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May 2, 2022

Advisory Board on Toxic Substances and Worker Health
Division of Energy Employees Occupational Illness Compensation (DEEOIC)

RE: Request for topics to be reviewed at May 10-11, 2022, meeting.

Dear Advisory Board members:

I wanted to bring to your attention an issue of concern with current practices of DEEOIC regarding a recent change to industrial hygienist (IH) report format which appears to violate DEEOIC PM directives.

I. Newly added language for “Within Existing Regulatory Standards” for IH Reviews which includes only a causation opinion of the reviewing CIH

Within the last three months, DEEOIC has instructed contracted IH’s preparing memorandums addressing exposures to various toxins, from the mid-1990’s on, to include a definition of existing regulatory standards that states the level of exposure suffered by the claimant was a level which is “without adverse health effects.” It appears that this change was performed without notification or request for input from the Advisory Board. It appears that this new wording violates the intent and explicit directives of the DEEOIC PM on both the role of an IH and the mandate to have a physician provide a causation opinion. DEEOIC held a meeting on November 30, 2021, and circulated, internally, several emails and draft copies of the new wording to be included in all IH reports. I have attached a DEEOIC internal email noting implementation of the new IH language. The new IH report language includes:

There is no evidence in the case file indicating that existing regulatory standards were exceeded. The following information, which was included with the IH referral, was reviewed: (Here we'll list specific documents, e.g., OHQ, EE-3, physician's letter, IH Reports (from SRS or RFP), SEM runs, IH monitoring data, etc.). "Within existing regulatory standards" is understood to mean that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse effects(1).

Footnote:

1.Regarding workplace regulatory standards, DOE historically has not adhered to the OSHA Permissible Exposure Limits or PELs, but rather has followed the more restrictive (in almost all cases) American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value-Time Weighted Average levels (TLV-TWA). The 2021 Threshold Limit Values for Chemical

Substances and Physical Agents and Biological Exposure Indices document, defines a TLV-TWA as: "The TWA concentration for a conventional 8-hour workday and a 40-hour workweek, to which it is believed that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse effects."

The concern with this new wording is that it is either being used to allow an IH to provide a causation opinion or that it is being used to infer that ACGIH PELs/TLV-TWAs were in place and mandate the physician to accept this ACGIH level of exposure is "without adverse health effects."

1. The IH report wording is being treated by DEEOIC CEs as a causation opinion.

The first concern with this wording is that the IH is offering a causation opinion which is outside the realm of tasks delegated to an IH in the DEEOIC claim review process. CEs have been instructed to treat the IH wording as a causation opinion, similar to their treatment of a CMC opinion on causation. CEs have been instructed to consider any private reviewing physician opinions not consistent with the IH finding of "no adverse health effects" as a contradictory opinion which will require a referral to a CMC for review. The wording does not provide any additional objective or usable exposure data to a reviewing physician and is contrary to the directives regarding the IH's role in the claim review process found at DEEOIC PM 15.11(a):

IH REVIEW-Functions of the IH in exposure analysis:

(1) The IH's role is to provide expert opinion regarding an employee's exposure as it relates to nature, frequency, and duration based on assessment of the evidence presented.

(2) The IH may also assist the CE in making determinations regarding likely exposure when the evidence is unclear or inconsistent. This may include issues with routes of exposure (e.g., whether a toxic substance would have been encountered through inhalation, skin contact, skin absorption, or ingestion). This may also include issues with claimed exposures where the evidence is insufficient to suggest the possibility or the evidence is not consistent. For example, an IH can confirm whether or not a toxic substance was encountered in a certain labor category or during a certain work process. This can be accomplished by phone, email, or through formal referral if deemed appropriate by the NO IH. The CE then documents both the inquiry and the response in the case file.

(3) The IH may also evaluate and interpret IH monitoring data such as personal or area industrial hygiene monitoring data provided through DAR records or submitted by the claimant.

Per the DEEOIC PM, it is not the role of the IH to provide a causation opinion on the potential effects of toxic substance exposure on the health of any claimant. The IH's role is simply to provide exposure levels, duration, and frequency so that a reviewing physician may use this information to form an opinion on causation between any toxic exposures and potential health effects.

This IH opinion of the level of exposure, whatever it may be, is a level that would not include any "adverse health effects" does not provide objective information to a reviewing physician. This is merely the IH's opinion on causation. The information presented in an IH report should be quantifiable and objective. The DEEOIC PM outlines the format of the information required to be contained in an IH report to be divided between significant and incidental exposures. It also requires that an IH report

include defined levels of exposure including high, moderate, or low levels of significant exposure. DEEOIC 15.11(e) provides the directive that the IH provide this usable information in the IH report:

Exposure levels used by the IH. DEEOIC IH staff broadly separate exposures into those which were significant and those which were incidental. Significant exposures are further categorized as low, medium and high. Examples of these categorizations are provided here.

(1) Significant, High. A Pipefitter working in the 1960s would have likely had high level of daily exposures to asbestos.

(2) Significant, Moderate. A Machinist working in the 1970s would have likely had moderate level exposures to mineral oil (perhaps on a daily basis).

(3) Significant, Low. A maintenance worker in the early 1980s may have had occasional (i.e., weekly or perhaps monthly) low level exposures to asbestos (based upon work assignments).

(4) Incidental Exposure. This can also be characterized as exposures occurring “in passing only.” Incidental exposure is exposure that is not significant, even at a low level. An example of incidental exposure would be if you went to pump your own gas for 10 minutes. Your exposure to gasoline vapors would be incidental (occurring in passing only) while the gas station attendant working a full 8-hour shift for 40 hours, would have a considerably different profile (significant exposures, low, moderate or high, depending on other factors).

Similarly, if you were a clerk at a DOE facility who had to drop off a work order in an area where vehicle repair work was taking place, you may be incidentally exposed to diesel engine exhaust. However, the full-time workers in that maintenance shop are clearly at risk of being significantly exposed.

The new practice of DEEOIC to direct IH preparers to include a causation opinion undercuts the credibility of the program by removing the ability of a claimant to obtain an independent physician opinion on causation. DEEOIC PM 13 ESTABLISHING CAUSATION directs that “[c]ausation is a medical determination that a qualified physician must make regarding whether or not a condition is related to a covered employment and exposure to a toxic substance.”

To illustrate the current use of this language by CEs, and my concerns with its continued use, I am including redacted correspondence in one of my current client’s claim process. First, I have attached a redacted copy of an IH report dated April 1, 2022. I apologize for the poor quality of this scan, but I did not receive a copy at my office directly from DEEOIC. The only copy was sent to the physician’s office, and this is the scan I received from that clinic. This IH report has the new wording and cites seven (7) toxins which the claimant was known to have been exposed to which were linked to the claimed conditions of pulmonary fibrosis and pneumoconiosis. You can see that the wording in this IH report matches the wording in the memorandum attached to the internal DEEOIC email noted above. The claimant’s reviewing physician provided a response which includes several sections with specific information regarding the claimant’s medical history and addresses each of the toxins noted in the IH report. Of relevance to this point, the physician includes in reference to silica exposure health effects and PELs:

development of non-malignant respiratory diseases is far less than once believed. Since 2001, OSHA has revised its guidelines for permissible exposure limits to respirable silica in its Final Rule for Respirable Crystalline Silica, which was to be made effective on June 23, 2016, and fully implemented through all General Industry and Maritime employers by June 23, 2018, which states, “*OSHA has determined that employees exposed to respirable crystalline silica at the previous permissible exposure limits face a significant risk of material impairment to his health. The evidence in the record for this rulemaking indicates that workers exposed to respirable crystalline silica are at an increased risk of developing silicosis and other non-malignant respiratory diseases, lung cancer, and kidney disease.*” (Department of Labor, Occupational Safety and Health Administration, 81 FR 16286 - Occupational Exposure to Respirable Silica, Federal Register Volume 81, Issue 58, March 25, 2016). In fact, OSHA, in their complete 605-page Federal Register publication of the exposure regulatory exposure limit reduction, details their support for their finding that the exposure limits to silica in effect prior to 2016 were “unsafe” and that this unsafe finding is a preliminary requirement under federal law before OSHA may even consider a reduction to existing regulatory limits on any substance.^v

In making the exposure limit amended guidelines, OSHA relied upon numerous peer reviewed medical journal reports of studies documenting silicosis, non-malignant lung diseases, lung cancer, and kidney disease caused by exposure to silica and evaluated the safety of the regulatory silica limits in effect prior to the 2016 amendment and reduction to the regulatory exposure limit.

OSHA has conducted an extensive review of the literature on adverse health effects associated with exposure to respirable crystalline silica. ...

OSHA finds that employees exposed to respirable crystalline silica at the preceding PELs are at an increased risk of lung cancer mortality and silicosis mortality and morbidity. Occupational exposures to respirable crystalline silica also result in increased risk of death from other nonmalignant respiratory diseases including chronic obstructive pulmonary disease (COPD), and from kidney disease. OSHA further concludes that exposure to respirable crystalline silica constitutes a significant risk of material impairment to health and that the final rule will substantially lower that risk. The Agency considers the level of risk remaining at the new PEL to be significant. However, based on the evidence evaluated during the rulemaking process, OSHA has determined a PEL of 50 µg/m³ is appropriate because it is the lowest level feasible for all affected industries.

Id. As stated by OSHA, even at the new regulatory limits post 2016, exposure to silica is still *significant* and poses a risk to those exposed to silica for the same illnesses but the feasibility of this level for various industries was considered in the final rule for the 2016 amendment.

The physician goes on to reference the fact that the references available, including safety audits of NTS, all reference OSHA standards and do not include any reference to ACGIH safety standards, PELs, or TLV-TWAs as cited in the IH report. Several citations are provided including specific safety audits during the relevant timeframe.¹ The physician also address the additional toxins and provides an analysis of the cumulative exposures on the claimant’s health. Of particular relevance is, again, the silica exposures. This IH report notes that the claimant worked at NTS from 2007 to 2022. As I noted above, and the physician correctly cited, silica PELs have been reduced during the claimant’s employment timeframe under OSHA regulations with full implementation in 2016. The PELs were reduced because the prior levels were deemed unsafe and known to OSHA to cause non-malignant lung disease. The safety audits

1 Inspection of Environment, Safety, and Health Management at the Nevada Test Site. Volume I. October, 2002. Office of Independent Oversight and Performance Assurance, Office of the Secretary of Energy. Reviewed 03/20/2022 at: https://www.energy.gov/sites/prod/files/hss/HS-40/Oversight/docs/reports/emevals/2002NTS/NTS_vol1_final.pdf

conducted of NTS only reference OSHA standards which were in place during the claimant's covered employment period. As such, there is not reasonable argument for the IH to state that the levels were at existing ACGIH "regulatory standards" and therefore "without adverse health effects." Per DEEOIC regulations an IH is not authorized to present a causation opinion, and, in this case, the causation opinion is clearly false.

Since it appears CEs have been trained to treat the IH report as a causation opinion, the CE responded with a letter to the claimant's physician which is of the same format to the letters which CEs send out when they receive a private physician opinion which conflicts with a CMC opinion. A copy of the letter is attached. The CE is requesting that the physician provide specific information relating only to the claimant which would make them not fit the causation opinion provided by the IH report. It is concerning in this case because, again, there is no reasonable argument for supporting the IH's opinion that the "regulatory standard" levels were "without adverse health effects" as OSHA already determined that the levels before 2016 were unsafe.

2. The IH report wording is directing the physician to accept that ACGIH standards were adhered to and they were, by definition, at a level which does not cause adverse health effects.

If the IH report is not offering a causation opinion, then the alternative interpretation is that the IH report is directing the physician to accept that not only were ACGIH PELs/TLV-TWA limits, rather than OSHA limits, in place, but that these levels were, by definition, "without adverse health effects." Neither of these assertions is true. The claim that ACGIH, rather than OSHA, standards were adhered to at DOE facilities from the mid-1990s on is either false or may apply to certain smaller facilities. The safety audits and reports I have located for the large facilities including NTS, Pantex, and SRS, all references OSHA regulations and PELs. Additionally, I have spoken with dozens of my own blue collar worker clients and none of them were trained on any ACGIH standards but all were trained on OSHA standards. They all relay that their PPE and other safety measures were OSHA mandated. There were instruction manuals, trainings, signs, and placards in their work areas referencing OSHA standards.

ACGIH is not an exposure standard setting body, they are simply a non-profit group, and their own group purpose statement specifically states they "are not intended to be used as legal standards."² The only enforceable regulatory standards for exposure limits to any toxins at NTS appear to be those contained in the OSHA regulations and these, by federal legislation, are those values set by NIOSH. "NIOSH RELs are authoritative Federal agency recommendations established according to the legislative mandate for NIOSH to recommend standards to OSHA... NIOSH transmits its recommendations to OSHA for use in developing legally enforceable standards." *Id.* All federal contractors, including those under Department of Energy, such as NTS are required to adhere to OSHA standards. *Id.*

Keeping with the current example, Nevada Test Site (NTS) audits reference OSHA standards. For example, in 2002 a thorough audit was performed of NTS and it appears that OSHA was the only agency setting enforceable regulatory limits to any toxins at the site. The Office of Independent Oversight and

2OSHA ANNOTATED TABLES, PERMISSIBLE EXPOSURE LIMITS. Viewed on 2/22/2022 at <https://www.osha.gov/annotated-pels>. "ACGIH® is a private, not-for-profit, nongovernmental corporation. It is not a standards setting body. ACGIH® is a scientific association that develops recommendations or guidelines to assist in the control of occupational health hazards. TLVs® and BEIs® are health-based values and are not intended to be used as legal standards."

Performance Assurance, Office of the Secretary of Energy, conducted an inspection and audit of certain areas of NTS in 2002 and published their findings.³ This 70 page report includes reference to various areas of the NTS and their compliance with OSHA, and deficiencies in complying with OSHA, regulations. It specifically notes that certain standards were out of date at NTS and that a baseline request to adhere to OSHA was approved 9/18/2002.⁴ Significantly, there is no mention of ACGIH or other regulatory standards in place at NTS.

This point is significant as if DEEOIC is claiming that the IH wording is not being used as a causation opinion, but rather a definition referencing to an alternate standard of PELs in place at the employee's time of employment, it appears to be inaccurate. In some instances, OSHA and ACGIH standards, at certain time periods, are the same. For instance, exposure levels to silica post 2016, OSHA and ACGIH exposure standards overlap. For other toxins, and even silica at different time periods, these standards are different. A physician needs to be able to rely on the actual regulatory standards in place at the time if the IH's opinion is that the claimant was exposed to a toxin at existing regulatory standards at the time of the covered employment.

3. Conclusion

The new IH wording appears violative of the DEEOIC PM directives on the role of an IH reviewer and the requirement that causation opinions be offered only by physicians. Any reference to the IH's opinion that the level of exposure is incapable of causing the claimant "adverse health effects" needs to be removed from the reports. If DEEOIC intends to have IH preparers include reference to ACGIH standards, they should be required to provide: 1) Some evidence with each IH report that ACGIH standards were actually in place at the time of the claimant's employment at the covered facility for the labor category(ies) held by the claimant; and, 2) A statement of the actual TLV-TWA values for each toxin the claimant was exposed to, the duration, and frequency of the claimants exposure to each toxin. This information is objective data that a physician should be provided so that they may provide a reasoned causation opinion.

I appreciate your time and attention to this matter.

Sincerely,

Jason C. Jones

³ Inspection of Environment, Safety, and Health Management at the Nevada Test Site. Volume I. October, 2002. Office of Independent Oversight and Performance Assurance, Office of the Secretary of Energy. Reviewed 03/20/2022 at:

https://www.energy.gov/sites/prod/files/hss/HS-40/Oversight/docs/reports/emevals/2002NTS/NTS_vol1_final.pdf

⁴ "Recognizing that the underground operations WSS was significantly out of date, the responsible NV WSS functional manager has submitted a Baseline Change Request to the NV WSS Change Review Group to update the standards to reflect current Mining Safety and Health Administration and Occupational Safety and Health Administration (OSHA) standards. These changes were approved by the Change Review Group on September 18, 2002."

Language for Within Existing Regulatory Standards for IH Reviews

NOTE: The first paragraph below would be inserted into the paragraphs for after mid-1990 exposure assessments. The footnote would provide additional details.

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There is no evidence in the case file indicating that existing regulatory standards were exceeded. The following information, which was included with the IH referral, was reviewed: (Here we'll list specific documents, e.g., OHQ, EE-3, physician's letter, IH Reports (from SRS or RFP), SEM runs, IH monitoring data, etc.). "Within existing regulatory standards" is understood to mean that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse effects¹.

Footnote:

¹Regarding workplace regulatory standards, DOE historically has not adhered to the OSHA Permissible Exposure Limits or PELs, but rather has followed the more restrictive (in almost all cases) American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value-Time Weighted Average levels (TLV-TWA). The 2021 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices document, defines a TLV-TWA as: "The TWA concentration for a conventional 8-hour workday and a 40-hour workweek, to which it is believed that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse effects."

Novack, Joshua - OWCP

From: Vance, John - OWCP
Sent: Friday, February 18, 2022 1:16 PM
To: Long, Christy A - OWCP; Prindle, Annette M - OWCP; Williams, Cara C - OWCP; O'Hare, Gerard - OWCP
Cc: Pond, Rachel - OWCP; Pennington, Douglas - OWCP; Kotsch, Jeffrey - OWCP; Levitt, David - OWCP; Hood, George E - OWCP
Subject: New Language for Within Existing Regulatory Standards for IH Reviews

Just to alert you to something, there is new language that is now being added to IH exposure profiles that provides more information on the meaning of "within regulatory standards." This new language now appears in the Conclusion section of the IH reports. See below (highlighted) for the new content. It is additional information that a physician may consider when weighing information about how the IH's characterize exposures after the mid-1990s that did not exceed regularly standards. CEs & HRs can expect to see this language in relevant IH referral reports moving forward. If you have any questions about this, please reach out to Jeff Kotsch. Thanks.

IV. Conclusion

It is highly likely that [REDACTED], in his capacity as a Police Officer/Security at the Savannah River Site, was exposed to asbestos at greater than incidental levels. His exposures to asbestos, through 1986, would have likely been occasional (i.e., a biweekly basis) and would have been at low levels. His exposures to asbestos, after 1986 and through the mid-1990s, would have also likely been occasional (i.e., a biweekly basis) and would have been at very low levels. However, there is no evidence in the case file indicating that after the mid-1990s existing regulatory standards were exceeded. Within existing regulatory standards it is understood to me that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects¹. The following information, which was included with the IH referral, was reviewed: e.g., OHQ, EE-3, SEM reports, IH Records. Additionally, in the absence of compelling data to the contrary, it is highly unlikely that [REDACTED], in his capacity as a Police Officer/Security, was significantly exposed to crystalline silicon dioxide. Any exposure to crystalline silicon dioxide that he might have received would have been incidental in nature (occurring in passing only) and not significant.

This document is for the purpose of providing supplemental information for use by a claims examiner in the development of this specific claim. It is not intended for use on other claims.

¹Regarding workplace regulatory standards, DOE historically has not adhered to the OSHA Permissible Exposure Limits or PELs, but rather has followed the more restrictive (in almost all cases) American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value-Time Weighted Average levels (TLV-TWA). The 2021 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices document, defines TLV-TWA as: "The TWA concentration for a conventional 8-hour workday and a 40-hour workweek, to which it is believed that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects."

U.S. Department of Labor

Office of Workers' Compensation Programs
Division of Energy Employees Occupational
Illness Compensation - Jacksonville Office
DOL DEEOIC Central Mail Room
P.O. Box 8306
London, KY 40742-8306



April 1, 2022

Case ID: 50032942

Employee: [REDACTED]

[REDACTED]

Dear Dr. [REDACTED]

This letter is in reference to Mr. [REDACTED]'s claim for the conditions of pulmonary fibrosis and pneumoconiosis under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA or the Act).

The Jacksonville District Office received Mr. [REDACTED]'s medical records to include a letter dated January 17, 2022, signed by you. In your letter you discussed Mr. [REDACTED]'s chest x-ray which was completed on September 19, 2019, with findings of primary and secondary opacities with a profusion of 1/0, and an impression stating the radiograph revealed bilateral interstitial opacities consistent with pneumoconiosis in the appropriate setting of exposure and latency. You stated the results are consistent with pneumoconiosis of mixed dust nature, and they are consistent with pulmonary fibrosis. You diagnosed Mr. [REDACTED] with both conditions with an initial onset date of September 19, 2019. You also requested that if an Industrial Hygiene (IH) report be required that you be given an opportunity to review it and provide an updated statement.

The Department of Energy (DOE) verified that Mr. [REDACTED] worked at the Nevada Test Site (NTS), as a Laborer from July 11, 2007, to at least February 23, 2022.

You provided a medical opinion in your report, in which you opined that while Mr. [REDACTED] worked at the NTS, his exposure to asbestos and/or other fibrogenic toxins was a significant factor that at least as likely as not contributed to his pulmonary fibrosis and pneumoconiosis.

During Mr. [REDACTED]'s occupational history interview, regarding safety equipment he frequently wore, he stated that he worked in the Environmental Restoration Unit for five years and wore a full protective Tyvek suit with a power air respirator. He also wore steel toed safety boots. When he transferred to a different area where he worked on various construction projects he wore a hard hat, steel toes boots, safety glasses, safety vest, and gloves. When he transferred to the Low-Level Waste site, he wore full protective suit with respiratory protection.

To determine if Mr. [REDACTED] could have had potential exposures to asbestos or to any other toxic substances having a known health link to pneumoconiosis, the Department of Labor's Site Exposure Matrix (SEM) was searched.

The search indicated that employees who worked at the NTS in the labor category of Laborer could have potentially been exposed to aluminum, asbestos, carbon steel, polyvinyl chloride,

crystalline silicon dioxide, synthetic vitreous fibers, and welding fumes, which all have an association to the health effect of pneumoconiosis.

I have since forwarded Mr. [REDACTED]'s claim to an IH and requested they provide the nature, frequency, and duration of his exposures to aluminum, asbestos, carbon steel, polyvinyl chloride, crystalline silicon dioxide, synthetic vitreous fibers, and welding fumes.

The IH concluded that although, while Mr. [REDACTED] worked as a Laborer at the NTS, he would have had the potential for significant exposures to aluminum, asbestos, carbon steel, polyvinyl chloride, crystalline silicon dioxide, synthetic vitreous fibers, and welding fumes, there is no evidence in the case file indicating that as part of his position between July 7, 2007, and February 23, 2022, existing regulatory standards were exceeded for these agents. Within existing regulatory standards is understood to mean that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects.¹

As you requested, the IH report is enclosed for review. Therefore, after your review and consideration, would please submit an opinion, whether it is at least as likely as not that Mr. [REDACTED]'s workplace exposure was a significant factor in causing, aggravating, or contributing to his pulmonary fibrosis and pneumoconiosis? Please reference any scientific medical literature or studies that support your opinion.

If you have any questions or need additional information, please contact me toll-free at (877) 336-4272.

Sincerely,

Tammy Evanchik
Claims Examiner, DEEOIC
Jacksonville District Office

Encl: IH report dated March 30, 2022

cc: [REDACTED]
[REDACTED] Authorized Representative

¹ Regarding workplace regulatory standards, DOE historically has not adhered to the OSHA Permissible Exposure Limits or PELs, but rather has followed the more restrictive (in almost all cases) American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value-Time Weighted Average levels (TLV-TWA). The 2021 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices document defines a TLV-TWA as: "The TWA concentration for a conventional 8-hour workday and a 40-hour workweek, to which it is believed that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects."

MEMORANDUM

DATE: Wednesday, March 30, 2022

TO: Jeffrey Kotsch
Senior Health Physicist and Supervisor, DEEOIC BPRP

CC: David Levitt
Certified Industrial Hygienist, DEEOIC BPRP

FROM: Wendy J. Nakao
Contract Certified Industrial Hygienist (CCH)
Catawba Corporations

RE: Evaluation of Occupational Exposures to Toxic Materials for DEEOIC Part E
Claim for [REDACTED] (50032942)

I. Issues for Determination

The issues for determination, as described in the Statement of Accepted Facts (SOAF), are:

Given Mr. [REDACTED]'s diagnoses of pulmonary fibrosis and pneumoconiosis and his work history at the Nevada Test Site (NTS) as a laborer from 07/11/2007 to 02/23/2022, what would be the nature, frequency, and duration of her exposure to aluminum, asbestos, carbon steel, polyvinyl chloride, crystalline silicon dioxide, vitreous fibers and welding fumes?

II. Background

Mr. [REDACTED] was employed at the Nevada Test Site (NTS), located in Mercury, Nevada, between 07/11/2007 and 02/23/2022. He accumulated approximately fourteen (14) years and seven (7) months of covered employment (verified) as a Laborer.

Mr. [REDACTED] was diagnosed with pulmonary fibrosis and pneumoconiosis. He filed a Part E claim for these conditions on 09/12/2021.

III. Discussion

Aluminum is a silvery-white, malleable metal that has a large number of uses due to its corrosion resistance, low density, low weight, ductility, electrical conductivity and strength (in alloys). Aluminum is a vital component in electrical power distribution lines, the building and construction industries and commonplace household objects. Significant exposures are associated with employees who engage in aggressive work practices (i.e., grinding, cutting, welding, etc.) on aluminum-containing materials. The routes of exposure include inhalation and skin contact. There are data that support Mr. [REDACTED], in his capacity as a Laborer at the NTS, as having had the potential for significant exposures to aluminum. However, there is no evidence in the case file indicating that as part of this position between 07/11/2007 and 02/23/2022 existing regulatory standards were exceeded. Within existing regulatory standards is understood to mean that nearly all workers may be repeatedly exposed, day after day, for a working lifetime

without adverse health effects¹. The following information, which was included with the IH referral, was reviewed: e.g., OHQ, EE-3, SEM reports.

Asbestos is a mineral silicate material and was present in, and widely used at, all Department of Energy (DOE) facilities. Historically, many common items such as floor tiles, thermal and electrical insulation, pump packing, gaskets, shingles, filters, fire-proofing materials and cement contained asbestos. The primary route of exposure is through inhalation. There are data that support Mr. [REDACTED] in his capacity as a Laborer, as having had the potential for significant exposures to asbestos. However, there is no evidence in the case file indicating that as part of this position between 07/11/2007 and 02/23/2022 existing regulatory standards were exceeded. Within existing regulatory standards is understood to mean that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects¹. The following information, which was included with the IH referral, was reviewed: e.g., OHQ, EE-3, SEM reports.

Carbon steel is an alloy of steel containing small amounts of carbon. It is widely used in construction as its mechanical properties can be varied with the addition of other metals. Significant exposures are associated with employees who engage in aggressive work processes on carbon steel-containing components (i.e., welding, heating, grinding, cutting, etc.). The primary route of exposure is through inhalation. There are data that support Mr. [REDACTED], in his capacity as a Laborer, as having had the potential for significant exposures to carbon steel. However, there is no evidence in the case file indicating that as part of this position between 07/11/2007 and 02/23/2022 existing regulatory standards were exceeded. Within existing regulatory standards is understood to mean that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects¹. The following information, which was included with the IH referral, was reviewed: e.g., OHQ, EE-3, SEM reports.

Polyvinyl chloride (PVC) is a thermoplastics material which consists of PVC resin compounded with varying proportions of stabilizers, lubricants, fillers, pigments, plasticizers, and processing aids. PVC is used in the manufacture of pipe, extruded wire coverings, toys, bottles, door and window components, film and fabric coatings. The routes of exposure include inhalation, ingestion and skin contact. There are data that support Mr. [REDACTED], in his capacity as a Laborer, as having had the potential for significant exposures to polyvinyl chloride. However, there is no evidence in the case file indicating that as part of this position between 07/11/2007 and 02/23/2022 existing regulatory standards were exceeded. Within existing regulatory standards is understood to mean that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects¹. The following information, which was included with the IH referral, was reviewed: e.g., OHQ, EE-3, SEM reports.

Silicon dioxide (crystalline), commonly referred to as silica or sand, is a colorless material in crystalline form. It is used in glass manufacturing, metal casting, sandblasting and the manufacture of refractory compounds, which are used for metal furnace liners. The primary route of exposure is through inhalation. There are data that support Mr. [REDACTED] in his capacity as a Laborer, as having had the potential for significant exposures to crystalline silicon dioxide. However, there is no evidence in the case file indicating that as part of this position between 07/11/2007 and 02/23/2022 existing regulatory standards were exceeded. Within existing

regulatory standards is understood to mean that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects¹. The following information, which was included with the IH referral, was reviewed: e.g., OHQ, EE-3, SEM reports.

Synthetic vitreous fibers are produced from glass, rock, or slag by blowing steam or air through molten rock (rock wool) and/or various furnace slags that are by-products of metal smelting or refining processes. Glass, rock, and slag wools are used for insulation in buildings and around ducts and pipes. Refractory ceramic fibers are used in furnaces. The primary route of exposure is through inhalation. There are data that support Mr. [REDACTED], in his capacity as a Laborer, as having had the potential for significant exposures to synthetic vitreous fibers. However, there is no evidence in the case file indicating that as part of this position between 07/11/2007 and 02/23/2022 existing regulatory standards were exceeded. Within existing regulatory standards is understood to mean that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects¹. The following information, which was included with the IH referral, was reviewed: e.g., OHQ, EE-3, SEM reports.

Welding fumes are a complex mixture of gaseous emissions and particulate matter generated by the welding of metal. The primary route of exposure is through inhalation. There are data that support Mr. [REDACTED], in his capacity as a Laborer, as having had the potential for significant exposures to welding fumes. However, there is no evidence in the case file indicating that as part of this position between 07/11/2007 and 02/23/2022 existing regulatory standards were exceeded. Within existing regulatory standards is understood to mean that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects¹. The following information, which was included with the IH referral, was reviewed: e.g., OHQ, EE-3, SEM reports.

IV. Conclusion

Although Mr. [REDACTED], in his capacity as a Laborer at the Nevada Test Site, would have had the potential for significant exposures to aluminum, asbestos, carbon steel, polyvinyl chloride, crystalline silicon dioxide, synthetic vitreous fibers, and welding fume, there is no evidence in the case file indicating that as part of this position between 07/11/2007 and 02/23/2022 existing regulatory standards were exceeded for these agents. Within existing regulatory standards is understood to mean that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects¹. The following information, which was included with the IH referral, was reviewed: e.g., OHQ, EE-3, SEM reports.

This document is for the purpose of providing supplemental information for use by a claim's examiner in the development of this specific claim. It is not intended for use on other claims.

¹Regarding workplace regulatory standards, DOE historically has not adhered to the OSHA Permissible Exposure Limits or PELs, but rather has followed the more restrictive (in almost all cases) American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value-Time Weighted Average levels (TLV-TWA). The 2021 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices document, defines a TLV-TWA as: "The TWA concentration for a conventional 8-hour workday and a 40-hour

workweek, to which it is believed that nearly all workers may be repeatedly exposed, day after day, for a working lifetime without adverse health effects."

V. References

1. US Department of Labor EEOICP Site Exposure Matrices (SEM) Database.
2. US National Institutes of Health Haz-Map Database.
3. US Department of Labor Energy Compensation System (ECS) Database.
4. US Department of Energy Facility List Database.
5. Proctor and Hughes, "Chemical Hazards of the Workplace," John Wiley and Sons, 5th Edition, 2014.
6. LaDou, Joseph, M.S., M.D., "Introduction to Occupational Health and Safety," National Safety Council, 1986.
7. Harbison, Raymond D., M.S., Ph.D., "Hamilton and Hardy's Industrial Toxicology", 6th Edition, 2015.
8. Baxter, Peter J. et. al., "Hunter's Diseases of Occupations," 10th Edition, 2011.
9. American Conference of Governmental Industrial Hygienists, TLVs® and BEIs® Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices, 2021, Cincinnati, Ohio.



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