Selected (Potentially) Fixable Problems Identified from Review of Cases
November 20-21 Advisory Board Meeting, Paducah, KY
(revised 1-27-2020)
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1) SEM
2) Quality Industrial hygiene reports
3) Who gets what information (IH, CMC - eg OHQ, SOAP vs selected medical records)
4) Claims examiner’s review of medical record can be inaccurate – omit or inaccurately summarize critical medical information
5) Questions claims examiner asks IH, CMC
6) CMC reports
7) Claims examiner’s assessment of treating physician / CMC reports
Example of Fixable SEM Problem – Health Effect and Exposure options / links

The site specific information in this database reflects available data and may not be complete. The results should be used with a full understanding of the limitations of the current dataset.

Select a health effect potentially-associated with Site: Paducah Gaseous Diffusion Plant

Health effect (from NLM Haz-Map Disease List): [TextField] Select health effect (button must be clicked after changing any selection in order to update results.)

Click here to find a listed disease by alias.
SEM is missing commonly used diagnoses: COPD, emphysema, fibrosis, interstitial lung disease, IPF, pulmonary fibrosis, sarcoid, sarcoidosis.

SEM also includes many rare diagnoses.
1) Aliases do not include pulmonary fibrosis, IPF, fibrosis

2) Linked SEM exposures do NOT INCLUDE ASBESTOS, one of the most common occupational causes of pulmonary fibrosis
More exposures listed for Pneumoconioses, other: most are uncommon and / or rarely cause pulmonary disease

**Antimony hydride** CAS: 780 Antimonwasserstoffes; Antimonwasserstoff; Antimonhydrid
**Antimony trioxide** CAS: 130 sesquis oxide; Antimony white; A
**Antimony trisulfide** CAS: 1: Antimony sesquisulfide; Antimo...}

**Bentonite** CAS: 1302-78-9; USP 4444; Altotonin SF; Aquagel; 15; Bengal 23; Bengal A; Bengi Bentonite T; Bentonite 2073; Ber 200; Bulgarben BA; Clarit BW 1 1FC; Detercal G 2FC; Detercol f (clay); GK 1295A; GK 1295A; creck bentonite; Southern bent Willikite; Wilikite

**Bronze** CAS: 7440-50-8; 7441 5; 7440-66-6; 7439-92-1 Atlas
**Carbon (graphite)** CAS: 778. carbon; Graphite; Aerodrag; A potole; C; Synthetic carbon graphite

**Carbon steel** CAS: Due to the CAS numbers are not listed. A carbon steel; Medium carbon steel; Medium-carbon steels; Medium-carbon steels;

**Ceric nitrate** CAS: 13093-17 Cerium nitrate; Cerium nitrate; Cerium ions(++) salt; (Ce(NO3)

**Cerium III 2-ethylhexanoate** acid, 2-ethyl-1; cerium III salt; H 2-ethylhexanoic acid; cerium salt;

**Cerium III hydroxide** CAS: (III) hydroxide; Ce(III) hydroxide hydroxide (CeOH3); Ce(OH)3

**Dysprosium** CAS: 7429-91-6 158; Dy

**Eurpomat CAS:** 7440-53-1 Allases Europium 154; Eu-154; Eu 154; Eurox

**Gadolinium CAS:** 7440-54-2 Allases 150; Gd-150; Gd 150; Gd

**Gadolinium III oxide** CAS: 12064 sesquis oxide; Didagolium oxide; Ox

**Lanthanum III nitrate** CAS: 1009 Lanthanum nitrate (La(NO3)3); Lanth salt; Nitric acid, lanthanum(3+) salt; I

**Lanthanum oxide** CAS: 1312-81-8 sesquis oxide; Lanthanum oxide; Dila Lanthanum (3+) oxide; La2O3

**Mica** CAS: 12001-26-2 Allases: Mks HSSD 2539; HK 610; Mica, fluorid; & group minerals; Mica, respirable fraction silica; MICA; Blottte; Lepidolite; Margite Anchorlobe G-771; (A,1/2)(Al/Si3N/K,Ni)

**Monel** CAS: 7439-89-6; 7440-02-0; Allases: none

**Naphthenic acid, cerium salt** CA

**Naphthenic acid, lanthanum salt** acid, lanthanum salts; lanthanum salts;

**Neodcianoic acid, cerium salt** neodcianoic Cerium; (III) neodcianoic Acid, cerium (3+) salt; N

**Neodcianoic acid, lanthanum salt** Lanthanum (III) neodcianoic; Lanth(3+) neodcianoic; Neodcianoic acid

**Neodymium chloride** CAS: 10024 Neodymium (III) chloride; NdO3; Nd

**Neodymium III oxide** CAS: 1313 Neodymium sesquis oxide; Neodymia; I

**Polyvinyl chloride** CAS: 9002-86-2 Expanded polyvinyl chloride; Polyvinyl Polychloroethylene; Bakelite; Breon; I

**Samarium CAS:** 7440-19-9; Samarium 146; Sm-146; Sm 146

**Silica gel** CAS: 63231-67-4; 1 Silicat; Silicat acid hydrate; Cubx Mikronit; Neoyxl ET; Polymeric hydroxide; Silton TF 66; Siperne Vulcata 5/G; Zeosil 45; Silicat x multiplic; SilicaL Precipitated silica; Silica gel; Amorphous silica, precipitated Silicat 244; Silicat 63; Separat Silicat N 85; Silicat PF 100; Silicat Dispect

**Silicon carbide** CAS: 409-21-Annannox CK; Betarunum; Beta Carbonol; Carbon silicide; CarbC Du-A 1; Du-A 2; Du-A 3; Du-A 100; HSSD 68; KZ 3M; KZ 5M; 8000; Silicon monocarbide; Silicat carbide (SIC); SIC

**Silicon dioxide, amorphous** Allases: Diamononate earth, amorphous silica; Silica dioxide

**Silicon dioxide, amorphous** Silica aerogel; Silica xerogel; Ac st-1; Cab-o-sil; Cabosil; Carplex silica; Hydrophobic silica 2482k calcined; Neosil; Neoyxl; Opal; Fused; Tokusil TPLM; Ultrasil VH fumed; Silica powder; Silicon dil beads; Glass microballs; Sox stGlass manufacturing spray; colloidal solution; Hi Sil 233; Aq 1000; Hi Tempco 1000 Couplant Suspension; SiO2

**Synthetic vitreous fibers** fiber; Mannmade mineral fibers; fiber; Refractory ceramic fibers; wool fibers; Special purpose gla Refractory ceramic fiber; Refrac ODB; Modular TrimkLL MHT-HP; Ball Milled B; HP Ball Milled C/T 70C; K-Chopped: KMTX; MT; M Durablanket® S; Durablanket® Tank Car Insulation; TCB; SMM 972-JH; 882-FH; 882-JH; HSA-vitreous; Aluminosilicate refr

**Talc** CAS: 14807-96-6 Allas (mineral); B 9; Beaver White 2 500; Emtal 549; Emtal 596; En Finnral F40; Finnthal PF; Frey 100; Lo Micron talc USP, bs 27; Micro Ace L1; Micron White 50; 139; Mistron 25C; Mstron frost MP 25-38; MP 40-27; MP 45-26 400; P 3; P 3 (Mineral); PKC; J Steatite talc; Steawhithe; Supers; form; Talcan PK-PK; Talcon CP-C fibers; Silicates (<1% quartz);I (containing no asbestos); Talc, Mg3Si4O10(OH)2

**Thulium oxide** CAS: 12036-1

**Titanium oxide** CAS: 1311 Titanium oxide; Titanic anhydride Rutile; Rutile (YIO2); BC-620 R

**Welding fumes** CAS: Due to the individual CAS numbers are not listed.

**Yttrium oxide** CAS: 1314-36-90; trisoxide; Y2O3

**DOES NOT INCLUDE ASBESTOS**
SEM: Fixable Problems

1) Revise choice of diagnoses can enter from dropdown menu
   A) Some of THE MOST COMMON clinical diagnoses are missing:
      pulmonary fibrosis, idiopathic pulmonary fibrosis (IPF), fibrosis,
      sarcoidosis, sarcoid, COPD
   2) Numerous rare diagnoses are included

2) Links between diagnoses and exposures need attention
   In part related to above.
   ex: asbestos - pulmonary fibrosis; beryllium - sarcoid

3) Other links (eg job title, exposures) need attention – especially
   office / non-production /lab workers who may have worked in close
   proximity to production areas.
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Fixable Problem: Questions the Claims Examiner asks CMC

1) Underground uranium miner in UT for over 1 year. Pneumoconiosis documented on chest x-ray, B read.  
   CE asks CMC: Was employee’s exposure to aluminum a significant factor in causing, contributing to employee’s pneumoconiosis?

2) Worker at Paducah GDP for over 30 years. Pulmonary sarcoidosis diagnosed on open lung biopsy.  
   CE asks CMC: Was employee’s exposure to beryllium a significant factor in causing sarcoidosis?
Sample Questions For Physician

Questions:
CE: Choose from options below or add your own

1. Impairment: Refer to PM Ch. 2-1300, Impairment Ratings for questions and instructions for CMC’s conducting impairment evaluations.

2. Impairment: If it is not possible to complete an impairment rating based on the medical evidence we provided, please advise us what medical records and/or testing is required to complete the rating.

3. Diagnosis: In your opinion, do the medical records support a diagnosis of a medical condition? If so, please provide the first date of diagnosis, diagnosis, and the ICD code.

4. Causation: If a medical condition was diagnosed, in your opinion is it at least as likely as not that exposure to toxic substances during the course of employment at covered facility was a significant factor in aggravating, contributing to, or causing the employee’s medical condition?

Ask CMC the causation question more broadly.

If exposure to toxic substance(s) during employment at covered facility was a significant ...............?
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Quality of CMC Reports

1) Review of cases reveals concerns regarding the quality of some CMCs reports.

2) Quality of the CMC report depends on multiple factors: the CMC, information provided (IH, medical, OHQ etc), questions asked.

3) CMC quality can be hard to assess from on-paper credentials, board certifications. Most pulmonary, internal medicine, occupational medicine physicians do not routinely assess disease causality.

More info on CMC process / performance needed.
Important topic for further discussion.
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Example 1:
Oak Ridge laborer at K-25 and Y-12 in the 1950s-1960s with COPD, fibrosis

Letter to treating physician:
Thank you for your letter dated [redacted]. Within your letter, you stated that exposures to both ammonia and asbestos contributed to the development of asthma and pulmonary fibrosis.

However, the attached industrial hygienist report does not indicate that ammonia or asbestos are linked to the employee’s pulmonary fibrosis.

Letter from treating physician to DOL:

Case ID [redacted]

Dear [redacted]

This is concerning your letter of August 2, 2018 regarding the above named patient. I find it incredible that the matrix does not report that asbestos is associated with pulmonary fibrosis. There are multiple articles that confirm this. I would direct your attention to a review article in the New England Journal, February 10, 2000 in which asbestos is listed as the leading occupational cause of fibrotic changes i.e. pulmonary fibrosis. The article references multiple supporting references. I would question the accuracy of the matrix if it does not list asbestos as a known cause of pulmonary fibrosis. The addition of exposure to ammonia intermittently would have compounded the impact on his lungs along with other respiratory irritants.

If you have any questions, please do not hesitate to contact me.

Sincerely,
Example 1 cont: Case then sent to CMC

Now to answer the first three questions posed:

1. In your opinion, is it at least as likely as not that exposure to ammonia asbestos, welding fumes and silicon dioxide, crystalline during the course of employment at the Y-12 Plant and K-25 Plant was a significant factor in aggravating, contributing to, or causing the employee's COPD?

   Answer: No, in my opinion, it is not at least as likely as not that exposure to ammonia asbestos, welding fumes and silicon dioxide, crystalline during the course of employment at the Y-12 Plant and K-25 Plant was a significant factor in aggravating, contributing to, or causing the employee's COPD.

2. In your opinion, is it at least as likely as not that exposure to Monel and welding fumes during the course of employment at the K-25 Plant was a significant factor in aggravating, contributing to, or causing the employee's Parkinsonism?

   Answer: No, in my opinion, it is not at least as likely as not that exposure to Monel and welding fumes during the course of employment at the K-25 Plant was a significant factor in aggravating, contributing to, or causing the employee's Parkinsonism.

3. In your opinion, is it at least as likely as not that exposure to silicon dioxide, amorphous during the course of employment at the Y-12 Plant was a significant factor in aggravating, contributing to, or causing the employee's pulmonary fibrosis?

   Answer: No, in my opinion, it is not at least as likely as not that exposure to silicon dioxide, amorphous during the course of employment at the Y-12 Plant was a significant factor in aggravating, contributing to, or causing the employee's pulmonary fibrosis.
Example 2: SRS employee for > 40 yrs, pulmonary sarcoid dx in 1981

Thank you for referring this case to me for review.

This file was reviewed extensively by me, which included a Statement of Accepted Facts (SOAF), employment information, and a report from an industrial hygienist concerning Mr. [redacted] occupational toxic exposure to beryllium as well as x-ray reports showing a diagnosis of sarcoidosis in [redacted] 1981.

The undersigned was asked to answer the question, Is it "at least as likely as not" that the employee's exposure to beryllium at a DOE facility was a significant factor in aggravating, contributing to, or causing the employee's diagnosis of sarcoidosis based on the guidance provided in the Federal EEOICPA Chapter 18, paragraph 10, Diagnosis of Sarcoidosis?

From the SOAF, we know that Mr. [redacted] was a confirmed covered employee at the Savannah River Site (SRS) from [redacted] 1970 to the present. The industrial hygienist wrote that, "Throughout the course of its operations, the potential for beryllium exposure existed at the Savannah River Site, due to beryllium use, residual contamination, and decontamination activities. Therefore, the employee was employed during a time period when beryllium dust, particles, or vapor may have been present."

Summary and Conclusions:

Because of the statutory guidance, cited above, it is not at least as likely as not that Mr. [redacted] exposure to beryllium at a DOE facility was a significant factor in aggravating, contributing to, or causing the employee's diagnosis of sarcoidosis. He, more likely, has CBD.
Example 2 (cont): CE then gets a 2\textsuperscript{nd} CMC report

I don’t think this physician understands sarcoidosis. Sarcoidosis is not a Part B claim. Sarcoidosis is only accepted under Part E. He states he reviewed an Industrial Hygienist (IH) report, there is no IH report required for sarcoidosis under Part E. He needs to state if he meets sarcoidosis criteria under Part E. If he is stating the employee has Pre-1993 CBD, he must clearly clarify in his medical rationale the medical that meets the criteria. Can we get this back by November 01, 2017.

No documentation found that CE communicated above back to CMC #1.
SOAF documents pulmonary sarcoidosis with progression in employee worked > 40 yrs at SRS.

Thank you for referring the case of [redacted] your case number [redacted] for review. All records that I have been provided with have been reviewed and considered in developing a medical opinion. No diagnosis, treatment or care has been provided as a result of this chart review.

1. Is it “at least as likely as not” that the employee’s exposure to beryllium at a DOE facility was a significant factor in aggravating, contributing to, or causing the employee’s diagnosis of sarcoidosis based on the guidance provided in Federal EEOICPA Chapter 18, Paragraph 10, diagnosis of Sarcoidosis?

Answer: Yes, in my opinion, it is “at least as likely as not” that the employee’s exposure to beryllium at a DOE facility was a significant factor in aggravating, contributing to, or causing the employee’s diagnosis of sarcoidosis based on the guidance provided in Federal EEOICPA Chapter 18, Paragraph 10, diagnosis of Sarcoidosis.

2\textsuperscript{nd} CMC concludes sarcoidosis, not CBD
Solution: Claims examiner’s assessment of treating physician / CMC reports

Extent problem is unclear - may be only a few CEs

Possible solutions:

Additional CE training, oversight

Certain actions automatically prompt review – such as request for CMC if treating physician provides report, need for 2\textsuperscript{nd} CMC.
Conclusions from Review of Cases:

1) Many ARE properly adjudicated.

2) A number of hopefully /potentially fixable problems have been identified from review of cases