** because the TBD-6000 WG has ignored peer reviewed articles McKeel has submitted to the WG and Board on accelerator decommissioning that shows persistent radiation of heavily used accelerators, including betatrons and cyclotrons in the 1950s and 1960s. McKeel strongly disputes closing Issue 9 because substantial new information on work practices at GSI has emerged since the 11/26/12 Appendix BB Issues matrix was issued by SC&A. Some of these data, cited as examples of new GSI work practices data, include the following:

- (a) Uranium handling data from railroad cars (Adley 1952), as occurred at GSI, was reviewed by McKeel and discussed within the TBD-6000 WG;
- (b) The fact the Bldg. 6 radiography building was not constructed until 1955 and that Ra-226 sources were stored in Building 5 need to be considered;
- (c) The fact that in 1952 GSI did contract AEC-Mallinckrodt Chemical Works (Uranium Division) Betatron radiography R&D work using a new uranium

shield built at MCW from Oct. 1 through 12/31/1952. Based on information supplied by Dan McKeel for Nov-Dec 1952 and by NIOSH for Oct 1952, DOL extended the covered period for GSI from 1/1/53 to 10/1/52 in December 2012;

(d) New interview information that St. Louis Testing Laboratories employed their Ir-192 source 25 to 50 times at GSI (doses not calculated; exact workplace uses not determined) even though Dan McKeel clarified the correct AEC By-Products license material number for the Board/TBD-6000 WG. This information was not followed up upon except that , GSI site expert, actually went to STLTL and photographed and viewed both their Co-60 and Ir-192 sources;

(e) Recognition that GSI part time radiographers pre-Landauer #2084 program film badge reports that contained the marking Nuclear Consulting Corp. were possibly reports reissued by GSI. NIOSH has seriously delayed this worker from obtaining his own film badge Landauer reports. The matter is still being investigated by McKeel and with the help of the part time radiographers (). Also, the 18 quarter radiation summary report often referred to by both SC&A and NIOSH from this worker contained additional exposure information the TBD-6000 WG has not considered. That is, the same worker received a dose of 7.2 REM in only two quarters (6 months) while using an Ir-192 sources for NDT radiography jobs in the St. Louis area carried out by Pittsburgh Testing laboratories based in Pittsburgh, PA. NIOSH has seriously neglected calculating GSI worker Ir-192 source term exposures form GSI, St. Louis Testing Labs, American Steel (wearing GSI badges), and Pittsburgh Testing Labs sources.

PART III. SEC Issues Matrix "Open" Items

• SC&A identified the following items as still being open on the last issued Rev 5 GSI SEC-00105 Issues Matrix dated 12/05/2012. On page 4, the following Timeline, which also omits Dan McKeel's white papers, entry appears:
[quote]

- **March 28, 2012: The Work Group on TBD-6000 met in Hebron, Kentucky. At the end of the meeting, two votes were taken on recommendations to the full board regarding the SEC petition for various periods. These votes are summarized in an e-mail from Paul Ziemer (2012), chair of the work group:**

For the early period (1952-1962) the recommendation was to agree with NIOSH that the dose can be bounded (which is to recommend that the SEC class not be granted). This was the split vote (2 yes, 1 no). For the later period (1963-1966) all 3 members voted that the remaining matrix issues were not SEC issues and should be handled as Appendix BB issues. This in essence represents a recommendation agreeing that the dose can be bounded for the later years.

Also on page 4, the Status Summary of Open and Closed Issues begins:
[quote]

Status Summary

The summary of 10 GSI SEC-00105 Issues continue on page 9...

- Issue 1 (lack of radiation monitoring data for 1953–1963) is *Closed*, by action of the work group. The members of the work group, as well as NIOSH and SC&A staff members present at the March 28, 2012, meeting, agreed that further research or fact finding would not produce any useful information.
- Issue 2 (incomplete monitoring of workers: 1964–1966) is *Transferred* to the Appendix BB issues matrix, by action of the work group.
- Issue 3 (lack of documentation) is *Transferred* to the Appendix BB issues matrix, by action of the work group. According to Paul Ziemer, the work group chair: “This has to do with the bounding in post-radium era. SC&A agrees with NIOSH that bounding can be done and recommend moving this to Appendix BB and closing.”
- Issue 4 (film badge angular and energy dependence) is *Closed*, by action of the work group.
- Issue 5 (lack of validation of models) is *Closed*, by action of the work group.
- Issue 6 (external exposure of unmonitored workers) is *Transferred* to the Appendix BB issues matrix, by action of the work group.
- Issue 7 (scientific errors in Appendix BB to be addressed by NIOSH) is *In Progress*, by action of the work group.
- Issue 8 (incomplete model used for exposure assessments) is *Transferred* to the Appendix BB issues matrix, by action of the work group.
- Issue 9 (underestimate of beta dose) is *Transferred* to the Appendix BB issues matrix, by action of the work group.
- Issue 10 is *Closed*, by action of the work group.

McKeel Comment on Part III. This narrative is a very imprecise reflection of the 3/28/12 TBD-6000 WG meeting transcript, which Dan McKeel reviewed at length previously. SEC-00105 12/5/12 Rev 5 matrix Issues 1, 4, 5 and 10 were marked as **Closed**. Issues 2, 3, 6 and 8 [n=4] were marked as **Transferred to the Appendix BB matrix**, and Issue 7 was marked as being **In Progress**.

It was shown in Part II that, as of 11/26/12, only one Appendix BB Rev 0 matrix Issue had been fully **Closed**, 3 more were **recommended to be closed by SC&A** but this has not been agreed to by the other parties as of 10/5/13, and Appendix BB matrix Issues 1, 2, 4, 5, 6, 10, 11 and 12 [n=8] were left **Open**. These were the **original SC&A Appendix BB Issues/Findings**.

Dan McKeel's concerns about Closed SEC matrix Issues are discussed next. These very serious concerns flow from the fact that highly germane information that contradicts the validity of the closure rationale has emerged following the Board vote of 9 to 8 to deny SEC-00105. Much of this newer information is covered in errors 45–64 listed in this document covering the period from 12/11/12 (Board SEC final vote) until now (Oct. 6, 2013).

• **Dan McKeel takes serious exception to SEC Closed Issue 1.** Actually, new information was turned up that AEC-MCW uranium NDT Betatron contract work was ongoing during the last three months of 1952. Also, Dan McKeel produced NYO-4699 (Suppl, 1) 1957 surrogate 22–25 Mev Betatron photon and neutron and

film badge data, and Adley 1952 Hanford Melt Plant data on uranium air intakes, that is directly relevant to GSI dose reconstructions.

• Dan McKeel takes exception to part of SEC Closed Issue 4. The angular dependence of film badges at GSI was not dealt with in depth as it has been at larger DOE sites. The special issue at GSI are Betatron operators whose back was exposed to the Betatron camera head at very close ranges during set up of castings and uranium. Film badged exposure geometry was not considered for badges SC&A claims were wearing on the belt of GSI Betatron operators (petitioners dispute that fact).

• Dan McKeel takes serious exception to SEC Closed Issue 5. Dan McKeel has insisted from day 1 that (1) computer models such as MCNPX and Attila code require measured data for validation, and (2) that to be valid, the SC&A and NIOSH computer model results should have agreed with each other within ± 2 to 20%, where in reality they never agreed closer than 200%, a scientifically unacceptable degree of agreement for peer reviewed studies. Since the SEC-00105 Board vote on 12/11/12, Dan McKeel has sent the TBD-6000 WG and Board three additional peer reviewed scientific journal papers that support his contention. In addition, he supplied everyone with the twin NYO-4699 1956 HASL and 1956 and NYO-4699 (Suppl. 1) 1957 reports that contain the only known extant 22-25 Mev Betatron photon/neutron measured data on badged workers (by NYO HASL as part of the AEC Reactor Surveillance program in the 1950s). Chairman Paul Ziemer of the TBD-6000 WG refused to task SC&A to review these papers, and NIOSH has not responded to having received, read or acted upon them.

• Dan McKeel takes strongest exception to SEC Closed Issue 10. The entries in the matrix for this issue showed that NIOSH recommended the mistakes it made in dose calculations NOT BE closed but made into an Appendix BB issue. This entry in the Status Summary by SC&A is thus incorrect. This should be listed as an OPEN Appendix BB issue. That this matrix error by SC&A has persisted so long is striking support to McKeel's contention the GSI SEC and APPENDIX BB Issues matrices have not been considered by anyone on the full Board or TBD-6000 work groups since November/December 2012 when the two matrices were compiled and updated.

Dan McKeel's Composite GSI APPENDIX BB/SEC ISSUES MATRIX 10/6/13
[Note: Only Open, Transferred or In Progress Issues are included]

SC&A has not been tasked, nor has it produced, an updated composite Appendix BB Issues matrix that includes the 13 original and all transferred and In Progress GSI SEC-00105 matrix Issues. I have done this in the listing that follows. These are all issues the TBD-6000 WG of the ABRWH must deal with systematically, thoroughly, and with absolute scientific integrity and transparency, before a Revised Appendix BB should be issued by NIOSH.

As I have stated many times before, I believe transferring the open SEC matrix Issues to Appendix BB Issues matrix on 3/28/12 was done in a hurried and scientifically unacceptable manner. The decision was rushed and the Chair, Dr. Ziemer, aggressively (and too quickly) went through the SEC issues to rush to a final vote. As the Ziemer quotation about the WG SEC vote reveals, "This in essence represents a recommendation agreeing that the dose can be bounded for the later years," a very weak statement about an expedient rush-to-judgment. The WG was too rushed to take a final roll call vote.

1. Transferred SEC ISSUE 2. Lack of monitoring data for 1953-1963... The members of the work group, as well as NIOSH and SC&A staff members present at the March 28, 2012, meeting, agreed that further research or fact finding would not produce any useful information. [McKeel comment: *The record is*

incomplete: McKeel vociferously disagreed and, in fact, produced substantial new information following the 3/28/12 WG meeting that continues to this day (witness NYO-4699 reports as one example). NIOSH produced new data from October 1952 showing that GSI contracted with AEC-MCW for R&D Betatron NDT work using MCW uranium billets and a new Uranium shield made by MCW. The goal was to improve uranium radiographic images using Betatron x-rays. Such prophecies are often self fulfilling: if you believe no new information will be found, you likely will stop searching and prove yourself to be correct!].

Issues from the 10 item SEC matrix to Appendix BB matrix:

2. Transferred SEC ISSUE 3. Lack of documentation.
3. Transferred SEC ISSUE 6. External exposure of unmonitored workers.
4. Transferred SEC ISSUE 8. Incomplete model used for exposure assessments.
5. Transferred SEC ISSUE 9. Underestimate of beta dose.
6. In Progress SEC ISSUE 7. Scientific errors in Appendix BB to be addressed by NIOSH. [not explicitly transferred to App-BB matrix]
- [19] SEC ISSUE 10 was not closed (status summary is incorrect) and should be listed as TRANSFERRED TO THE APPENDIX BB ISSUES MATRIX (see above).

Issues from the original 13 item SC&A Appendix BB matrix:

7. Recommended to be closed by SC&A APPENDIX BB ISSUE 3. Betatron beam intensity.
8. Recommended to be closed by SC&A APPENDIX BB ISSUE 7. Residual radiation from betatron apparatus.
9. Recommended to be closed by SC&A APPENDIX BB ISSUE 9. Work practices.
10. Open SC&A APPENDIX BB ISSUE 1. Data sources.
11. Open SC&A APPENDIX BB ISSUE 2. Period of covered employment.
12. Open SC&A APPENDIX BB ISSUE 4. Underestimate of stray betatron radiation.
13. Open SC&A APPENDIX BB ISSUE 5. Other radiography sources.
14. Open SC&A APPENDIX BB ISSUE 6. Skin dose.
15. Open SC&A APPENDIX BB ISSUE 10. Dose rates from uranium.
16. Open SC&A APPENDIX BB ISSUE 11. Doses to other workers.
17. Open SC&A APPENDIX BB ISSUE 12. Surface contamination and resuspension.
18. In Progress SC&A APPENDIX BB ISSUE 13. Incorrect units. "..., pending completion of revised Appendix BB."

• These are the 19 items that still must be resolved by the TBD-6000 WG during or following the October 11, 2013 (Friday) meeting. It is truly discouraging to see this many unresolved issues 6+ years after Rev 0 Appendix BB and 5 years after the NIOSH SEC-105 evaluation report. The US Government is partially shut down at the present time and many federal employees are away from work on furlough. The two (at least) SC&A review papers of the two Allen August Discussion papers for the TBD-6000 WG 10/11/13 meeting have not yet been released (10/6/13 AM). It is difficult to see how the TBD-6000 work group can possibly fully resolve the above 19 not fully closed out GSI SEC/Appendix BB matrix issues at the 10/11/13 meeting. In fairness to the GSI claimants, I sincerely hope there will not be another rush-to-judgment, too hurried, close out of the above 19 findings. The ABRWH full Board preliminary Federal Register "placeholder" Agenda circulated by Ted Katz, Board DFO, has an item the worries me as being very premature and overly optimistic. That entry is "Review of GSI Site Profile." The GSI site profile currently consists of TBD-6000 Rev 1 and Appendix BB Rev 0 (June 2007). DCAS Director Hinnefeld has stipulated the TBD-6000 WG must resolve all outstanding GSI matrix issues before NIOSH will release Rev 1 of Appendix BB. I take that statement by the DCAS Director to me to mean that NIOSH has not yet drafted Revision 1 to GSI Appendix BB and clearly is in no position to release it.

Respectfully submitted,



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