

**Dan McKeel Dow SEC-00079 Co-petitioner Comments  
to the SEC Issues work group, November 12, 2010**

1. RE: the Oct. 8, 2010 tasking date mentioned in the Thurber SC&A white paper, what were the circumstances for tasking SC&A to review the white paper on DR and use of surrogate data at Dow Madison site? I believe Dr. Melius was absent from the Oct. 7, 2010, Board teleconference meeting, so how was tasking done the next day, please?
2. I need to state the co-petitioner's objections to Mr. Thurber's overall conclusions that all uses of surrogate at the Dow Madison site fulfilled the Board's surrogate data criteria. Part of my general objections were aired in a recent e-mail exchange between Dr. Melius and myself. He argued that the Board uses its SD criteria, which may differ from OCAS-IG-004, the surrogate data criteria that NIOSH uses. He told me the two sets of criteria do not need to be "reconciled." I strongly disagree with this approach. I feel that both the Board and their contractor SC&A, and NIOSH, need to use the same uniform criteria to assess use of SD across the AWE and DOE covered site spectrum.
3. NIOSH has not formally used either OCAS-IG-004 or the Board's SD criteria to justify the overwhelming use of SD to make recommendations for extending SEC-00079. NIOSH's position is the 83.14 SEC extension to cover the residual contamination period should be denied. I hope to persuade the full Board to approve SEC-00079 extension to cover 1961 through 2007 at the Dow Madison, IL, site at the full Board meeting on November 17.
4. This morning I e-mailed you PDF files of my May 4, 2010 presentation to the Board on NIOSH's initial presentation of its SEC-00079 evaluation report (ER). The text of my remarks is one file and the Powerpoint presentation is the other PDF. I also submitted these two files, again, to Dow Docket 113.
5. I want to give two examples today why I believe the Board SD criteria were misapplied in Bill Thurber's, October, 2010, SC&A white paper under consideration by the SEC Issues work group today. My contention all along has been to challenge the assignment of quoted "Dow Madison" site monitoring data to the Madison, IL, Dow plant. I believe that most, or perhaps all, of this "direct data" may have been collected at other Dow Chemical Company plants that are located at Bay City and Midland, Michigan and at Freeport, Texas.

Example #1: (Filename: Bldgs\_NotAt\_DowIL.txt)

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**4.4 Site Locations Associated with Radiological Operations.**

Additional areas where thorium materials were handled were

identified in the newly provided documents. Besides Bldg. 6, other buildings with Th activities included: thorium fluoride storage in Bldg. 376 and hardener casting in Bldg. 152.

**MCKEEL STATEMENT:** (1) **There were no such buildings as 376 and 152 at Dow Madison in Illinois.** Dan McKeel showed a detailed building plan of Dow Madison at his 5/04/2007 Board presentation that favored approval of SEC-00079 from 1957 through 1998, the known end of the residual period at that time. The Podonsky-HSS/DOE Jan 8, 2008, letter declaring Dow Madison was a thorium AWE site had not been issued at that point. This discrepancy in Bldg. numbers at various Dow sites illustrates a point I made at the SC&A workers meeting held in 2006 in East Alton and at subsequent presentations on SEC-00079 to the Board.

(2) To my knowledge, **thorium fluoride** was not stored at Dow Madison IL site. The ORNL survey of 1989 or the Pangea Group 2003 through 2007 cleanup reports did not mention this form of thorium being used at Dow Madison, IL site.

**CONCLUSION:** Other Dow sites—Bay City and Midland, MI, and/or Freeport, TX—were being mixed up with Dow Madison site by BOTH NIOSH/ORAU (Mr. Mahathy) and SC&A (Bill Thurber).

Example #2: (Filename: Dow\_ERadd1\_BayCityFB.txt)

From document TDCC 362 concerning the film badge readings used to bound uranium and thorium external doses at Dow Madison during the respective residual radiation contamination periods (uranium 1961-2008; thorium 1961-2007, source: DOE facilities Database entries.

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6/26/57

L. Silverstein  
(Dow Midland)

Document type:

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Letter to H. Price  
(AEC)

Q: Content:

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Request for exemption from  
posting and labeling  
requirements of 10CFR20 for  
areas and containers in which  
Mg alloys containing up to 4%  
Th are stored and fabricated;

includes film badge data from  
HK-31 casting jobs

Q: New or Differing  
Information from ER?

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Personnel film badge data for 13 day period for 27 people (20 specific jobs) (Note: this list is from Bay City – it is the same as the list in TDCC 000055)

	FB = 27 readings from 20 jobs
	27/3000 workers = 0.9% of workforce
	at Dow Bay City
	13/13505 days = 0.1% residual days

=====end of TDCC 362 Dow ER add1=====

The Board surrogate data criterion that was most egregiously misapplied in my opinion was the need for *stringent justification* for surrogate site data in instances where, as pertained to Dow Madison, zero personal film badge or bioassay existed for workers from 1957 to 2007, including the 1986 to 2007 era when Spectrulite Consortium, Inc., owned the Madison site. Workers from that time period gave affidavits that film badges were worn by some workers, yet none of this FB data had surfaced at Landauer or elsewhere. The workers suspect these film badges may not have been analyzed. No FB reports were shown to them by plant management or their direct supervisors (see Ed Holzouser affidavits, for example).

As shown above and in Dow ER-appendix 1, the Bay City, MI surrogate film badge data was for 13 days, with 27 badge readings from 20 job descriptions. Those 13 days represent <0.01% of days in the 37 year thorium residual period (1961-2007), or 37/1465 = 0.9% of days in the operational period (1957-60). Assuming that Bay City had 3,000 workers and FB readings from 20 of them, then only 0.7% of the peak annual workforce was monitored and even less when job turnover is considered. Bay City is not otherwise justified by NIOSH. In fact, here is what NIOSH concluded about the Bay City FB data: "SEC-00079 Addendum 08-06-07 Dow Madison

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...heat treat, Wheelabrator, touchup, X-ray, fixture, shipping, metal reclamation) associated with HK-31 casting production at Bay City, which was another facility operated by Dow (TDCC 000362). ***The list of jobs is fairly descriptive and specific, and probably similar to those which would have been performed during thorium operations at the Madison site, but it is not known how complete or how representative of the Madison site this list is, and therefore it is still not possible to use job descriptions to define the proposed class.*** Yet, in spite of any justification of Bay City other than that no evidence had surfaced that Bay City was not similar to Dow Madison, Bill Thurber concluded the "stringent justification" criterion for sites such as Dow that lacked any personnel monitoring data was satisfied.

I contend that no professional statistician would accept such limited time period (operational <0.01%; residual 0.9%) and number of workers (<0.7%) film badge data from Dow Bay City, MI, as being (a) in any way representative of the time periods or the

workforce, or (b) as satisfying the Board's stringent justification criterion. I hope the work group and full Board will agree with me.

6. An overriding issue that is evident from the wealth of Dow and successor owner worker affidavits is the poor enforcement of safety regulations at Dow Madison. This was a very unsafe workplace. For example, I have evidence that Madison site owners underreported to Illinois EPA inspectors its regular furnace stack emissions of both thorium and beryllium for a twenty year period ending in 2004. Dow Madison site in 1963 began producing an aluminum-beryllium alloy called "LOCK-ALLOY™" that was licensed from Lockheed-Martin. On October 5 of this year current owner Magnesium-Elektron experienced a tremendous explosion and fire that blew out windows of the castings building. The adjacent elementary school was closed, and IL EPA is instituting a lawsuit against Magnesium-Electron as a result of the mishap. There are at least 5 pages of Google news reports about this dramatic event that highlight the unsafe conditions that characterize the Madison site for the past 60 years.

Respectfully submitted,

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