THE SECRETARY OF HEALTH AND HUMAN SERVICES

WASHINGTON, D.C. 20201

September 22, 2015

[redacted]

Dear [redacted]:

Thank you for your request for an administrative review of the February 2, 2012, determination not to add a class of employees from the Hooker Electrochemical Corporation (Hooker), Niagara Falls, New York, to the Special Exposure Cohort (SEC), established by the Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA).

Pursuant to 42 CFR § 83.18(b), and because you filed a challenge to this determination, a panel of three Department of Health and Human Services (HHS) personnel, independent of the National Institute for Occupational Safety and Health (NIOSH), was appointed to conduct an administrative review. The panel has now completed its review of your challenge.

After reviewing the administrative record in this case, the panel recommended two actions:

> (1) The panel concluded that petitioner's challenge has merit in regard to the Hooker employees who worked during the "operational period from January 1, 1943, through December 31, 1948," and they recommend revising that portion of the February 2, 2012, determination that denied SEC status to these workers.
> (2) Further, the panel concluded that your challenge does not have merit in regard to the Hooker employees who worked during the "residual period from January 1, 1949, to December 31, 1976," and they recommend upholding that portion of the February 2, 2012, determination that denied SEC status to these workers.

NIOSH agreed to provide a new designation comporting with the panel's recommendation. I have approved that designation, and it is being sent to Congress, as required by the EEOICPA regulations. You will be provided with additional information from NIOSH in due course.

I am enclosing a copy of the administrative review panel's final report and the NIOSH response, which I hope you will find helpful.

Sincerely,

[Signature on File]

Sylvia M Burwell

Enclosure

The Honorable Sylvia M. Burwell
Secretary of Health and Human Services
Department of Health and Human Services
200 Independence Avenue, S.W.
Washington, DC 20201

Re: Hooker Electrochemical Corporation Special Exposure Cohort Administrative Review Panel

Dear Madam Secretary:

The Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA), 42 U.S.C. § 7384-7385 *et seq.*, established a compensation program for workers who may have developed specific cancers associated with duties performed on nuclear weapons programs administered by the Department of Energy (DOE) and its predecessor agencies (hereafter "Energy workers").

In order to qualify for compensation under EEOICPA, individual workers with a specified cancer may file claims with the Department of Labor (DOL). For individual claims, a radiation dose reconstruction is performed by the National Institute for Occupational Safety and Health (NIOSH), and a probability of causation estimate is calculated by DOL to determine whether the cancer was incurred as a result of exposure to radiation at a DOE facility.

Workers may also qualify for compensation from DOL, without completion of a radiation dose reconstruction or a probability of causation estimate, if they incur a specified cancer and are members of a class of Energy workers designated as the Special Exposure Cohort (SEC). To qualify for the SEC, a representative of a class of Energy employees must file a petition with the Department of Health and Human Services (DHHS) and meet the appropriate requirements under regulations implementing EEOICPA at 42 CFR part 83. Then, pursuant to 42 U.S.C. § 7384q, the Secretary of DHHS may designate the class for addition to the SEC, when it is recommended by the Advisory Board on Radiation and Worker Health (hereafter "ABRWH" or "the Board") that: (1) it is not feasible to estimate with sufficient accuracy the radiation dose that the class received; and (2) there is a reasonable likelihood that such radiation dose may have endangered the health of members of the class. If the petition to add a class to the SEC is denied, the petitioners may request an administrative review of the final decision by the Secretary.

Background

On February 2, 2012, the Secretary of DHHS at that time, Kathleen Sebelius (hereafter "the Secretary") determined that the following class of employees from the Hooker Electrochemical Corporation (hereafter "Hooker"), Niagara Falls, New York, could not be added to the SEC because it did not meet the necessary statutory criteria for such a designation:

> All employees who worked in any location at the Hooker Electrochemical Corporation during the operational period from January 1, 1943, through December 31, 1948, and during the residual period from January 1, 1949, to December 31, 1976.

This determination was based upon the recommendation by the Board, in a letter the Secretary received on January 4, 2012, advising that the Board agreed with the NIOSH finding "that radiation dose can be reconstructed with sufficient accuracy for certain Hooker Electrochemical employees …" *See* "DHHS Determination Concerning a Petition to Add Members to the Special Exposure Cohort Under the Energy Employees Occupational Illness Compensation Act of 2000: Determination Concerning a Petition for Employees from Hooker Electrochemical Corporation, Niagara Falls, New York," February 2, 2012 (hereafter "DHHS Determination Concerning a Petition for Hooker Employees").

Subsequently, petitioner (b) (6) in a letter dated February 29, 2012 (attached to this report as Appendix I), requested an administrative review of the Secretary's February 2, 2012, decision. (b) (6) is the representative for petitioners and surviving daughter of a former employee of Hooker. Her appeal letter ("AL") lists a total of 16 "arguments in favor of reversal," 12 of which are presented in the main body of the AL, and the other 4 are included as an attachment ("AX") to the AL. On July 31, 2012, the petitioner submitted a second appeal document as an attachment to an email, referred to as an addendum ("AD") (attached to this report as Appendix II). This addendum listed an additional 60 "challenges." The petitioner had requested to supplement her appeal with an addendum because she had received additional information, which was previously requested under a Freedom of Information Act (FOIA) request, after the time that she filed her initial appeal letter. The total 76 arguments and challenges were all accepted by DHHS as part of the appeal.

Pursuant to 42 CFR § 83.18(b), the Secretary appointed a panel of three DHHS personnel, independent of NIOSH, to conduct an administrative review and provide recommendations concerning the merits of the challenge and the resolution of the issues contested by the challenge. The undersigned, Orhan H. Suleiman, Ph.D. (Chair), Eric Bernhard, Ph.D. and James A. Deye, Ph.D., comprise that panel. Our collective expertise includes: health physics, radiation exposure, dose assessment, dose reconstruction, and radiation health effects.

Our Charge

The review panel was charged with conducting an administrative review of the Secretary's determination not to add a class of Hooker employees to the SEC. This included reviewing the data and information that formed the basis of the February 2, 2012, decision. EEOICPA implementing regulations at 42 CFR § 83.18(a) provide that, in order to contest a final decision by the Secretary to deny adding a class to the Cohort, a challenge "must include evidence that the final decision relies on a record of either

substantial factual errors or substantial errors in the implementation of the procedures" set out in 42 CFR part 83.

In conducting our review, pursuant to 42 CFR § 83.18(b), we examined the 76 arguments and challenges submitted by the petitioner; the NIOSH evaluation report; the report containing the recommendations of the Board to the Secretary; the recommendations of the Director of NIOSH to the Secretary; the information presented or submitted to the Board by NIOSH, NIOSH contractors, the petitioner, and others; and the deliberations of the Board (and Board working groups), contained in transcripts and otherwise, prior to the issuance of its recommendations. The documents that we relied upon most often in the writing of this report were titled as follows:

(1) NIOSH Evaluation Report for the Hooker Electrochemical Corporation ("SEC Petition Evaluation Report: Petition SEC-00141, Report Rev. #0, May 3, 2010") (hereafter "Hooker Evaluation Report");

(2) Technical Basis Document for the Hooker Electrochemical Company ("Division of Compensation Analysis and Support Technical Basis Document for the Hooker Electrochemical Company, Niagara Falls, New York, Document Number: DCAS-TKBS-0009, Revision No. 0, 04/04/2011" – supersedes "Batelle-TBD-6001 Appendix AA, Rev. 0) (hereafter "Hooker TBD");

(3) Site Profiles document for Atomic Weapons Employers that Refined Uranium and Thorium ("Site Profiles for Atomic Weapons Employers that Refined Uranium and Thorium, Document Number Battelle-TBD-6001, Rev. F0, Battelle Team Dose Reconstruction Project for NIOSH, 12/13/2006") (hereafter "Site Profiles"); and

(4) Criteria for the use of Surrogate Data, Prepared by the ABRWH Work Group on Use of Surrogate Data, May14, 2010 (hereafter "Board Surrogate Data Policy").

Regulations in 42 CFR § 83.18(a) prohibit petitioners from introducing any new information or documentation that was not previously submitted to NIOSH or to the Board prior to the Board issuing its recommendations. Our review was based entirely on the written documentation provided to us in this case.

Main Conclusions

Although the petitioner's arguments are broadly stated and sometimes difficult to follow, the most relevant point concerns the use of surrogate data to reconstruct dose at the Hooker site. This concern, which comes up repeatedly, is exemplified in argument 7 in the AL: "There is still the question of the use of 'surrogate data' in order to use dose reconstruction. Neither of these two procedures should have been used for Hooker since it no longer exists and there are no records" (emphasis added) (AL, p. 3). The review panel interprets this argument of the petitioner as questioning the validity of the use of surrogate data in this case.

The review panel concludes that petitioner's challenge has merit in regard to a subset of the class of Hooker employees for which the petition was submitted. We unanimously find that the use of surrogate data to assess internal radiation doses to the Hooker workers during the operational period from January 1, 1943, through December 31, 1948, does not meet the standard of reasonable application of scientific methods (see Section A below),, nor does it meet the standards for use of such surrogate data as agreed to by the Board itself (see Section B below). Consequently we feel that the use of surrogate data in this case resulted in a "substantial factual error." Consequently we feel that the use of surrogate data in this case represents a "substantial factual error." We conclude that this error invalidates the determination that exposure could be accurately reconstructed for the time period 1943 through 1948 using only surrogate data. Thus, we recommend reversal of the portion of the Secretary's February 2, 2012, determination that denied SEC status to "All employees who worked in any location at the Hooker Electrochemical Corporation during the operational period from January 1, 1943 through December 31, 1948."

Finally, because of the different timeframe and very different working conditions that existed after January 1, 1949, we do accept the basis for reconstruction of doses for the Hooker workers in the "residual period from January 1, 1949, to December 31, 1976." We conclude that the petitioner's challenge with respect to this subset of workers does not have merit and we, therefore, recommend that you uphold the portion of the Secretary's February 2, 2012, determination that denied SEC status to workers at Hooker during the residual period from January 1, 1949, to December 31, 1976.

Structure of Report

The body of this report contains the following sections:

A. In Section A of this report, we address the points in the Secretary's February 2, 2012, determination, as this is what the petitioner is challenging in this appeal. This section largely focuses on the reasons why, in our view, the use of surrogate data to reconstruct doses for employees that worked at Hooker prior to January 1, 1949 was erroneous.

B. In Section B of this report, we further address the surrogacy issue, which is central to our recommendation. Specifically, we review the use of surrogate data within the context of the criteria set out in the May 14, 2010, Board Surrogate Data Policy, as the application of these criteria are crucial to the "factual accuracy of the information supporting the final decision" (42 CFR § 83.18(b)). This section includes our discussion of how the Board failed to follow these criteria.

C. In Section C of this report, we address each of the 76 arguments and challenges set forth in the petitioner's appeal letter (AL), attachment (AX), and following addendum (AD). This clearly expanded our effort, but the review panel felt it was essential to address each of the petitioner's concerns to the best of our abilities. These arguments and challenges have been grouped into common subject categories and addressed accordingly.

Section A. DHHS Secretary's Determination Letter of February 2, 2012

Pursuant to 42 CFR § 83.18(b), part of the review panel's charge was to determine whether the Secretary's final decision was supported by accurate factual information, and to consider the principal findings and recommendations of NIOSH and the Board.

Section IV of the Secretary's February 2, 2012, "DHHS Determination Concerning a Petition for Hooker Employees" summarizes the Determination Findings. These Findings are based upon the memorandum from the Director of NIOSH, dated January 9, 2012, and the Board's letter to the Secretary, concurring with the "Findings," dated December 29, 2011 (received January 4, 2012). The complete Determination Findings are listed in bold text below; the review panel's analysis follows each point along with our conclusions.

IV. Determination Findings

1. NIOSH determined principal sources of internal and external radiation exposure for members of the evaluated class were gamma and beta radiations associated with handling and working in proximity to uranium-bearing slag material (C-2 and C-2 concentrate).

While we agree that gamma and beta radiation were principal sources of external radiations during the handling of, and working in proximity to, uranium-bearing slag material (C-2 and C-2 concentrate), we note that this Finding is misleading and not factually correct. This is because it does not address internal dose, and alpha radiation is considered the primary source and the most significant contributing radiation source term for the internal exposures to these workers. This was recognized in the Hooker Evaluation Report, which states (p. 15):

> "... The primary source of internal radiological exposure resulting from Hooker Electrochemical operations was inhalation and/or ingestion of uranium metal present in magnesium-fluoride residues obtained from the uranium-tetrafluoride reduction process utilized at the Electro-Metallurgical Corporation. The radiological hazard presented by uranium metal or compounds results primarily from alpha particles emitted by uranium -238 ... and its isotopes uranium-235 ... and uranium-234."

The panel also notes that alpha radiation, when deposited internally, is recognized as a significant contributor to health effects such as lung cancer.

Thus, the review panel challenges the "factual accuracy" of Finding 1.

2. **NIOSH has found a significant amount of air sampling data relevant to the materials and processes used at the Hooker Electrochemical site. In addition, the method proposed for establishing a bounding dose for the operational periods in Battelle-TBD-6001 Appendix AA has been compared to available air monitoring data from related sites and has been found to be bounding in each case (based on the assessment of the dose using the appropriate dose reconstruction approaches and methodologies).**
(emphasis added for clarity of discussion as follows)

3. **NIOSH has access to sufficient information to estimate the maximum internal radiation dose that could have been incurred from exposure to uranium-bearing slag during the operational period. NIOSH has a significant amount of air sampling data relevant to the materials and processes used at the Hooker Electrochemical site. In addition, the method proposed for establishing a bounding dose for the operational periods in Battelle-TBD-6001 Appendix AA has been compared to available air monitoring data from related sites and has been found to be bounding in each case (based on the assessment of the dose using the appropriate dose reconstruction approaches and methodologies).**
(emphasis added for clarity of discussion as follows)

Except for the first sentence, Finding 3 is essentially identical to Finding 2 and, thus, we address them together. The key elements of Findings 2 and 3 (underlined in each above) relate to the adequacy of the air sampling data for bounding the internal doses during the operational period 1943 through 1948. Thus, the review panel considered the following elements of Findings 2 and 3 to be: (a) "significant amount of air sampling data;" (b) "relevant to the materials and processes;" (c) "bounding dose for the operational time periods;" and (d) "data from related sites."

(a) "significant amount of air sampling data":

Regarding the amount of data, section 6.0 of the Hooker Evaluation Report indicates that "NIOSH did not locate any data relating to the occupational internal or external doses received during the Atomic Energy Commission (AEC) work at Hooker Electrochemical" (p. 17). In addition, Section 6.1 of this same report presents "relevant data from sites that processed the same material" as Hooker. This section includes 3 Tables: "Table 6-1: Pertinent Air Monitoring Data from Electro-Metallurgical Corporation;" "Table 6-2: Summary of Pertinent Air Monitoring Data from the Mallinckrodt Facility;" and "Table 6-3: Summary of Pertinent Air Monitoring Data from Fernald." There are 2 data points in Table 6-1 from Electro-Metallurgical Corp, dated 1947/1948 and 1949; 10 measurements in Table 6-2 from Mallinckrodt, dated 1948 through 1953; and 12 measurements in Table 6-3 from the Fernald site, dated from 1956 through1959 (*see* pp. 18-21 of the Hooker Evaluation Report).

We note that, of the total 24 data measurements used as surrogate data in this report, only 2 were prior to 1949; and these 2 data points - 456 dpm/m^3 (Hooker Evaluation Report, p. 18, citing Site Research Database (SRDB) Ref ID: 8917, p.7) and 398 dpm/m^3 (Hooker Evaluation Report, p. 18, citing SRDB Ref ID: 8930, p. 19) - are averages of measured values. In addition, these averages are 6.5 and 2.2 times higher, respectively, than the "tolerance" levels of the era per stated values and "tolerances" in Table 6-2.

Thus based on the very limited amount of data used, the review panel questions the "factual accuracy" of the statement that "**NIOSH has a <u>significant</u> amount of air sampling data relevant to the materials and processes used at the Hooker Electrochemical site,"(emphasis added)** particularly in regard to the operational (pre-1949) period.

(b) <u>"relevant to the materials and processes":</u>

The panel again notes that 22 of 24 samples referenced above were from 1949 and after. As discussed below (and shown in Figure 1), the panel finds it to be inaccurate to claim that source terms for dust samples after 1949 are **relevant to the materials and processes used at the Hooker** site from 1943 through 1948, which is the operational radiation exposure period identified in the DHHS Determination Concerning a Petition for Hooker Employees. This earlier period of time was very different in terms of dust levels, since after 1949, major improvements in the uranium refining processes were made to reduce the hazard from uranium dust, including more stringent enforcement of air quality standards, resulting in "alpha-emitting dust concentrations for the years 1953-1957 – roughly 100 times lower than they were in 1948." (Site Profiles, p. 52).

(c) <u>"bounding dose for the operational periods":</u>

The review panel disagrees that **"available air monitoring data from related sites"** can be used as bounding for the operational period at Hooker, since the amount and relevance of the data are insufficient and the variance and uncertainties of the data are too large. This is acknowledged in the Hooker TBD, Section 4.0 (p. 8), which states that:

> "No data were found in the Site Research database related to occupational internal dose during MED work. The work performed at Hooker Electrochemical involved concentrating C-2 slag. Much of that work involved either liquid or material with a high moisture content which would result in little or no airborne activity. The one task involving dry material was the dumping of barrels of MgF2 slag. The slag came directly from the nearby ElectroMet facility. Two air sample results from handling this material at ElectroMet were found. The first result was an average of an unknown number of samples taken on December 24, 1947, March 30, 1948 and May 14, 1948. The average of the samples was 456 dpm/m^3. The second result was an average of three samples taken between August 17th

> and the 19th of 1949. The average value was 398 dpm/m^3 .Work associated with these samples included shoveling the material into the barrels.
>
> Since there are only two results and they were reported as averages, they provide little information about the variability of the data."

Strong support of this panel's position also comes from Section 8.4 of Site Profiles. Specifically, this section includes Figure 1, as pasted below, which is taken from a paper written by Christofano and Harris in 1960 (Christofano, Emil and Harris, William, "The Industrial Hygiene of Uranium Refining," *Archives of Environmental Health*, Nov. 1960, vol. 1, pp. 438-460) SRDB Ref ID:15724, p. 24, (note, despite the figure caption in TBD-6001 which says this is Figure 1, this is actually Figure 16 in the Christofano paper) . This Figure shows the decreasing trend in time- weighted average air concentrations of alpha-emitting dust.

8.4 Time-Dependent Air Concentration Data

The air concentration in refining plants varied with time. The following information was extracted from Strom (2006). Christofano and Harris (1960) showed that there was a large reduction over the years in time-weighted average air concentrations of uranium in various refining plants (Figure 1).

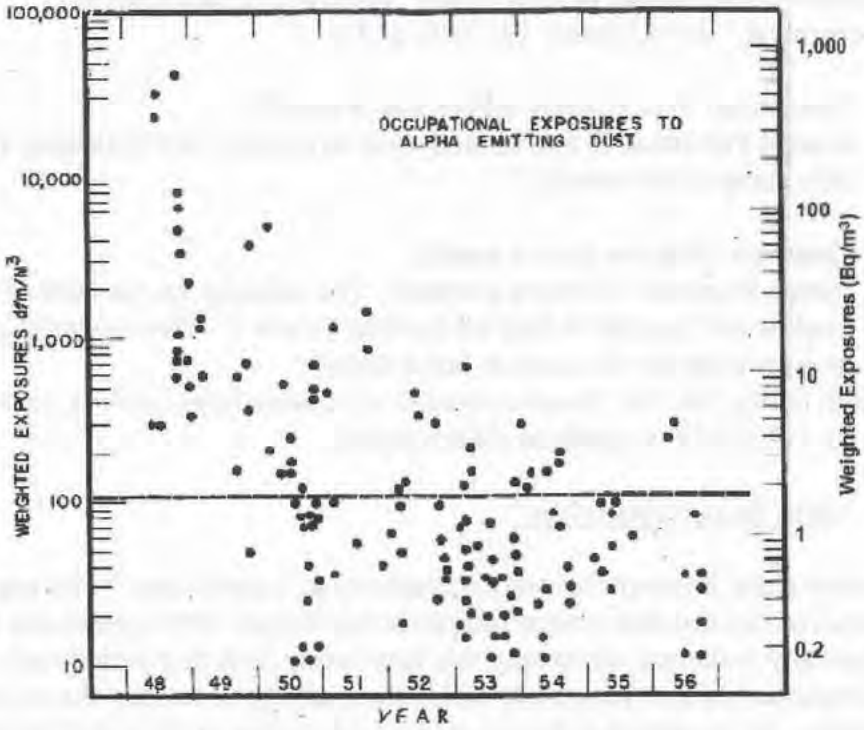

Figure 1. Data from Figure 1 of Christofano and Harris (1960) showing the decreasing trend in time-weighted average air concentrations of alpha-emitting dust.

From these data the panel notes: 1) that there are no measured data prior to 1948; 2) the measurements after 1948 show a 100 times reduction in the occupational exposures to alpha emitting dust due to major changes in the work processes and enforcement of safety standards; and 3) during the period of high exposures (1948 and likely before) there is a variation in measured exposure values of 100 times. Hence the review panel believes it is simply incorrect, and also not supported with any reliable scientific data, for NIOSH to claim that there is "… **significant amount of air sampling data relevant to…the Hooker Electrochemical site**" and that these data allow for a "…**bounding dose for the operational period**…" The large variations in what measured data exists, along with the sparse amount of such data, preclude using average values with such high levels of statistical uncertainties for realistic bounding. Thus, the panel does not accept that 2 out of

24 measurements represents **"sufficient information to estimate the maximum internal radiation dose that could have been incurred"** (emphasis added) for this operational period since the 2 values used for the pre-1949 period are "averages" for which the maximum values are not known.

These very large and unpredictable variations in the air concentrations of alpha-particle containing dust are supported by the statements made by former Hooker employee, (b) (6), in an interview conducted by NIOSH contractor, Oak Ridge Associated Universities (ORAU), on December 12, 2009, as follows (*see* "Data Capture Document Discovery and Review (SRDB) Ref ID:77828: Documented Communication with (b) (6) regarding Hooker Electrochemical," dated January 14, 2010, p. 3):

> **"Question: Was it dusty where you worked?**
> (b) (6): It was so dusty that he couldn't see sometimes (when they dumped the barrels)."
>
> **Question: Did you have a mask?**
> (b) (6): He had a gas mask. The cartridge on the front of the mask would get full of dust but he didn't know it. But he would get a new cartridge for the mask at lunch time."

It is worth noting that (b) (6) worked at Hooker from 1944-45, which is within the 1943 to 1948 operational time period.

(d) "data from related sites":

The review panel believes that any comparisons to "related sites" with regard to measured radioactive dust concentrations during the pre-1949 operational period are essentially anecdotal, since only two data points from that period were applied to the evaluation of the Hooker site without any ability to validate the results. Nonetheless, we do note that there is evidence that prior to 1949, the "related sites" - Electro Metallurgical Corporation (hereafter "Electro-Met"), Mallinckrodt, and Fernald - had very significant Uranium dust exposures that could not be accurately assessed. Some evidence is set out below.

1) With respect to Electro-Met, a data capture document, which included a report on "Dust Hazards at Electrometallurgical Company," dated June 18, 1948 (SRDB Ref ID: 8917), states as follows:

> "If no respirators were worn different groups would inhale from 2 to 25 times the preferred limit of uranium bearing dusts."

The NIOSH Evaluation Report for Electro-Met ("SEC Petition Evaluation Report: Petition SEC-00136, Report Rev. # 1, 01/31/2012") also states (p. 21):

> "The primary source of internal radiological exposure resulting from Electro Met operations was inhalation and/or ingestion of

> uranium metal or uranium tetrafluroide. The hazards represented from uranium-bearing dust in the air were well documented, particularly in the years preceding 1948, with exposures greater than 500 times the tolerance level of the day being routinely measured (Dust sample Results, Aug 1949)."

In addition, in the DHHS Designation related to a class of employees from the Electro Met site ("DHHS Designation of Additional Members of the Special Exposure Cohort Under the Energy Employees Occupational Illness Compensation Act of 2000: Designating a Class of Employees from Electro Metallurgical Site, Niagara Falls, New York," May 11, 2012), NIOSH determined that (p. 3):

> "...neither the bioassay nor the early limited air sampling data are sufficient to bound the dose at Electro Metallurgical for the August 13, 1942 through December 31, 1947 portion of the period under evaluation. Based on health improvements described as occurring in late 1947, the internal dose related data collected after 1947 cannot be extrapolated to exposures occurring prior to 1948 at Electro Metallurgical" (emphasis added).

2) With respect to Mallinckrodt, the NIOSH Evaluation Report completed for this site ("SEC Petition Evaluation Report: SEC-00012-2, Report Rev. #Draft 2"), states as follows (p. 36):

> "This evaluation has attempted to address in reasonable detail the scientific and technical matters concerning the feasibility of completing dose reconstructions. NIOSH has also come to a determination concerning the extent to which the documentation concerning data integrity casts excessive doubt on the validity of data available for dose reconstruction. NIOSH has determined that it cannot provide reasonable assurance of validity for dose reconstructions involving internal exposures of radiological dusts during the 1946-1948 period, which would include all employees working during this time period, because all employees had potential exposure to such dust" (emphasis added).

3) Finally, regarding Fernald, all of the Fernald site data used in the Hooker Evaluation Report that are given in Table 6-3 are measurements dated from 1956 or later. Furthermore, unlike the operational conditions at Hooker, the NIOSH Evaluation Report for Fernald ("SEC Petition Evaluation Report: Petition SEC-00046, Report Rev # FINAL, 10-25-06") states that, for all the Fernald data (p. 44):

> "Routine air sampling was used in all plants and operational processing areas to evaluate internal exposure potential via

> inhalation and served as the primary means of controlling intakes. This sampling was performed over the entire operational period evaluated in this report, from the start of FMPC [Feed Materials Production Center, in Fernald Ohio] operations through 1989."

Notwithstanding those later dates and stricter operational standards, all of the air monitoring average measurements from 1956 through 1958 set out in Table 6-3 of the Hooker Evaluation Report (*see* pp. 19 and 20) are still above the "tolerance"[1] value of 70 dpm/m^3 by factors that range as high as 11.8 times.

In summary, concerning the **"data from related sites,"** the review panel finds that 100% of the air sampling data used in the Hooker Evaluation Report were from surrogate sites, and only 2 of those 24 surrogate measurements (as set out in Tables 6-1, 6-2 and 6-3 in the Hooker Evaluation Report) were within the earlier 1943 to 1948 operational time period. The remaining 22 measurements came from the post-1948 time period for which the historical data (as set out in Figure 1 above) correlates with the major improvements in processes and procedures that were undertaken, in order to reduce the earlier high levels of radioactive dust air concentrations. Additionally, the review panel notes that the 2 measured values prior to 1949 (154 and 456 dpm/m^3) were 2.2 and 6.5 times above "tolerance" levels (Hooker Evaluation Report, p. 19, citing SRDB Ref ID: 9340, p. 4) of that era (later reduced), when the standards were less stringent. In fact, these values represented averages, without known variation or maximum values that simply do not allow for any precise or accurate scientific bounding of these very large exposures to the alpha particle emitting Uranium slag dust. Thus, the review panel concludes that Findings 2 and 3 are based on highly questionable data from different sites and different time periods and, thus, represent "substantial factual errors" for the context in which they were used.

4. NIOSH reviewed and assessed the available airborne radioactivity and source term data against the methodology provided in Battelle-TBD-6001 Appendix AA, and NIOSH believes that internal dose during both the operational and residual periods can be bounded using the methodology defined in Battelle TBD- 6001 Appendix AA.

The review panel notes again, as in Findings 2 and 3 above, that data referred to in the Hooker Evaluation Report and the Hooker TBD was 100% surrogate data from non-Hooker sites, and was collected during or after 1948. Therefore, as shown in Figure 1 above, it cannot be claimed to be either comparable or "bounding" for the earlier operational period of time, specifically January 1, 1943 – December 31, 1948. The review panel asserts that this finding is based on "substantial factual errors."

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[1] "NIOSH has determined from the limited air sampling data available that alpha-emitting dust concentrations from 1943-1947 were high by 1958 standards; that concentrations of 50 to 100 times the MAC level of 70 dpm/m^3 occurred; ("SEC Petition Report: Petition SEC-00012-1 [Mallinckrodt], Report Rev # Draft, 07-21-2004," p. 18. *See also,* Christofano, Emil and Harris, William, "The Industrial Hygiene of Uranium Refining," *Archives of Environmental Health*, Nov. 1960, (Vol 1, pp 438-460), SRDB Ref ID: 15774, p.24

5. **There are no available data on contamination levels or source term quantities left at the Hooker Electrochemical facility after the cessation of operations. A bounding assessment of external photon and beta dose is presented in Battelle-TBD-6001 Appendix AA, based on the assignment of dose from surface contamination present during scrap recovery operations, with no adjustment for cessation of processing activities. That is, the dose assigned is the same as would be from exposure to surface contamination at an operating scrap recovery facility.**

The review panel agrees with this Finding, as it addresses the "quantities left at the Hooker Electrochemical facility after the cessation of operations" (i.e., the residual period, January 1, 1949 to December 31, 1976), and it also addresses only "external photon and beta doses."

6. **NIOSH reviewed and assessed the available source term and external monitoring data against the methodology provided in Battelle-TBD-6001 Appendix AA. NIOSH determined that the calculated external dose assigned in Battelle-TBD-6001 Appendix AA can be used to bound exposures at the Hooker Electrochemical site during the residual period. With the removal of the source material at the onset of the residual contamination period, the likely exposure scenario during the post-operations period would be consistent with the scenario evaluated in Battelle-TBD- 6001 Appendix AA.**

The review panel agrees with this Finding as it addresses only external doses during the residual period.

7. **Although no specific information regarding occupational medical dose has been identified specific to Hooker Electrochemical Corporation, the dose associated with medical X-ray exams, if required as a condition of employment, can be assessed using the methodology defined in ORAUT-OTIB- 0006. NIOSH believes that this methodology supports its ability to bound the occupational medical X-ray doses for the Hooker Electrochemical evaluated class.**

The review panel agrees with this Finding since it addresses radiation exposures associated with medical X-ray exams.

8. **NIOSH determined that the reconstruction of internal and external doses is feasible for the operational period from January 1, 1943, through December 31, 1948, and for the residual period from January 1, 1949, to December 31, 1976.**

The review panel does not agree with this Finding since it is based on "factually inaccurate" information, specifically for internal doses during the operational period of January 1, 1943, through December 31, 1948. As previously stated, the surrogate sites and the time periods from which the surrogate data were collected are not comparable to

the Hooker site's environmental working conditions during the 1943-1948 time period. However, we do agree with this Finding with respect to the residual period.

9. **NIOSH determined that it has access to sufficient Hooker Electrochemical Corporation information to either (1) estimate the maximum internal and external radiation dose for every type of cancer for which radiation doses are reconstructed that could have been incurred under plausible circumstances by any member of the evaluated class; or (2) estimate the internal and external radiation doses to members of the evaluated class more precisely than a maximum dose estimate.**

The review panel finds that this overall Finding is "factually inaccurate," as stated in our analysis of Findings 2, 3 and 4 above. As we explained above, the surrogate data used for internal exposure for the earlier period of January 1, 1943 through December 31, 1948, are not representative and not valid "**to either (1) estimate the maximum internal and external radiation dose for every type of cancer for which radiation doses are reconstructed that could have been incurred under plausible circumstances by any member of the evaluated class**; or **(2) estimate the internal and external radiation doses to members of the evaluated class more precisely than a maximum dose estimate.**"

10. **The Board concurred with the NIOSH findings.**

Following its deliberations, the Board voted on a motion to accept the Work Group's recommendation and NIOSH's finding that dose reconstruction is feasible for both the operational and the residual radiation periods (i.e., to recommend not adding the class to the SEC). The motion passed with 10 members voting in favor of denying the addition of a class (Anderson, Field, Griffon, Lockey, Melius, Munn, Poston, Richardson, Roessler, and Ziemer). Five members voted against the motion to deny the class (Beach, Clawson, Gibson, Lemen and Schofield).

Thus, although the majority of the Board concurred with the NIOSH findings, the review panel believes that the Board's multiple discussions and final vote were based upon inaccurate and misleading surrogate data with which to estimate internal doses for workers at Hooker during the January 1, 1943 – December 31, 1948, period of time.

Section B. Review of Board Surrogate Data Policy and its Application to Hooker

In our assessment of whether the petitioner's arguments and challenges regarding the use of surrogate data have merit, we reviewed the Board Surrogate Data Policy (this document is also included in its entirety in Appendix III). The relevance to the review panel of this surrogate data policy derives from the fact that the Board adopted these criteria, as developed by the Board Work Group on the Use of Surrogate Data, for its evaluation of the use of surrogate data at Hooker. In fact, the specific use of surrogate data at Hooker, as evaluated against the criteria, was also approved by the Board at its December 07, 2011, meeting. Although the May 14, 2010, document indicates that the

document is a final draft from the Board's working group, we understand from NIOSH that it is, in fact, the final version of the surrogate data criteria adopted and used by the Board. The title of the document was still listed as a draft after the Board adopted the document as its own.

The review panel wants to emphasize that surrogate criteria were being revised during the entire time that the Hooker SEC petition was being reviewed and evaluated, and, in our view, it was essential that we understood which criteria the Board eventually used in order for us to properly assess the appeal.[2]

Given the centrality of the issue of the appropriate application of surrogate data in the review panel's conclusion regarding the "factual accuracy of the information supporting the final decision" (42CFR§ 83.18(b)), we have set out below the Board Surrogate Data Policy in its entirety and have included our analysis following each point. Please note that the bold text in the sections below represent the exact wording used in the original document.

FINAL DRAFT

CRITERIA FOR THE USE OF SURROGATE DATA

Prepared by the ABRWH Work Group on Use of Surrogate Data

May 14, 2010

For the purposes of this report, the term "surrogate data" will refer to the use of exposure data from one site for individual dose reconstruction for workers at another site. In reviewing this topic for the Work Group SC&A distinguished between "Type I" surrogate data use (as described above) and "Type II" surrogate data where these data are used as part of a scientific effort to develop parameters for use in dose reconstruction activity calculations rather than as a substitute for the lack of adequate data needed for dose reconstruction.

"Surrogate data" are used in the NIOSH dose reconstruction program because of the lack of complete and comprehensive exposure monitoring records for many of the workers at the sites covered by the program (SC&A September 2007). It is more often considered for dose reconstruction during the early years of some DOE and AWE facilities because of the lack of reliable monitoring methods, the urgency of developing production capabilities, and other reasons.

This report will review a number of criteria that need to be considered in determining whether the specific use of surrogate data for individual dose

[2] We also reviewed the Implementation Guideline issued by NIOSH in 2008 related to the use of surrogate data (*"The Use of Data from Other Facilities in the Completion of Dose Reconstructions Under the Energy Employees Occupational Illness Compensation Program Act,"* Document No. OCAS-IG-004, August 21, 2008). It is unclear if this NIOSH policy was used in its Evaluation Report or recommendation to the Secretary. However, it is clear that the Board adopted and used the May14, 2010, document in evaluating the use of surrogate data at Hooker. The criteria in the two policies are essentially the same, with the May 14, 2010, document further clarifying the earlier NIOSH policy on surrogacy.

reconstruction is scientifically sound and appropriate for that particular application.

1. **Hierarchy of Data: It should be assumed that the usual hierarchy of data would apply to dose reconstructions for that site ((1) Individual worker monitoring data followed by (2) co-worker data followed by (3) workplace monitoring data such as area sampling followed by (4) process and source term data.) This hierarchy should be considered when evaluating the potential use of (5) surrogate data. Surrogate data should only be used to replace data if the surrogate data have some distinct advantages over the available data and then only after the appropriate adjustments have been made to reflect the uncertainty inherent in this substitution.**
(Numbers added to original text for clarity.)

The review panel notes that surrogate data is 5th on a list of 5 in the preferred hierarchy of data to be used in dose reconstruction and, in the case of Hooker, it was the only method used for internal dose estimation.

2. **Exclusivity Constraints: In many cases, surrogate data are used to supplement the available monitoring data from a site. In those cases, the surrogate data is usually used to justify certain assumptions about the distribution or range of possible exposures or assumptions about the source terms. In those cases, no special justification is necessary beyond the usual scientific evaluation. This is akin to the Type II use described above. However, in other situations, there are no or very little monitoring data available. In those cases, the use of the surrogate data as the basis for individual dose reconstruction would need to be stringently justified. This judgment needs to take into account not only the amount of surrogate data being relied on relative to data from the site but also the quality and completeness of that surrogate data.** (emphasis added)

The review panel believes that the use of surrogate data for Hooker fails on all 3 counts of "stringent justification:"

AMOUNT: Surrogate data accounts for 100% of the data used for internal dose reconstruction, with no Hooker data available to corroborate. Additionally, even where surrogate data was used, most of it comes from one surrogate site, Fernald, and was from a time period later than the operational period at Hooker.

QUALITY: The Fernald data, which accounts for the major share of the surrogate data used to reconstruct doses at Hooker, is from the post-1949 period. After 1949, major improvements in the uranium refining processes were made to reduce the hazard from uranium dust, including more stringent enforcement of air quality standards. In addition, much of the data pre-1948, sparse as it is, has very large variations and uncertainties, which challenges the quality of such data. This calls into serious question any attempts

at statistical analysis and reasonable scientific conclusions. (See Figure 1 and related discussion in Section A. above).

COMPLETENESS: The surrogate data used for Hooker are not complete in that there are no data before 1948; and the data from after 1948 are fragmentary in description and method, and they largely derive from a period after 1949 when they no longer represent comparable processes and procedures.

3. **Site or Process Similarities: One of the key criteria for judging the appropriateness of the use of surrogate data would be the similarities between the site (or sites) where the data were generated and the site where the surrogate data are being utilized. The application of any surrogate data to an individual dose reconstruction at a site should include a careful review of the rationale for utilizing that source of data. Factors that could be considered include, but are not limited to, similarity of the production processes, presence or absence of conditions that might affect exposure, and monitoring methods employed at the site(s). The potential availability of other sources of surrogate data needs to be considered and the selection of the surrogate data used for dose reconstruction justified. Some of the questions to be considered where appropriate are:**

   - **Are there other sources of surrogate data that were not used?**
   - **Do these other potential sources contradict or undermine the application of the data from the selected site?**
   - **Are there adequate data characterizing the site being used that would help support its application to other sites?**
   - **Do the surrogate data reflect the type of operations and work practices in use at the facilities in question?**

   Surrogate data should not be used if the equivalence of working conditions, source terms, and processes of the surrogate facility to the one for which dose reconstructions are being done cannot be established with reasonable scientific or technical certainty as outlined here. (emphasis added for use below))

The review panel notes that it is highly unlikely that the surrogate data for internal exposures accurately reflects the Hooker site, since the processes were just being developed in 1943-44. This is supported by testimony from a former Hooker worker about the on-the-job creation of processes (*see* "Data Capture Document Discovery and Review: Documented Communication with (b) (6) regarding Hooker Electrochemical," dated January 14, 2010, p. 2) . The earlier hazardous environment at Hooker is further supported by statements such as the "dust" was so thick that the "gas mask cartridge had to be changed at lunch" (Ibid at p. 3). These process details are not found with the surrogate site characterizations and they argue for potentially much more severe conditions at Hooker than the surrogate sites. Additionally, a "process" which entailed opening barrels of slag and dumping the material through a sizing screen onto a conveyor belt (*see* Hooker Evaluation Report p. 13) is by its very nature idiosyncratic and subject to very wide variations in the way it is carried out and the resulting dust dispersal.

The review panel took special note of the major documented changes to the work process post-1949 as reflected in statements in various references (*see, e.g.*, Site Profiles, p. 52: "Clearly, the mean concentration drops rapidly from 1948 through 1950, from 7,400 dpm/m^3 to 350 dpm/m^3 (a factor of over 20), as engineered workplace controls were installed at the dustiest locations. Alpha-emitting dust concentrations for the years 1953-1957 are roughly 100 times lower than they were in 1948."; and NIOSH Evaluation Report for Electro-Met ("SEC Petition Evaluation Report: Petition SEC-00136, Report Rev. # 0, 04/21/2009"), p. 17) states: " The hazards represented from uranium –bearing dust in the air were well documented, particularly in the years preceding 1948, with exposures greater than 500 times the tolerance level of the day being routinely measured."; and the data in Figure 1. (above) from Christofano (1960), where it is especially noted that there were major improvements in the operational processes post-1948. This calls into serious concern whether **"surrogate data reflect the type of operations and work practices in use at the facilities in question"** and lead the panel to conclude that **"surrogate data should not be used"** since **"the equivalence of working conditions, source terms, and processes of the surrogate facility to the one for which dose reconstructions are being done cannot be established with reasonable scientific or technical certainty"** (see underline above) for the Hooker operational period in the mid 1940's with data that is almost exclusively post- 1948. The Christofano paper describes the working conditions before and after the 1948-1950 time period, and provides a wealth of data, all of which has been collected in later years.

4. **<u>Temporal Considerations</u>: Consideration also needs to be given to the period in question, since working conditions and processes varied in different periods. Surrogate data should belong in the same general period as the period for which doses are sought to be reconstructed unless it can be demonstrated that the working conditions, procedures, monitoring methods, and (perhaps) legal requirements were comparable to the period in question.**

The review panel does not consider the data from selected surrogate sites to meet this criterion. As in 3. above we again note that there are multiple references to the fact that process conditions in the early 1940's were substantially worse than those after 1948. For example, Christofano (1960) and the NIOSH Evaluation Report for the Electro Metallurgical Corporation ("SEC Petition Evaluation Report: Petition SEC-00136, Report Rev. # 1, 01/31/2012") states (p. 21):

> "The primary source of internal radiological exposure resulting from ElectroMet operations was inhalation and/or ingestion of uranium metal or uranium tetrafluroide. The hazards represented from uranium-bearing dust in the air were well documented, particularly in the years preceding 1948, with exposures greater than 500 times the tolerance level of the day being routinely measured (Dust sample Results, Aug 1949."

In addition, with respect to our conclusions regarding temporality, see also our additional comments above under Findings 2 and 3 in Section A.

5. **Plausibility: The manner in which the surrogate data are to be used must be "plausible" with regard to the reasonableness of the assumptions made. The plausibility determination should address issues of:**

- **Scientific plausibility. Are the assumed models (e.g., bioassay, concentration gradients) scientifically appropriate? Have the models been validated (where feasible) using actual monitoring data collected in a similar situation?**
- **Workplace plausibility. Are the assumed processes and procedures (including monitoring) plausible for the facility in question? Have all of the factors that could significantly impact exposure been taken into account? Is adequate information available about the facility in order to be able to make a fair assessment?**

With respect to "scientific plausibility," the review panel notes that there is no evidence that the models have been validated for the Hooker case since no measured data exist for Hooker by which such validation may occur. In addition, the values used pre-1949 are averages for which the maximum is unknown so it is not scientifically plausible to use them to place upper bounds on the doses.

Regarding "workplace plausibility," as stated above, the surrogate workplaces used for Hooker - Electro-Met, Mallinckrodt, and Fernald - were demonstrably different in time and processes to such an extent that any remaining similarities are of questionable scientific value for determining Hooker processes and internal exposures.

Claimants will have significant concerns about the credibility of using surrogate data. To the extent that the use of surrogate data for individual dose reconstruction can be avoided, this will help to minimize concerns about the credibility of the individual dose reconstruction process. This is especially important given that the use of surrogate data often relies on information on the operations and characteristics of industrial facilities operated many years ago. Many of the people knowledgable about the facility have died, and records are usually incomplete (which is the reason for needing to use surrogate data in the first place). Given the difficulties in obtaining the comprehensive information needed for validating the use of surrogate data for individual dose reconstruction and the inherent concerns about its use by claimants, the Work Group recommends that the use of surrogate data be limited to the circumstances where other approaches are not feasible and then only after the rigorous review of the proposed use to determine if the above criteria have been fully met.

The review panel concludes that it is demonstrable, if not self-evident, that these criteria have not been fully met regarding the use of surrogate data for internal exposures to employees of Hooker during the operational period from 1943- 1948.[3]

[3] In performing this review, the review panel took note of a working document prepared by David Allen (a NIOSH contractor), dated April 2011 – updated May 2011, and titled "Surrogate Data Evaluation – Hooker Electrochemical Company." While we acknowledge the views expressed in that paper, we note that our analysis is in almost complete disagreement with the conclusions of that evaluation.

Section C. Review Panel's Analysis of 76 Points Raised on Appeal

As explained on page 2 of this report, the petitioner's appeal consists of a total of 76 separate points identified in the February 29, 2012, appeal letter (AL), the attachment to the appeal letter (AX), and the July 31, 2012, addendum to the appeal (AD). In this section, these 76 points have been categorized and grouped into several common subject areas, although some of the points seem to include overlapping and, at times, difficult to characterize issues. The review panel has done its best to address each of the appeal points. We did this to ensure that we were in accordance with our responsibility to respond to all of the petitioner's arguments and challenges, in addition to that of the surrogacy-related issues. For each category, we have included a reference to where the issue was raised in petitioner's appeal documents, our analysis, and conclusion.

Surrogacy Issue
The use of surrogate data is the major part of the Appeal, and is raised directly or indirectly in the following specific challenges
AL-3, 4, 7-10, 12, AX-1-4, and AD-2, 6, 9, 10, 12, 14, 17, 19-26, 28, 30-42, 45-46, 48-60:

The review panel's opinions and recommendations with respect to surrogate sites and surrogate data are addressed fully in earlier Sections A and B of this report, and are not further discussed here. The review panel considers this issue to have significant merit, and concludes that this issue points to substantial factual error in the final decision to deny SEC status to employees of Hooker during the operational period from 1943- 1949.

The 180-day Rule
AL-1, and AD-8:

The petitioner alleges that "NIOSH passed the 180-day requirement for evaluation" (AL, p. 1). The requirement to which she is referring is set out in both statute (*see* 42 U.S.C. § 7384q(c)(1)) and in the EEOICPA SEC regulations at 42 CFR 83.13(e), and indicates that NIOSH must submit its recommendation and evaluation report to the Board within 180 calendar days of receiving the petition. We understand that an Interim Final Rule amending the procedures for designating a class to the SEC published on December 22, 2005 (70 Fed. Reg. 75949), as well as the references in § 83.13(e) to § 83.11 (which sets out the procedures for qualifying a petition), make clear that the 180 days is counted from when a petition qualifies for evaluation, not from when it is first received by NIOSH.

The review panel believes that the petitioner is correct that NIOSH failed to "...submit a report of its evaluation findings to the Board and to the petitioner(s)" (42 CFR § 83.13(d) and "within 180 calendar days of the receipt of the petition by NIOSH" (42 CFR § 83.13(e). The petition was received March 6, 2009, was qualified on October 16, 2009, and the SEC evaluation report was submitted to the Board May 3, 2010.

However, the review panel does not feel that the missed deadline qualifies as a substantial error in the procedures of 42 CFR part 83. There is no penalty provision specified in the regulations for missing the deadline, and considering the complexity of the petition and the fact that the delay was only a few weeks, the review panel did not believe the missed deadline had a substantive effect on the outcome of the petition for SEC status.

Radiation Sources
AD-3, 4, and 27:

We interpret several of the petitioner's challenges to be about the appropriate consideration of external source radiation and medical x-rays. The panel does not consider external x-rays to be a significant contributor to cancer risk relative to the uranium dust exposure that occurred at Hooker, where internal exposure to alpha particle irradiation would be the predominant radiologic hazard. As indicated in Section 7.2 of the Hooker Evaluation Report, "The principal source of internal radiation doses for members of the class under evaluation was inhalation of uranium-bearing dust that was generated during the processing of uranium-bearing slag material (C-2 and C-2 concentrate)" (p. 24). Therefore, the review panel does not judge challenges based on external radiation sources to be significant relative to the determination to deny SEC status in this instance, and does not believe that petitioner's challenges related to radiation sources constitute a substantial factual error.

Freedom of Information Act Requests
AL-2, 5, 6, and AD-43, 44:

We understand that the petitioner submitted two separate requests under the Freedom of Information Act (FOIA) for documents related to the Hooker SEC. The petitioner states that at the time of the determination by the DHHS Secretary, she had not received all FOIA requested material and that she was questioned as to what material she was seeking. However, after the petitioner received documents in response to her first FOIA request, in which she was essentially seeking the package of materials sent to the Secretary in order to make a determination, she was allowed to file an addendum to this appeal to include information made available to her as part of the FOIA request.

In petitioner's second FOIA request, she was seeking all emails pertaining to Hooker. In her appeal, she seems to be alleging that, had she had these emails, she could have provided further information to the Board in her favor, the Board may have voted differently and, thus, the Board should have waited to vote until she received the FOIA requested information. The transcript of the Board's December 7, 2011, meeting in Tampa, Florida, at which the final vote was taken, shows that the Board addressed the fact that petitioner had not yet received a response to this FOIA request and concluded that they did not want to delay the vote to wait for a broad data request, rather than for technical documents. In fact, the Board noted that the second FOIA request "was a rather generic request for all email traffic of which now NIOSH has identified some 4,000 documents" (Transcript, December 7, 2011, Advisory Board meeting in Tampa Florida, p.123) and "is unlikely to uncover a great deal of new, or any new technical information"

(Ibid at p.124) and that they "have never delayed it for sort of a broad data request, particularly one dealing with emails and other information, not for technical documents" (Ibid at p.163). The review panel does not consider this action by the Board to rise to the level of a substantial error in the procedures of 42 CFR part 83. Furthermore, with respect to DHHS's delay in providing the FOIA response, the EEOICPA SEC regulations are silent with regard to FOIA, so it is not possible for this delay to constitute procedural error under 42 CFR part 83.

Advisory Board Process Issues
AX-2, and AD-41, 43, 51, 52, 54, 57, 59-60:

The Petitioner's general challenge is that the Board "was too much in a hurry to deny Hooker" workers eligibility for SEC status (AX-2). She attempts to reinforce this perception many times. The review panel feels that the petitioner's concern may have merit. Upon extensive review of the transcripts of the Board (and aware that transcripts may be interpreted out of context), we found numerous examples where members of the Board, and the working groups, asked questions regarding surrogate data use which appear to have never been satisfactorily answered. Often these questions were answered as a deferral to a working group, or as a previously resolved issue. In reviewing these transcripts, the review panel never found specific answers to these critical questions. Examples concerning the seemingly rushed decision making process are included in Appendix IV and some excerpts of these are cited below.

Sometimes the answers to questions appeared to be misleading or incorrect, such as the dialogue at the December 7, 2011, Board meeting in Tampa, Florida, between Board Member David Richardson and Dr. John Mauro from Sanford Cohen & Associates (SC&A), a Board contractor, in which Member Richardson made the incorrect statement that "the process was relatively consistent over time and so despite the fact that samples are separated by a period of 15 years there's a sense that there weren't process changes." (Ibid at p. 139). (For more lengthy excerpts from this dialogue, as well as other discussions from this meeting described below, *see* Appendix IV, "Excerpts from transcript of December 7, 2011, Board Meeting in Tampa, Florida," p.138, line 10 to p. 141, line 16.) As explained in Sections A and B above, the process of uranium refining was not constant over time, and changed dramatically during the 1948-1949 period of time due to concerns about the hazardous uranium dust levels.

Another example of misleading or incorrect statements made during Board meetings can be found in the dialogue between Dr. Jim Neton, from the Division of Compensation Analysis and Support, NIOSH, and Board Chairman James Melius, during that same December 7, 2011, meeting, where the fact that Hooker operated earlier than 1947 was not clarified. This discussion includes Dr. Neton's false question or statement:

> "... that the surrogate data used for the natural right dumping operations collected between 1947 and '59. So all the surrogate data was in that time frame. And I forget the years now that Hooker is under review for but it's in that same." (Ibid at p. 141)

The implication of this discussion was that Hooker operated only during that period. The fact is that Hooker began operations in January 1, 1943.

Finally, we see evidence of doubt in this same meeting just before the final vote, when Board Member Bradley Clawson, in a discussion with Board Member Henry Anderson, sums up his concerns about the use of surrogate data (Ibid at p.152):

> "I guess, you know I realize we have to use surrogate data and we've had high debates over surrogate data. But the thing that bothers me about Hooker a little bit is how much data do you have? According to the paperwork there, zero. Is there any air sampling data from them or bioassay from Hooker? So it's zippo. And I understand, I just really have a hard time using surrogate data from a site, three sites actually that are in question, in my mind in question. I just, that to me is using, you know, you can use as much information as you want but if it's no good. Just wondering."

These are a few examples from the Board transcripts of apparently unanswered questions or statements, some of which occurred in the meeting during which the vote to deny SEC status was taken. This raises the possibility that if these questions by Board members had been correctly answered, the final vote might have been different. In spite of these incomplete answers, the review panel cannot conclude, on the basis of the evidence we were given, that the overall process with which the findings were reached constituted a substantial procedural error as per 42 CFR part 83. The processes with which the meetings were conducted were, in general, procedurally correct. Although some individual members raised relevant questions, which the review panel felt were never completely answered, the final decision was a collective Board decision. However, we do note that if these omissions conceptually affected the Board's vote, which in turn impacted the Secretary's final determination, then this could rise to the level of both a substantial factual and procedural error.

Outside of the Scope of the Panel's Review
AL-11, and AD-1, 5, 7, 11, 13, 15, 16, 18, 29, 47, 52, 53, 56:

The petitioner also raises a wide variety of administrative and miscellaneous issues throughout the appeal. These challenges include, but are not at all limited to, issues relating the Ombudsman, the Ten Year Review, updating the *Federal Register*, unrelated sites, and employee interviews. The review panel believes that these points raised by the petitioner are outside the scope of the panel's review.[4] Accordingly, although we have

[4] SEC regulations at 42 CFR § 83.18(a) make clear that proper challenges must "include evidence that the final decision relies on a record of either substantial factual errors or substantial errors in the implementation of the procedures of this part." In addition, challenges "may not introduce new information or documentation concerning the petition or the NIOSH or Board evaluation(s) that was not submitted or presented by the petitioner(s) or others to NIOSH or to the Board prior to the Board's issuing its recommendations under § 83.15." Thus, to the extent that the petitioner in this case included information in the appeal that was not evidence of a substantial factual or procedural error, or any new information that was not previously submitted to NIOSH or to the Board, we believe it is outside the scope of our review.

addressed these administrative issues insofar as we have carefully considered them and analyzed them, we determined that they are outside of our charge, and did not reach a conclusion with respect to whether they have merit.

Overall Conclusion:

Based on the documentation provided to the review panel in this case, we conclude that petitioner's challenge has merit in regard to the application of surrogate data to evaluate the eligibility for SEC status of the subset of the Hooker workers employed during the operational period from January 1, 1943 through December 31, 1948. We unanimously find that the use of surrogate data to assess internal radiation doses to the Hooker workers during the operational period from January 1, 1943, through December 31, 1948, does not meet the standard of reasonable application of scientific methods, nor does it meet the standards for use of such surrogate data as agreed to by the Board itself. Consequently we feel that the use of surrogate data in this case resulted in a "substantial factual error." We conclude that this error invalidates the determination that exposure could be accurately reconstructed for the time period 1943 through 1948 using only surrogate data. Thus, we recommend reversal of the portion of the Secretary's February 2, 2012, determination that denied SEC status to "All employees who worked in any location at the Hooker Electrochemical Corporation during the operational period from January 1, 1943 through December 31, 1948."

However, because of the different timeframe and very different working conditions along with a greater amount of measured data that existed after January 1, 1949, we do accept the basis for reconstruction of doses for the Hooker workers in the "residual period from January 1, 1949, to December 31, 1976." We conclude that the petitioner's challenge with respect to this subset of workers does not have merit and we therefore recommend that you uphold the portion of the Secretary's February 2, 2012, determination that denied SEC status to workers at Hooker during the residual period from January 1, 1949, to December 31, 1976.

Sincerely,

[Signature on File]

Orhan H. Suleiman, M.S., PhD, FAAPM, FHPS
Senior Science Policy Advisor
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[redacted]

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[redacted]

James A. Deye, Ph.D.
Director, Radiation Research Program (RRP)
Division of Cancer Treatment and Diagnosis (DCTD)
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Attachments:
Appendix I - Petitioner's Appeal Letter with attachment, dated February 29, 2012
Appendix II - Petitioner's Addendum to Her Appeal Letter, dated July 31, 2012
Appendix III – Board Surrogate Data Policy, dated May 14, 2010
Appendix IV – Board Transcript Excerpts

APPENDIX I:
Petitioner's Appeal Letter with Attachment

(b) (6)

Dawn L. Smalls
Executive Secretary to the Department
of Health and Human Services
200 Independence Ave SW #603H
Washington, DC 20201

Re: SEC Tracking Number SEC00141

Dear Ms. Smalls:

Please accept the following as the requirements set up for filing a request for an Administrative Review by the three-person panel in regard to the Secretary's agreement with the Advisory Board's decision to deny granting an SEC status for all employees in all locations of Hooker Electrochemical Corp. headquartered in Niagara Falls, NY.

We, the petitioners, list the following arguments in favor of a reversal.

1. The SEC status rightfully should have been granted when NIOSH passed the 180-day requirement for evaluation. This rule is still on the books as evidenced by current SEC petitions under evaluation. Either the rule applies or it doesn't.

   WHY WAS HOOKER TREATED THIS WAY?

2. NIOSH has requested the FOIA in Atlanta to forward all material to the petitioner that was sent to the Secretary prior to her decision-making on Hooker. This has not been accomplished. Therefore, asking the petitioners to respond via this request for an Administative Review is not giving "due process".

   WHY IS HOOKER BEING TREATED THIS WAY?

3. *The Work Group on Hooker dealt within a program called TBD-6001 (Battelle) for a lengthy time making all determinations on so-called findings. Then after the petitioner pointed out some things in the evaluation of NIOSH's Evaluation, which had passed the 180-day requirement, suddenly the TBD was made a standalone and the Group was determined to use "surrogate data". They even changed the name of the group. In the past, companies such as Hooker, no longer in existence with no records were automatically granted the award as long as claimants did work for an atomic location and did become ill or died. This method should have still applied for Hooker.

   WHY WAS HOOKER TREATED THIS WAY?

*See Attachment

SEC Tracking Number SEC00141

Arguments Continued:

4. The use of "surrogate data" in dealing with compensatory programs is not viewed favorably even by all members of this Advisory Board. Yet the Work Group insisted on accepting it with the Hooker claim. NIOSH searched and found three companies that they thought did the same process as Hooker. These companies are Mallinckrodt, Electromet and Fernald. Only Mallinckrodt had been granted an SEC in the past and only because the Board felt that there were insufficient records and the Congress failed to act within the 30 day requirement. The other two were still being considered by other work groups when the Hooker Work Group made its decision to deny. Mallinckrodt is still in business and there were insufficient records but the Work Group and NIOSH saw fit to use it as "Surrogate Data" for Hooker which no longer exists. How can the Work Group be 100% certain that they can trust Mallinckrodt's procedures?

BREAKING NEWS: The Majority of the surrogate data used to reconstruct dose is from Fernald. The Chair of the Fernald Work Group stated that the Work Group cannot verify the accuracy of the air monitoring used for Hooker Chemical. Therefore, NIOSH cannot guarantee that the data they used from Fernald is accurate. Since this data cannot be verified as true air monitoring readings, it cannot be used to reconstruct dose.

In addition it should be noted that Fernald had even been cited by a court for improper handling of records in order to deceive.

BREAKING NEWS: NIOSH HAS REVERSED ITS DECISION ON ELECTROMET AND CLAIMS IT CANNOT DO "DOSE RECONSTRUCTION".

Please note that both of these announcements above were made just recently which is after the denial of the Hooker SEC petition. The Board was in too much of a hurry to deny.

The claim being made regarding the process used by these companies is that it is similar to Hooker. However, since the position taken is that it was both an inside and outside process, the petitioners disagree since they know it mainly as an inside job. No evidence has been given to indicate otherwise.

WHY IS HOOKER BEING TREATED THIS WAY?

SEC Tracking Number SEC00141

Arguments Continued:

5. Before the Board voted, the petitioner asked for more time since the request for information from FOIA made in August 2011 had not been received. This request was denied. They went ahead and voted denying the petition. It was not a unanimous decision. Considering NIOSH's "faux pas" on the 180-day requirement, the question again is,

   WHY WAS HOOKER TREATED THIS WAY?

6. The Federal Advocate, at the behest of the Chair of the Advisory Board, called the petitioner to find out what information was looked for from FOIA. This is denying the right of the petitioner to search for information. The petitioner objected to the Board about this cross examination and it demonstrates once again further proof of how much in a hurry the Board was to deny the petition.

   WHY WAS HOOKER TREATED THIS WAY?

7. There is still the question of the use of "surrogate data" in order to use dose reconstruction. Neither of these two procedures should have been used for Hooker since it no longer exists and there are no records.

   The Federal Advocate was involved in the creation of dose reconstruction and has been termed by petitioners as a "person of conflict of interests" and this also gives proof that NIOSH is bent on using this method no matter what. The use of "surrogate data" plays an important role for NIOSH in order to use "dose reconstruction". Once again, neither should be used in regard to Hooker since it no longer exists and there are no records.

   WHY WAS HOOKER TREATED THIS WAY?

8. *The Board has requested the EPA to further support their use of "surrogate data". This request was made and not answered before the vote. The petitioners have not been notified even yet if it has ever been answered. This information should have been requested long before and no vote taken until received. Again, further proof of the rush on the part of the Board to deny.

   WHY WAS HOOKER TREATED THIS WAY?

*See attachment

SEC Tracking Number SEC00141

Arguments Continued:

9. The Work Group and the Advisory Board have become so dependent on the use of "surrogate data" that they have become blinded by their own methods. Case in point, at one of the teleconferences that the petitioner was allowed to listen in on, one of the Board members questioned, "If we don't use surrogate data, what can we use? We use surrogate data everyday. I use it when I decide how I am going to prepare my zucchini. Ha, ha." Well, the answer is don't use it for companies that no longer exist and there are no records. The Board members should have realized that paying the awards would certainly be less expensive than all the "rigamarole" that these groups have expended and the fact that they have gone way beyond the original executive order or "act" signed by President Clinton to keep things simple and not to frustrate the petitioners. Surrogate data may be something to joke about by Board members but to the petitioners it has become a very serious issue.

WHY IS HOOKER BEING TREATED THIS WAY?

10. This panel is following the "rule of three". So such a rule does exist. Using Mallinckrodt alone does not serve the rule of three - why three companies and then go down to one? In the rule of three, selections are made of companies that are within close proximity to the company being analyzed. If not that close, then within the same state. This was not done with the Hooker claim. The only company that may have qualified in this designation would have been Electromet. However, Electromet has now been disqualified by NIOSH itself since it cannot do dose reconstruction. Again, proof of how much in a hurry the Board was to deny.

WHY WAS HOOKER TREATED THIS WAY?

11. The petitioners found that the role of the ombudsman did not serve them well after the initial stages. Filing for the SEC was encouraged by the ombudsman and assistance was given in the correct phrasing before filing. However, as time went on, it was more and more difficult to get ombudsman help. The reasons given were the overload of cases, phone messages, e-mails, etc. to handle. Also, that this "act" doesn't allow more help. The ombudsman did make a request of the Federal Advocate to have a phone conference with the petitioner, but it never happened. Instead the Federal Advocate told the ombudsman that he could well understand how laymen found it difficult to understand all the scientific jargon. This is further proof of not keeping it simple and frustrating the petitioners.

WHY WAS HOOKER TREATED THIS WAY?

SEC Tracking Number SEC00141

Arguments Continued:

12. Included in this process is the Work Group's use of SC & A to review NIOSH's findings. Upon advice from the ombudsman, the petitioner requested the input of SC & A. This was a mistake since SC & A really did not do a fair job. Even when they found differences, they conceded to NIOSH's findings saying because it was more favorable to the claimant. When questioned by the petitioner how was it more favorable - SEC or dose reconstruction? The SC & A response was dose reconstruction. The truth is SEC is more favorable.

    As turn of events will have it, the petitioners suggest that this group be investigated for allowing the atmosphere of "making book" on its employees to exist in the work place.

    WHY WAS HOOKER TREATED THIS WAY?

We, the petitioners, therefore, request that the Board's denial be rejected. We also request that the three-person panel deem it necessary for the information from all of the FOIA locations that have not so far complied with the requests from the petitioners and NIOSH be made available to the petitioners without delay. Also that the appeal to FOIA be speeded up. This request definitely spells out that the three-person panel set a "moratorium" on the SEC status for Hooker and that Congress be advised of same in order to allow the petitioners access to the FOIA material and time to digest it. After all of this is handled properly, the petitioners are certain that the panel will encourage the Secretary to reverse her decision and Hooker will be granted SEC status.

The petitioners thank the panel for the time spent with this Review and know that after realizing the truth of the present situation and the latest developments coming from discoveries about Electromet and Fernald, they will encourage the Secretary to reverse her decision and then notify Congress accordingly that Hooker Electrochemical Corp. workers in all locations have been added to the SEC category.

PLEASE NOTE THAT AN ATTACHMENT HAS BEEN ADDED WITH CURRENT DATA.

Very truly yours,

(b) (6)

Representative for Petitioners

mrg

ATTACHMENT: SEC Tracking Number SEC00141

Further arguments in support of a reversal to give Hooker Electrochemical Corp. workers the SEC Status.

1. The petitioners suggest that the three-person panel consult this link listed below to see what the Advisory Board has laid out as a foundation for surrogate data:

   www.cdc.gov/niosh/ocas/pdfs/abrwh/proc/abrwh-proc-sd-r0.pdf

   This is dated May 14, 2010.

   As you can see, it is very general and could be made to go along with any choice made as surrogate data. It is not credible. When the petitioner asked NIOSH who the author was, the response was that there was no author. This did not allow the petitioner to discuss this format with anyone to tie in any historical background on surrogate data. The reference given by NIOSH and also found by the petitioner is explained in the main body of this Request for Review whereby a company must be close by or no farther than the same state. When the petitioner explained this to the Board, an objection was raised and this fact was rejected. The petitioner still supported it and there has been no follow-up from the Board. Surrogate data cannot be turned into anything to suit NIOSH's decisions. They claim that they are following the guidelines from the Board. However, the guidelines are not credible. Simplicity would say the following:

   a. Is the location an atomic worker location? Yes or No

   b. Was the person an employee of this location? Yes or No

   c. Did the person have a serious illness? Yes or No

   d. Did the person die? Yes or No

   e. Are the survivors who they say they are? Yes or No

   End of story.

   If fraud is suspected in any of these categories, it can be handled by a fraud unit.

   End of story.

Trying to put people and their sickness into a percentile is really out of line.

With all due respect to the people running these groups and their education and background, simplicity is not their "forte".

ATTACHMENT - Continued SEC Tracking Number SEC00141

2. An Advisory Board session was held on February 28, 2012 to discuss Electromet. The Board voted to give the SEC status to this company. Once again, the Board was too much in a hurry to deny Hooker.

   The basis for giving the SEC is that there wasn't sufficient documentation to do dose reconstruction by NIOSH. Even SC & A's input didn't counteract this decision.

   Remember Electromet is the only company of the three (surrogate data) in close proximity to Hooker. Having been given the SEC takes it out of the group of three. This leaves two.

   Fernald represents most of the documents used against Hooker and Fernald has also been eliminated since dose reconstruction cannot be done. This now leaves one.

   Mallinckrodt is too far away for a choice as surrogate data and so that leaves zero. The manner in which Mallinckrodt received an SEC is suspect and goes back as another company with insufficient records. So how can NIOSH, SC & A, the Work Group or the Advisory Board recognize it as valid in judging Hooker? *SEE BELOW-N.B.

3. In listening in via the teleconference on February 28, 2012, the petitioner was amazed at how difficult it was for the NIOSH rep to try to explain their decision change. Here are some comments - sound bites if you will:

   a. Air data doesn't make sense ...
   b. Much better after 1948 - no documentation existed before that time.
   c. Major health improvements but NIOSH doesn't know what they did. (Health and Safety Lab)
   d. Different conclusion arrived at, can't do dose reconstruction.
   e. GA - samples - not too good.
   f. Electromet can't give them info needed.
   g. DOL can't do without the info.
   h. SC & A countered with dose reconstruction could be done for later years and not earlier.
   i. Chair of the Work Group understood the stand of both but felt the group hadn't had enough time to study this.
   j. Objection from the Board that doing partials - giving a segment of workers the SEC and the others not had not worked in the past.

   FINALE: SEC given to Electromet.

*Please Note Well: A serious lawsuit has just recently been filed against Mallinckrodt for contaminating Cold Water Creek with nuclear wastes based on residents developing various cancer conditions who are under age 50.

ATTACHMENT - Continued SEC Tracking Number SEC00141

4. As a reminder to this panel, reference was made in the main body of this Request for Review to the TBD. One of the comments that really cinches or clinches the truth about this is the following made by NIOSH and it is:

"After the TBD fell apart or whatever way you want to say it ..."

A slip of the lip - probably not. The truth will out.

In conclusion, this attachment illustrates further how Hooker workers were misjudged by NIOSH, SC & A, the Work Group, and the Advisory Board.

(b) (6)

Representative for Petitioners

APPENDIX II:
Petitioner's Addendum to Her Appeal Letter

From: (b) (6)
Sent: Tuesday, July 31, 2012 9:16 AM
To: Jones, Wanda K. (DHHS/OS/OASH)
Subject: (b) (6) NF NY USA - HERE IS THE ADDENDUM
Attachments: ADDENDUM.doc

Dear Dr. Jones,
Attached to this e-mail is the addendum to the Request for Review by the Three-Person Panel of the decision of the Advisory Board to deny the SEC status to Hooker Electrochemical Corp. petitioners. Please acknowledge receipt by return e-mail. This should satisfy the deadline imposed on the petitioners. Thank you. (b) (6)

ADDENDUM OF CHALLENGES IN SUPPORT OF A REVERSAL OF THE DENIAL FOR SEC STATUS FOR HOOKER ELECTROCHEMICAL CORP.

CHALLENGE ONE:

III. Decision Criteria and Recommendations

How can NIOSH prove sufficient accuracy if they have not established what this means according to the Ten Year Review?

www.cdc.gov/niosh/docket/review/docket/194F/pdfs/DRAFTFINALTimeliness Section_51611.pdf

NIOSH claims to be able to reconstruct dose for certain employees, but not all. this clearly indicates that dose reconstruction is very limited and restricts employees' rights.

An example which further proves the drawback of dose reconstruction is the use of the 50% ile. In the case of lung cancer, points are taken away from the worker who smoked. This is not legal. None of the workers knew the danger they were in. They were not made aware that they were more susceptible to disease in this work environment if they smoked. No one knew what they were involved in. Probably not even the supervisors. Better yet, why were these men hired if smoking was a drawback? This alone should rule out dose reconstruction.

OBSERVATIONAL STUDY:

An example of observational study is one that explores the correlation between smoking and lung cancer. This type of study typically uses a survey to collect observations about the area of interest and then performs statistical analysis. In this case, the researchers would collect observations of both smokers and non-smokers, perhaps through a case-control study, and then look for the number of cases of lung cancers in each group.

Even Sir Richard Doll who did research in the relationship of smoking to cancer is seen as a controversial figure because of his ties to chemical companies Monsanto and Dow and asbestos company Turner and Newall. He received payments from them. His defense was that he had to go along so that he could get the data. He also caused controversy when interviewed on BBC radio in 2001 by claiming that "the effects of other people smoking in my presence is so small, it doesn't bother me."

Ref.: en.wikipdia.org/wiki/Richard_Doll

Note: there are no observational studies for workers who smoked and a risk of

developing lung cancer faster than anyone else in an AWE location.

CHALLENGE TWO:

IV. Determination Findings

Since TBD-6001 was cancelled, how can a Battelle-TBD-6001 Appendix AA still apply to Hooker? The same question applies to all paragraphs under this part IV.

CHALLENGE THREE:

X-ray exams, under the guise of a condition of employment, cannot be used after the fact when time has passed and the workers had been exposed. This data was not available to the petitioners.

CHALLENGE FOUR:

Regardless of the methodology used in ORAUT-OTIB-0006, this assumptive reasoning does not apply and is invalid for Hooker Electrochemical workers. ORAUT also carries a cloud of suspicion similar to Battelle.

CHALLENGE FIVE:

Health Endangerment:

It would be impossible for the Secretary to establish feasibility to estimate sufficient accuracy since that reasoning is based on the NIOSH suppositions and are invalid according to the Ten Year Review.

CHALLENGE SIX:

V. Effect of the Determination:

The only reason behind this Part V is to continue the ploy that dose reconstruction is the way to go according to NIOSH. Petitioners say it is not. It is restrictive and unfair to the petition process. It relies on surrogate data and results in stats from companies that are not true surrogates as in the case of those used against Hooker.

The petitioners challenge the use of Battelle since the Work Group ceased using it and went to surrogate data which was another false move since all companies selected as surrogate data candidates have proven to be "bogus". Also all three companies have been granted SEC status which further proves that their records are not trustworthy and should never have been used in analyzing Hooker. How can the Work Group flip from one (Battelle) to the other (Surrogate Data) and back again? This does not make any sense.

Remember the original law (executive order) states that the petitioners were to be spared frustration. This went on for several years.

CHALLENGE SEVEN:

FEDERAL REGISTER

The copies submitted to the petitioners as part of the material used by HHS in agreeing with the Board's decision dates back to 2004. In light of all that has developed during the past 8 years, it would have been wise to update the Register in regard to this program.

CHALLENGE EIGHT:

Page 30765 of the Federal Register:

Time limit of 180 days was proposed for determining the feasibility of doing dose reconstruction. In the Hooker case, NIOSH went beyond the 180 days, using the Dept. of Energy as their excuse, and got away with it. The Board should have granted the SEC on this fact alone. One of their reps. (NIOSH) told the petitioners that the RULE was not written in stone. So why should the petitioners honor anything in the Register?

CHALLENGE NINE:

Page 9 of 51
3.3 NIOSH – Proposed Class to be Added to the SEC
Based on research, NIOSH has obtained applicable monitoring data from other sites that performed similar work. So NIOSH determined that it could estimate dose from these sites with sufficient accuracy.

Petitioners disagree since all the sites have been granted SEC status that were used against Hooker. In order to get this status, they would have to have had no records and NIOSH could not do dose. So how can a denial of Hooker still stand? The petitioners strongly object to the manipulation of the manner in which NIOSH, the Work Group and the Board went against Hooker.

CHALLENGE TEN:
Page 11 of 51 (bottom)
It is clear here that the dose reconstructions done for Hooker were based on info from other sites. So even though the cases completed were done with dose reconstruction, the data is "bogus" since it is based from other sites which now have SEC status. You cannot trust this math!

CHALLENGE ELEVEN:

4.5 Manhattan is mentioned but not elaborated on and leaves a void as to its relevance in this report.

CHALLENGE TWELVE:

5.0 Still repeating the dependence on other sites which info is now null and void.

CHALLENGE THIRTEEN:

5.1 First paragraph: Nice history but still Manhattan cannot be relevant simply because of a bi-product (hydrochloric acid).

CHALLENGE FOURTEEN:

Third paragraph: Still dependent on surrogate which has not stood the test of time.

CHALLENGE FIFTEEN:

As for the employee interviews, the impression of these is that most of them had memory lapses or refused to talk so that they wouldn't ruin their individual chances at an award. They are just hit and miss. Any sensible person wouldn't put much stock in them.

CHALLENGE SIXTEEN:

Rest of this section is a nice historical interlude but does not make or break the case for Hooker.

CHALLENGE SEVENTEEN:

Lake Ontario Ordinance Works is now SEC.

CHALLENGE EIGHTEEN;

5.2.2 External Radiological Exposure Sources from Hooker Electrochemical Operations

In the explanation of Photon, Beta, and Neutron, the implication is that there wasn't much danger to employees. If that is the case, why did NIOSH use dose reconstruction for anyone? If this is true, how could surrogate overcome it?

CHALLENGE NINETEEN:

6.0 Again, "bogus" surrogate info used against Hooker. The "so-called" scientific information was good enough (supposedly) to use against Hooker but not for the

surrogates themselves namely, Electro-Met, Lake Ontario Ordnance Works, Mallinckrodt and Fernald. How scientific is that?

CHALLENGE TWENTY:

6.1 Misuse once again of surrogate data.
All info and stats for pages 18, 19, 20 and 21 of 51 have to be disregarded as not trustworthy and damaging to the Hooker SEC Petition request.

CHALLENGE TWENTY-ONE

6.2 No outside monitoring available at Hooker. IMAGINE THAT!

CHALLENGE TWENTY-TWO

7.0 NIOSH does not have sufficient information to feasibly conduct dose reconstructions. They have gone every which way to state their position to be able to do dose. However, they have failed. They cannot say that both EEOICPA and 42C.F.R.& 83.13(c) (1) have governed anything that they claim. They have truly just put up a smokescreen to crimp Hooker!

CHALLENGE TWENTY-THREE

7.1 Pedigree? Come on now! With pedigree, there must be the quality of "class". There is no class in 7.1, 7.1.1, 7.1.2. Any reference to the surrogate companies makes all of the 7.1 category false. You cannot ethically use data from those companies. Since TBD was cancelled, its use is also suspect.

CHALLENGE TWENTY-FOUR

7.2 This follows the same pattern as 7.1 and cannot be used by NIOSH to prove anything. Again the use of the surrogates has become invalid.
NIOSH continues to repeat and repeat how unavailable data from Hooker actually was and in each case used surrogate which is "bogus".

Also the use of Battelle-TBD-6001 Appendix AA is a poor excuse for stats.

CHALLENGE TWENTY FIVE:

7.2.4 NIOSH has not proven feasibility to do dose reconstruction based on the poor choice of data.

CHALLENGE TWENTY SIX:

7.3 Again NIOSH repeats how there was no available data from Hooker and once again have used surrogate improperly.

CHALLENGE TWENTY SEVEN

The two paragraphs on the x-ray exam is a hit and miss entry.

CHALLENGE TWENTY EIGHT

The rest of the 7.3's are unbelievable. Battelle has such a cloud over its head since they are DOE contractors, who would believe their stats? Let's not forget that they played a major role in creating dose reconstruction.

Check out this link:
http://www.eecap.org/PDF_Files/ANWAG/Newsletters/2012_July_ANWAG_newsletter.pdf

CHALLENGE TWENTY NINE:

7.4.1 Call it poor reading skills especially in the area of comprehension, but the petitioner never stated that her husband had experienced ...
The person or employee was the father of the petitioners. So one must change the word husband to father to be correct.

CHALLENGE THIRTY:

7.5 This further shows the lengths that NIOSH has gone to in order to use dose reconstruction and since it needs surrogate data and the surrogates are now "bogus", one questions why they went through all this rigamarole?

CHALLENGE THIRTY ONE:

8.0 Not valid since "other sites" meaning the surrogates used are invalid.

CHALLENGE THIRTY TWO:

9.0 Conclusion:
Paragraph One: False since they have not established what sufficient accuracy is.

CHALLENGE THIRTY THREE:

Paragraph Two: False since they repeatedly claim no records available from Hooker and

their need to use surrogate which has negative aspects and is detrimental to the petitioners.

CHALLENGE THIRTY FOUR:

Paragraph Three: NIOSH has not complied with the so-called standards of performance since they are bent on using dose reconstruction which relies on surrogate and in this case is totally false.

CHALLENGE THIRTY FIVE:

Attachment One: Data Capture Synopsis

The name Oldbury never appears anywhere. So their synopsis is incomplete. Notice that in the first block, with all those contacts, no relevant data identified. Too many references to DOE especially since the executive order's intent was to "curb" the DOE so that claimants got a fair deal. It is nice that they gave us all the Hooker keywords and Phrases, but what did they actually come up with? Again no reference to Oldbury where this got started. There is no mention of who was responsible for Oldbury manufacturing a product which led it to become an Atomic Worker location. Was it a government contract?

CHALLENGE THIRTY SIX:

Dr. Melius' letter affirms the Board's complicity in NIOSH's claim to be able to reconstruct dose with sufficient accuracy knowing full well that the term has not been defined according to the Ten Year Review.

CHALLENGE THIRTY SEVEN:

Dr. Henry Anderson, head of the Work Group, confesses the break-up of TBD and going into surrogate data which is now "bogus". The question that needs to be asked is - Why was Hooker given an AWE status if what was done there was so insignificant?

CHALLENGE THIRTY EIGHT:

Dr Anderson discusses Electro-Met as easy as rolling off a log. How come it wasn't that easy to do dose for Electro-Met? He goes on to the TBD 6001 history only to further show the maneuvering that went on with no consideration for the petitioners for the SEC.

CHALLENGE THIRTY NINE:
On p. 3, Dr. Anderson continues with the confession of using the three surrogates which are "bogus".

CHALLENGE FORTY:

The S C & A points are not accepted by the petitioners since they only add wood to the fire.

CHALLENGE FORTY ONE:

Remember all this was going on while other Work Groups were still investigating the surrogate companies themselves for SEC status. This supports the fact once again how premature the vote was against Hooker. The Chair of the Advisory Board "sloughed off" the idea of waiting for further investigation by the other Work Groups.

CHALLENGE FORTY TWO:

On page 4, Dr. Anderson continues with what a wonderful thing they had done with surrogate data. Imagine Dr. Anderson saying that they asked NIOSH about Fernald? So they just supported each other with "bogus" material.

CHALLENGE FORTY THREE:

The FOIA request is here documented and part of the record. The petitioners are being penalized by the Board for the inefficiency of FOIA by not assisting them in this regard but ignoring it only for a rush to vote. They assumed that it was just technical documents that petitioners are in the habit of requesting. This is false. FOIA has informed the petitioners that they are not allowed to question the reasons behind a request for information. So the Chair was very wrong to have Mr. Katz call the petitioner to demand information about the FOIA request.

CHALLENGE FORTY FOUR:

The petitioners maintain that the e-mails are evidence and need to be part of this review. They have gone into an appeal with FOIA and have been given the "runaround". At the present time, the appeal is with the CDC from whom there has been no response to its status even after several inquiries from the Program Support Center. Based on all of this, the petitioners maintain that the panel is being deprived of all evidence in defense of Hooker and an important avenue in order to see if the Board did do a just assessment with the denial which the petitioners feel that they did not.

CHALLENGE FORTY FIVE:

To continue with the minutes, pay attention to the "jockeying around" about Fernald data which gets interesting with Member Richardson's comments on p. 9. They all knew they were "jumping the gun".

CHALLENGE FORTY SIX:

Check p. 10 to see how they feel that what one surrogate didn't have, the other did so it didn't matter about Hooker. This is a negative view of what surrogate was intended to be. It would be very difficult for anyone to call this a "class act".

CHALLENGE FORTY SEVEN:

The petitioner's comments are contained on pp. 12-15. They are self-explanatory.

CHALLENGE FORTY EIGHT:

Please note Member Clawson's remarks at the bottom of p. 15. He spells out what is wrong.

CHALLENGE FORTY NINE:

Dr. Anderson's reply is a smokescreen and the question is how come his words didn't apply to the surrogate companies when their time came for SEC deliberations?

CHALLENGE FIFTY:

Member Clawson continued with questioning the reason for SEC and this time the Chair interjects with more hyperbole, claiming sufficient accuracy when they don't know what that means and playing down Hooker's operation.

CHALLENGE FIFTY ONE:

The Chair goes on to keep the "rush" going stating the time delay to wait on the Fernald Work Group.

CHALLENGE FIFTY TWO:

Member Munn added her "two cents" by crimping any idea of a postponement with no reasons at all. She advanced the idea that if they wait, they will look bad and speaks for all with – "nobody's going to be happy with that". Who is she referring to? There was

no reason not to delay the vote except plain stubbornness and misdirection from the Chair.

CHALLENGE FIFTY THREE:

Member Beach countered with a line of reasoning in favor of the petitioners and the copies sent to the petitioner do not have the number of reasons from the Chair.

CHALLENGE FIFTY FOUR:

Member Beach also pointed out that the petitioner requested that the Board wait on the vote. The Chair ignored the comment since he proceeded as planned.

CHALLENGE FIFTY FIVE:

Dr. Anderson's comments on p. 18 are just a rehash of what he said before and they do not make Fernald acceptable.

CHALLENGE FIFTY SIX:

Then the Chair goes on to say how the petitioner can come back again with new data whenever. He calls it opportunity. What does he call what might be a wasted "four" years already spent by the petitioner listening to all this "bogus" reasoning?

CHALLENGE FIFTY SEVEN:

So consider p. 19 – (top) – the Chair offers the idea of "reopening". Now shouldn't they be ashamed at the way this was handled? His comments confirm that there was every indication of "unknown" things to come with the surrogates. Further proof of the "rush" to get rid of Hooker.

CHALLENGE FIFTY EIGHT:

The rest of p. 19 is so taken up with Fernald. How come?

CHALLENGE FIFTY NINE:

The Chair continues with his reasoning about FOIA requests being solely for technical info. If they have been doing this to other petitioners, then they have been out of line for quite some time based on FOIA rules. He would not know what was in all the e-mails. The Chair should be made accountable for his action. He ordered the Federal Advocate to call the petitioner to demand what the purpose of the e-mails was. He was wrong in doing this. The Advocate mentioned technical data also. He was wrong, too. He went on with a need to close the Hooker case since they were on a budget. Now anyone

knows that if something is held until new info arrives, there is no cost to the budget. They go on doing other things. As the Senator from NY recently said that a budget should not interfere with good science. Of course, he never has applied for SEC status.

.CHALLENGE SIXTY:

If you notice on p. 20, they proceeded with the vote, even though a copy of the petitioner's address was requested by the Federal Advocate as necessary because many issues had been brought up and needed concentration. How come they didn't wait for the copy of the address before voting? Could it be there was a need to "rush"?

PETITIONER'S CONCLUSIONS:

The petitioners are very serious in their displeasure as to the manner in which the Hooker Electrochemical Corp. request for SEC status was handled.

In the original request for this Review, the petitioners have explained the role of the ombudsman in this SEC process. Comments can be found on p.4 number 11. The Review Panel should consult this link to further update them on what the ombudsman has encountered in this program which strengthens the petitioner's experience as found on p. 4.

www.dol.gov/eeombd/2011annualreport/2011.pdf

It is clear that the report contains a series of complaints from the petitioners and shows, without a doubt, high dissatisfaction with the Petition Process.

A reference to the Ten Year Review has been given in the main body of this addendum. Consider Numbers 28 and 29 as listed below:

28. Because NIOSH did not give added meaning to the phrase "with sufficient accuracy" in the SEC regulations, it has created a "zero sum game" where approval of a SEC petition is beneficial for some while at the same time limiting the dose considered in the claims of others. NIOSH should revisit whether this policy choice is reasonable.

29. NIOSH should explain the rationale for its decisions, and its change of position, clearly and succinctly. The rationale behind its choices should be transparent.

It should not be necessary for the petitioners to elaborate any more than numbers 28 and 29. Both of these recommendations in the Ten Year Review spell out the plight of the petitioners for Hooker Electrochemical Corp.

In regard to the FOIA request for Hooker e-mails, here are two links that spell out how in fact e-mails revealed that a NIOSH rep was not totally honest.

http://www.eecap.org/PDF_Files/Colorado/Rocky_Flats/Thorium_FOIA_Emails/2007%2c_May_15_Thorium_Strikes_email_between_Chew,_Ulsh.pdf

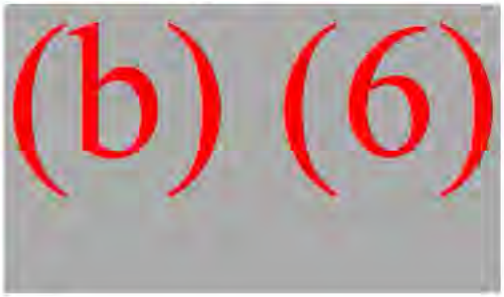
http://www.eecap.org/PDF_Files/Colorado/Rocky_Flats/Thorium_FOIA_Emails/2007%2c_May_25_Rocky_conference_call_email_between_Ulsh,_Wade.pdf

It is well for this panel to be aware that it is not an easy road for petitioners to get a review panel set up since this appeal started with being lost in the electronic system, had to be retrieved and staff had to be searched for to get it in motion and since there is a no-time-limit involved, no one hurries. You will notice that the original request went to a Dawn Smalls who had left government service some time before unbeknownst to NIOSH. The new replacement refused to even sign a letter to the petitioner acknowledging receipt of the request. Can you see that the Review process is part of the traffic on the road of frustration which is forbidden by the executive order.

The petitioners take this opportunity to thank each of the three-person panel for the time taken to consider all avenues of this review and look forward to a reversal of the denial by the Advisory Board.

We also especially want to thank the five Board members who saw the light and stood for petitioners' rights. This is the true basis for an Advisory Board.

Submitted by:



APPENDIX III:

Board Surrogate Data Policy

FINAL DRAFT

CRITERIA FOR THE USE OF SURROGATE DATA

Prepared by the ABRWH Work Group on Use of Surrogate Data

May 14, 2010

For the purposes of this report, the term "surrogate data" will refer to the use of exposure data from one site for individual dose reconstruction for workers at another site. In reviewing this topic for the Work Group SC&A distinguished between "Type I" surrogate data use (as described above) and "Type II" surrogate data where these data are used as part of a scientific effort to develop parameters for use in dose reconstruction activity calculations rather than as a substitute for the lack of adequate data needed for dose reconstruction.

"Surrogate data" are used in the NIOSH dose reconstruction program because of the lack of complete and comprehensive exposure monitoring records for many of the workers at the sites covered by the program (SC&A September 2007). It is more often considered for dose reconstruction during the early years of some DOE and AWE facilities because of the lack of reliable monitoring methods, the urgency of developing production capabilities, and other reasons.

This report will review a number of criteria that need to be considered in determining whether the specific use of surrogate data for individual dose reconstruction is scientifically sound and appropriate for that particular application.

1. Hierarchy of Data – It should be assumed that the usual hierarchy of data would apply to dose reconstructions for that site (Individual worker monitoring data followed by co-worker data followed by workplace monitoring data such as area sampling followed by process and source term data.) This hierarchy should be considered when evaluating the potential use of surrogate data. Surrogate data should only be used to replace data if the surrogate data have some distinct advantages over the available data and then only after the appropriate adjustments have been made to reflect the uncertainty inherent in this substitution.

2. Exclusivity Constraints – In many cases, surrogate data are used to supplement the available monitoring data from a site. In those cases, the surrogate data is usually used to justify certain assumptions about the distribution or range of possible exposures or assumptions about the source terms. In those cases, no special justification is necessary beyond the usual scientific evaluation. This is akin to the Type II use decribed above. However, in other situations, there are no or very little monitoring data available. In those cases, the use of the surrogate data as

the basis for individual dose reconstruction would need to be stringently justified. This judgment needs to take into account not only the amount of surrogate data being relied on relative to data from the site but also the quality and completeness of that surrogate data.

3. Site or Process Similarities – One of the key criteria for judging the appropriateness of the use of surrogate data would be the similarities between the site (or sites) where the data were generated and the site where the surrogate data are being utilized. The application of any surrogate data to an individual dose reconstruction at a site should include a careful review of the rationale for utilizing that source of data. Factors that could be considered include, but are not limited to, similarity of the production processes, presence or absence of conditions that might affect exposure, and monitoring methods employed at the site(s). The potential availability of other sources of surrogate data needs to be considered and the selection of the surrogate data used for dose reconstruction justified. Some of the questions to be considered where appropriate are:

    - Are there other sources of surrogate data that were not used ?
    - Do these other potential sources contradict or undermine the application of the data from the selected site?
    - Are there adequate data characterizing the site being used that would help support its application to other sites?
    - Do the surrogate data reflect the type of operations and work practices in use at the facilities in question?

    Surrogate data should not be used if the equivalence of working conditions, source terms, and processes of the surrogate facility to the one for which dose reconstructions are being done cannot be established with reasonable scientific or technical certainty as outlined here.

4. Temporal Considerations: Consideration also needs to be given to the period in question, since working conditions and processes varied in different periods. Surrogate data should belong in the same general period as the period for which doses are sought to be reconstructed unless it can be demonstrated that the working conditions, procedures, monitoring methods, and (perhaps) legal requirements were comparable to the period in question.

5. Plausibility: The manner in which the surrogate data are to be used must be "plausible" with regard to the reasonableness of the assumptions made. The plausibility determination should address issues of:

- Scientific plausibility. Are the assumed models (e.g., bioassay, concentration gradients) scientifically appropriate? Have the models been validated (where feasible) using actual monitoring data collected in a similar situation?

- Workplace plausibility. Are the assumed processes and procedures (including monitoring) plausible for the facility in question? Have all of the factors that could significantly impact exposure been taken into account? Is adequate information available about the facility in order to be able to make a fair assessment?

Claimants will have significant concerns about the credibility of using surrogate data. To the extent that the use of surrogate data for individual dose reconstruction can be avoided, this will help to minimize concerns about the credibility of the individual dose reconstruction process. This is especially important given that the use of surrogate data often relies on information on the operations and characteristics of industrial facilities operated many years ago. Many of the people knowledgable about the facility have died, and records are usually incomplete (which is the reason for needing to use surrogate data in the first place). Given the difficulties in obtaining the comprehensive information needed for validating the use of surrogate data for individual dose reconstruction and the inherent concerns about its use by claimants, the Work Group recommends that the use of surrogate data be limited to the circumstances where other approaches are not feasible and then only after the rigorous review of the proposed use to determine if the above criteria have been fully met.

APPENDIX IV:
Board Transcript Excerpts

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One of our observations was that several Board members asked questions throughout the review of the Hooker petition for SEC status, which were never factually answered. If they had been, we believe the final vote may have been different. These questions were sometimes deferred to working groups, or the questioner was assured that the question or surrogacy issue was in the process of being resolved, or had been resolved. Search as we did, we never found complete resolution of these critical questions, despite the fact that we reviewed all of the transcripts made available to us, including the many Advisory Board meetings, and especially the Surrogate Working Group meetings. Since these are part of the administrative record in this case, we did not feel it necessary to reproduce all of the relevant transcripts as part of this report. However, we felt it important to present a select few sections below supporting our thesis that these critical questions were never satisfactorily answered.

Excerpts from transcript of August 24, 2011, Board Meeting in Richland, Washington

Page 18, line 1 to Page 20, line 19 then skipping to Page23, lines 4-14 regarding the use of surrogate data from Fernald:

CHAIRMAN MELIUS: Look at me, Brad. Brad, ask me the question.
(Laughter.)

MEMBER CLAWSON: Using the Fernald 4 data there was a question, with that being on the Fernald Work Group these air samples were in question from the very beginning. On the Fernald Work Group we can't use the air sampling data. It's been questioned and falsified and everything else but we are now using it as surrogate data to do another facility.

MR. ROLFES: Hi, this is Mark Rolfes with NIOSH. Brad, to address what you had mentioned about the specific allegation of a Fernald employee falsifying some of the air sampling data, we did look into that issue. We believe that that was a limited issue associated with one particular individual. We had no indication that was a widespread occurrence at the Fernald site.

MEMBER CLAWSON: It was an issue and you had a signed affidavit stating of how these air samples were being done. And now we want to take questionable information and use it to do another facility. Basically the bottom line is is it gets down to Hooker has its own data and we're going to use another site's -- in my eyes that were questionable from the beginning. It just doesn't make common sense.

CHAIRMAN MELIUS: Any other questions for Henry? Dick.

MEMBER LEMEN: I again have trouble with the use of surrogate data from other facilities for a compensation program. I'm not -- I don't have that much concern of

surrogate data if used in an epidemiological study, one that's justified. And the caveats are all spelled out. But it seems to me totally inappropriate in a compensation program such as we are here to represent, to take data from other plants and use that data to determine what the compensation eligibility is for individuals within a plant that is geographically and physically not in the same location and work practices are not taken into account between these two facilities which is something that should be taken into account. I just, I'm going to have to disagree with the committee's recommendation solely based upon I have still, as I've expressed in previous meetings, this serious problem with surrogate data.

MEMBER ANDERSON: Yes, I think -- I mean we discussed that considerably and I think what we looked at in this case is that it's a -- the surrogate data where we're using and the issues related to it as far as comparability was really focused on a specific activity, not, you know, the whole plant.

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I understand your issues and we did discuss them and this -- we wouldn't want to use this as a precedent for how data ought -- or we would like to use it actually to say that this is a good example of how you can use specific activity surrogate data. Other? Oh yes.

Excerpts from transcript of December 7, 2011, Board Meeting in Tampa, Florida

Page 130, lines 10-21 regarding dates when Fernald air sampling data may have been manipulated:

MEMBER ANDERSON: Could you comment on the dates when this happened?

MR. ROLFES: The individual did not specify a particular date, he only specified a particular operation which was the plant 5 jolting operation where they were compacting green salt and magnesium prior to reducing it into uranium metal. It is possible, well the Fernald facility didn't operate until after Hooker was closed. So as far as the specific data I don't have one because one was not provided to us.

Page 134, lines 2-14 regarding the quality of the Fernald air sampling:

MEMBER CLAWSON: I just bring into question because the Fernald Work Group is not using air sampling data because it was in question and that's why we went to the bio part. And Mark brought that up but we have not dug into if the air sampling data is good. There is an affidavit out there that it was questioned and Mark brought up numerous times that there's nothing to say that this was taken out, this information, but there's nothing to, you know. There's many questions with the air sampling data on it, especially with Fernald.

Page 138, line 10 to page 141, line 16 regarding the timeliness of the surrogate data:

MEMBER RICHARDSON: Could I ask one question of SC&A?

CHAIRMAN MELIUS: Sure.

MEMBER RICHARDSON: This was about -- I mean, one of the other issues with using surrogate data is not just extrapolation between places but also extrapolations over time. And here some of the samples that we're talking about are taken let's say a decade to two decades after the period of operations. You're shaking your head no.

DR. MAURO: The timeliness -- I remember the surrogate data report, I reviewed it, Bill prepared it and timeliness was one of the issues. And I recall the position, and I'd have to look at it again, was that the timeliness was supportive. In other words, it wasn't that we had a break there. There's five criteria and that was one of them. And I can't give you the dates but I recall our finding was that the timeliness worked in a favorable way.

MEMBER RICHARDSON: And from what I recall from what's in the report it's that the process was relatively consistent over time and so despite the fact that samples are separated by a period of 15 years there's a sense that there weren't process changes.

DR. MAURO: Your recollection is better than mine. I wish I could say that I could -- we could probably get our hands on it because I remember the summary page where we have the criteria, we summarize each one. That may very well have been some of the language in there. I'm sure that the language itself is relatively brief. The summary level at the end of the report. If we could bring it up maybe it's even possible to show it on the screen, each of the -- our findings and the rationale why we felt they met the exclusivity requirement. That had to do with 95th percentile, the impact. And then the second one had to do with timeliness and I remember coming out favorably but it wouldn't hurt to just take a look at that if it's possible to just grab it.

CHAIRMAN MELIUS: If you let me get a word in I can point out where it is. Page 5 of 7, sort of the middle of the page there. I don't think it's, I'm not sure if putting it up is even necessary. I mean, the process is slag handling, and slag handling is I think unlikely to have changed significantly over that time period. I think that's -- and that's the rationale that's stated in the SC&A report. I actually had the same question so I had to look back to the report while we were talking earlier.

DR. MAURO: Thanks for helping me out on that.

CHAIRMAN MELIUS: Which is why I had it up, because I think it is an important question that came up. Jim, did you have a comment?

DR. NETON: I was just going to read from the report that the surrogate data used for the natural right dumping operations collected between 1947 and '59. So all the surrogate

data was in that time frame. And I forget the years now that Hooker is under review for but it's in that same.

CHAIRMAN MELIUS: Okay. Any additional questions?

Page 152, line 3 to page 153, line 17:

MEMBER CLAWSON: I guess, you know I realize we have to use surrogate data and we've had high debates over surrogate data. But the thing that bothers me about Hooker a little bit is how much data do you have? According to the paperwork there, zero. Is there any air sampling data from them or bioassay from Hooker? So it's zippo. And I understand, I just really have a hard time using surrogate data from a site, three sites actually that are in question, in my mind in question. I just, that to me is using, you know, you can use as much information as you want but if it's no good. Just wondering.

MEMBER ANDERSON: I think the, I mean that's part of the issue. And what we tried to do was use the criteria that we set up to see. And the criteria don't really say you have to have some measurements or something at a facility at all. This basically was just a, you know, a fairly simple process of moving stuff through and dissolving it and then filtering it out and re-bagging it so the process was very similar at these things. I think as a committee when we looked at it it was kind of, of all the possible surrogate data uses that the committee has looked at this seemed to be the closest to the measurements are of activities that are performed at all of these various facilities rather than trying to use some others. So it's about as good as you can get but the fact that there are no measurements from the facility at least as I understand it at all, that, you know, again that is an issue. But we don't have any indication that anything here was done differently.

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TO: Dr. Wanda Jones

FROM: Director, National Institute for Occupational Safety and Health (NIOSH)

DATE: **March 27, 2015**

SUBJECT: Hooker Electrochemical Corporation Special Exposure Cohort (SEC)

Dr. Jones:

Thank you for providing to NIOSH the final report of the Hooker Electrochemical Corporation Special Exposure Cohort (SEC) Administrative Review Panel, dated September 10, 2014.

The National Institute for Occupational Safety and Health (NIOSH) very much appreciates the review conducted by the Administrative Review Panel of the decision by the Secretary to deny adding the following class of employees to the SEC:

> *All employees who worked in any location at the Hooker Electrochemical Corporation during the operational period from January 1, 1943 through December 31, 1948, and during the residual period from January 1, 1949, to December 31, 1976.*

Although NIOSH may not agree with the Administrative Review Panel's finding that the use of surrogate data in the Hooker Electrochemical SEC petition resulted in "substantial factual error," NIOSH respects the findings of the Administrative Review Panel and will provide a new designation package to the Secretary that comports with the Panel's recommendations, as set out in their final report.

Additionally, NIOSH understands that it is not the Administrative Review Panel's intention to define the class of Hooker Electrochemical Corporation employees for inclusion into the SEC as "all workers," but rather to allow NIOSH to define the class such that non-radiologic workers would <u>not</u> ultimately be included in the class for a specified time period.

The new designation package that NIOSH is preparing for the Secretary's review and action will reflect NIOSH's understanding of the Panel's intention and include a class definition that will

not encompass non-radiologic workers. The exact start date for the class is currently under study and will be included in the new designation.

Again, please express NIOSH's appreciation to the Administrative Review Panel for their review of the Hooker Electrochemical SEC Petition.

John Howard
[Signature on File]

John Howard