



BHSC NEWS

SPOTLIGHT: Worker Environment Beryllium Characterization Study

This report summarizes the conclusion of regular monitoring of occupied buildings at the Nevada Test Site (NTS) and North Las Vegas (NLV) facility to determine the extent of beryllium (Be) contamination in accordance with Judgment of Needs (JON) 6 of the August 14, 2003 "Minnema Report."

Executive Summary

From March 2002, when the U. S. Department of Energy, National Nuclear Security Administration Nevada Site Office (NNSA/NSO) was notified that an employee at NLV had been diagnosed with Chronic Beryllium Disease (CBD), to present (October 2009), periodic monitoring of occupied buildings at the NTS and NLV has been performed for the potential introduction or spread of Be, until the extent of contamination could be determined and controls implemented. During this period, 228 facilities were sampled with over 11,000 surface wipe samples, along with numerous air samples obtained and analyzed. Also during this period, statistical methods of data collection, analysis, and detail were developed and sharpened to provide a high degree of confidence in all results (see Appendices I through 4). All but five of the facilities examined now do not exceed the U.S. Department of Energy (DOE) release criterion (RC) of 0.2 micrograms (μg)/100 square centimeters (cm^2). Of those five, two have been demolished and the other three involve legacy equipment (not in use) or long-term storage.

See Pg. 4 SPOTLIGHT

Chairman's Corner

BY MIKE BRISSON

Chairman, BHSC

I'm keeping my comments brief this month.

As indicated elsewhere in our Spring meeting agenda elsewhere in the *BHSC News*, our keynote speaker for the Spring meeting will be Dr. David Michaels, Assistant Secretary of Labor for OSHA. Dr. Michaels will be speaking to a joint session of the BHSC and the EFCOG/DOE Chemical Safety Workshop. We do not know what he may have to say regarding beryllium, but it is widely understood that OSHA is accelerating the development of regulations for beryllium and silica.

Other highlights of the Spring meeting include:

- Demonstration of Visual Sampling Plan (VSP) on Monday, March 15
- Roundtable on beryllium contamination during D&D work
- Roundtable on new developments in measuring beryllium by optical fluorescence

Presentation by Dr. Terry Gordon, New York University, on Genetic Determinants of Sensitivity to Beryllium in Mice

If you cannot come to Washington in person, remember that you can register to participate remotely.

As my current term as BHSC Chair comes to a close, I would be remiss if I didn't comment just a bit about the last three years. We now have just over 100 members, up from 63 in the

last year and a half. We have done quite a bit together, such as organizing another successful symposium; instituting a regular newsletter; improving our other information-sharing tools; improving the formality of our committee structure; sponsoring science-advancing activities such as last year's BeO round robin; and I'm sure I'm leaving out some things I'll realize later should be listed here. I'm glad to have been a part of it all, and thankful for the part each of you has had.

(The views expressed in the Chairman's Corner are those of the chairman and are not necessarily official positions of the BHSC.)

Special points of interest:

- > SPOTLIGHT ON: Beryllium Characterization
- > Closure of BHSC Sharepoint

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MEETING: JOWOG [US-UK Joint Working Group]

ATTENTION Personnel at DOE/NNSA Sites

JOWOG 3D-1-1, Beryllium Facilities Safety

Summer 2010 June 22-24

AWE Aldermaston United Kingdom

Our hosts at AWE want to be sure that there is enough interest to continue with planning for the meeting. At this point I am looking for interest, not a firm commitment. You will be notified when we need a more firm commitment. At that time, a more detailed agenda will be provided to assist you in obtaining approval for foreign travel. A DOE "Q" clearance, or the AWE equivalent, will be required. Presentations may be classified or unclassified, but will be held in a classified setting. If you are willing to give a presentation (one or more) on behalf of your site on any (or all) of the topics listed, please let me know by Friday March 12.

Mike Brisson, Chair
Beryllium Health and Safety Committee

DRAFT AGENDA

Focus Areas

- Applications of controls, ventilation, and IH surveillance to D&D work

Emergency response

Objectives

- Share best practices and lessons learned
- Improvement opportunities for risk management

Updates on medical surveillance and response

Monday, 21 June 2010

Mid-morning Registration, visitor badges, etc. Welcoming and plenary presentations

Afternoon Presentations - Industrial Hygiene, Risk Communications

Tuesday, 22 June 2010

Morning Presentations – Engineering Controls

Afternoon Facility tours – Beryllium manufacturing, R&D, waste/recycling

Evening: TBD social event

Wednesday, 23 June 2010

Morning Presentations – Ventilation

Afternoon Facility tours – Analytical lab, JET visit

Thursday, 24 June 2010

Morning Presentations – Medical, Analytical

Afternoon Facility tours – Plutonium facility (also handles beryllium)

BHSC Board Report

MIKE BRISSON

Chairman, BHSC

The Board had a teleconference on February 17, 2010. The following are highlights of items discussed:

- Approval was given to use BHSC funds to pay travel expenses for Dr. Terry Gordon to the spring meeting, and for beverage service (coffee, etc.).
- Revisions to the BHSC Charter continue in progress. John Bishop is leading this effort. The goal remains to distribute the proposed new charter to the membership prior to the Spring meeting, and vote on it at the meeting.
- A phased shutdown of the Sharepoint collaboration site was approved (see separate article in this newsletter).

Progress continues on the white paper, "Developing Alternative Medical Testing Procedures for CBD Detection". Current plans are for discussion between the Med/Epi and Research Needs subcommittees at the Spring BHSC meeting. It will not be ready for a vote by the membership until after the Spring meeting.

As a reminder, BHSC Board meetings and teleconferences are open to others who may be interested. Please contact Mike Brisson for additional information.

NOTE: *These are not official minutes. Board minutes are separately produced by the Secretary and approved by the Board.*

MEETINGS: JOWOG [US-UK Joint Working Group] - BHSC BOARD - BHSC

JOWOG / BHSC BOARD Meeting: Fall 2010

Fall 2010: Livermore California
November 2

BHSC Meeting: Fall 2010

Fall 2010: Livermore California
November 3-4

MEETING LOCATIONS

Locations for the Spring 2011 and Fall 2011 meetings are now being solicited.

Fall meetings are typically in the western U.S.

Spring meetings are typically in the eastern U.S. (or at AWE).

Locations typically need to be at a DOE, DoD, or AWE site.

NOTE: *If you would be interested in hosting a meeting, please contact Mike Brisson.*

BERYLLIUM HEALTH & SAFETY COMMITTEE

BHSC BOARD MEMBERS

Mike Brisson, Chairman
Geoffrey Braybrooke, Vice Chair

David Weitzman, Vice Chair
Dan Field, Secretary

Amy Ekechukwu
Tony Quinn

Mike McCawley
John Bishop

Tom Ford

Linda Youmans-McDonald

Lisa Barker

Paul Wambach

Kathleen Noonan

Spotlight (cont.)**Worker Environment Beryllium Characterization Study**

The full text report is provided at the following url.

http://www.osti.gov/bridge/product.biblio.jsp?query_id=0&page=0&osti_id=970811

Thanks to Danny Field and Paul Wambach for bringing this article to our attention.

Board: Lung disease risk too high at Hanford

By Annette Cary, Herald staff writer

Tricityherald, Friday, Feb. 05, 2010

KENNEWICK -- The Hanford Advisory Board is questioning whether the Department of Energy is doing enough to protect Hanford workers from an incurable lung disease caused by exposure to beryllium.

DOE officials in Washington, D.C., are about to launch a review of the Hanford beryllium protection program because of the concerns of some workers. But by the time that review is finished, three more cases of chronic beryllium disease could be diagnosed if current trends continue, said board member Mike Korenko at a meeting Thursday of the advisory board in Kennewick.

"How can you not look at that data and have adrenaline flowing?" he asked Doug Shoop, deputy manager of the DOE Hanford Richland Operations Office. Ten months have passed since the advisory board last recommended that DOE improve its beryllium protection program, and since then three more Hanford cases of chronic beryllium disease have been verified. That brings the total with the disease to 32 and the number of workers determined to be sensitized to beryllium to 95, up from 88. Workers with an allergy-like

See page 8

Conference Call Schedule—MARCH 2010 (All times Eastern Standard Time)

If you are told that the subscriber has not yet arrived, please do not hang up; wait about 15 seconds and you will be prompted for your name, and then you will be connected to the call.

For our European friends, please note that the U.S. begins observing Daylight Savings time on Sunday, March 14, two weeks before it begins in Western and Central Europe. Our calls will therefore be one hour sooner for you than usual from March 14-28.

| Date | Day | Time | Group | Leader |
|-------------|-----|-------|--------------------------|---------------------------------|
| 03-Mar-2010 | Wed | 11 AM | LIBS WG | Rick Russo |
| 04-Mar-2010 | Thu | 11 AM | Fluorescence WG | Anoop Agrawal |
| 09-Mar-2010 | Tue | 11 AM | Sampling/Analysis SC | Amy Ekechukwu |
| 09-Mar-2010 | Tue | 3 PM | Research Needs SC | Mike McCawley |
| 10-Mar-2010 | Wed | 11 AM | Medical/Epidemiology, SC | Paul Wambach Kathleen Noonan |
| 11-Mar-2010 | Thu | 11 AM | Risk Communication SC | Lisa Barker |
| 23-Mar-2010 | Tue | 3 PM | Technical Standards SC | David Weitzman |
| 30-Mar-2010 | Tue | 11 AM | Sampling WG | Geoff Braybrooke |

NOTE: Regular conference calls that would normally occur during the week of March 15 will not be held.

Sub-committee and Working Group breakouts will be held at the BHSC meeting.

Those who have registered to participate remotely in the meeting will receive webinar and call-in information.

**Conference Call
Number**

803-725-1403

**Pass code
2227011**

*Scheduled duration is one
hour for all calls*

New ASTM Standard Proposed for Beryllium Surface Wipes

Discussions within the Fluorescence and Sampling Working Groups have identified a need for a new ASTM standard for beryllium surface wipes. Currently, wipes are manufactured to ASTM standards E1728 and D6966, which were developed for lead and are typically certified lead-free, but not beryllium-free. Input from interested parties is being solicited. If time permits, this may be discussed at the March 16-17 BHSC meeting; otherwise, the Sampling Working Group will discuss it during their March 30 conference call. The March 23 discussion reached the following initial conclusions:

One standard that combines the details from ASTM E1728 and D6966 while adapting to beryllium should be adequate. At least two different size ranges should be included, one being the present size as for the lead sampling for wiping larger areas, and also a smaller size so that lower amounts of dissolution solution can be used to obtain higher sensitivity.

Singly packaged wipes are preferred to avoid cross contamination and to maintain more uniform wetting amongst wipes. Based on these arguments the committee that approved the lead wipes was quite opposed to packing multiple wipes in a single package. It appears that some sites, such as Y-12, may prefer multiple wipes in a single package. Representatives from these sites need to be brought into discussion to understand why multiple wipes packaged in a single package are more suitable so that an appropriate solution can be found.

Input will be obtained between now and the next phone meeting on this issue March 30, 2010. Input will also be obtained in person during the Spring BHSC meeting in Washington DC in mid-March.

Based on the outcome of the meeting on March 30th, an outline for a proposed standard will be presented to the ASTM meeting on April 23, 2010 in Saint Louis and a work package number will be obtained thereafter.

The first draft of the test will be submitted to the ASTM at their fall meeting of 2010 which will be held in San Antonio.

EXPERIENCING BHSC SPRING 2010

Remote viewing of presentations will be available using GoToMeeting™. The web link, will be provided to those who have registered for remote participation. Remote users should ensure in advance that the computers they intend to use are compatible with webinar software, such as GoToMeeting™. Foreign nationals must register separately; contact David Weitzman (301 903-5401, david.weitzman@hq.doe.gov) for the procedure.

ABIH Points:

ABIH points will be requested and sign-in sheets will be provided to attendees at the conference. Instructions for obtaining ABIH points, will be provided to those who have registered for remote participation.

Telephone Conferencing:

To participate remotely by telephone conferencing phone: +1-803-725-1403, access code 2227011.

Security in the Forrestal Building:

Guards at the security desk will check visitors against the list of people that registered on-line for the meeting. Visitors will be asked for a picture ID to sign-in; and will be given a visitor's badge. Allow 15 minutes for sign-in. Visitors keep the same badge each day but turn it in and retrieve it if leaving and returning during the same day. The sign-in process is repeated each day. Access to certain areas of the building is restricted and controlled. Visitors will have access to the balance of the building which includes the rooms for this meeting, the cafeteria, and snack bars. Most visitors will not require escorts in these areas. Foreign national visitors from certain countries will require escorts. Laptop computers, digital media (e.g., thumb drives, CDs), and cell phones may be brought into the building. Visitors must obtain a property pass for their laptop computer upon entering the building in order to be permitted to leave with it. Guards at the security desk will issue a property pass each day that must be kept by the visitor while in the building.

AGENDA

Spring 2010 BHSC and Affiliated Meetings – March 15-17, 2010

U.S. DOE Headquarters, Forrestal Building, Washington, DC

Monday, March 15*Location: Small Auditorium, ground floor,**GJ-D15*

0830-1200 BHSC Board Meeting – Open to all interested

1200-1330 LUNCH

1330-1630 VSP demonstration, Dr. Jayne-Anne Bond

Tuesday, March 16

Conference Line: 301 903-9156

BHSC Meeting*Location: Small Auditorium, ground floor**GJ-D15*

08:00-08:30 Registration, Coffee

08:30-08:45 Welcoming Remarks

08:45-10:15 Roundtable #1: Be Contamination during D&D Work
 Hanford– Scott Seydel
 Portsmouth– Dan Ruggles
 Kansas City Plant– Bill Frede

10:15-10:30 BREAK

10:30-12:00 Roundtable #2: BeD Measurement by Optical Fluorescence
 Use of the Automated Fluorescence System for Beryllium Measurement Tom Oatts, Y-12
 Measurement of Beryllium by Optical Fluorescence using pre-wetted wipes Linda Youmans-McDonald, SRS
 Further studies of pre-wetted wipes to measure beryllium oxide by optical fluorescence Anoop Agrawal, Berylliant

12:00-13:30 LUNCH

13:30-14:15 Update on TLV position paper: Gary Whitney, LANL./ input from Sandia

14:15-15:00 Former Worker Surveillance Program: Donna Cragle, ORISE

*Locations: Small Auditorium,**GJ-D15**GH-D27**GA-D92*

Conference lines: 301 903-9156 301 903-9157 301 903-9158

15:00-17:00 Subcommittee Breakouts

15:00-16:15 Individual subcommittees except Meetings/Symposia

16:15-17:00 Joint meetings and Meetings/Symposia subcommittee

AGENDA

Spring 2010 BHSC and Affiliated Meetings – March 15-17, 2010
U.S. DOE Headquarters, Forrestal Building, Washington, DC (Cont.)

Wednesday, March 17

Conference Line: 301 903-9156

Location: Small Auditorium, ground floor***GJ-D15***

| | | |
|-------------|--|-----------------------|
| 08:00-08:30 | Registration, Coffee | |
| 08:30-09:00 | Reports (Board, BHSC Operations, Membership, etc.) | |
| 09:00-09:25 | Business Meeting (Election of Chairperson; revised BHSC charter) | |
| 09:25-09:45 | Brief Updates (IOCFR850, AIHA, JOWOG 30-1-1, etc.) | |
| 09:45-10:15 | Development of Hanford CBDPP – | Scott Seydel, Hanford |
| 10:15-10:35 | BREAK | |

Location: Large Auditorium***GE-D86***

| | | |
|-----------------|--|--|
| 10:35-10:45 DOE | Worker Safety and Health Initiatives: | Glenn Podonsky, Chief Health Safety & Security Officer, DOE/HSS |
| 10:45-11:30 | Keynote Presentation: Chemical Safety and OSHA, | Dr. David Michaels, Assistant Secretary of Labor for OSHA |
| 11:30-13:00 | LUNCH | |

Location:***SE-D81***

| | | |
|-------------|---|---|
| 3:00-14:00 | Genetic Determinants of Sensitivity to Beryllium in Mice: | Dr Terry Gordon, Prof. of Environmental Medicine, New York University |
| 14:00-14:45 | Communicating the Risks of Beryllium Exposure: | Dr. Annyce Mayer, National Jewish Health |
| 14:45-15:00 | BREAK | |
| 15:00-15:45 | Unclassified Portion of Fall 2009 JOWOG Presentation on Beryllium | |
| | Decontamination: | Gary Whitney, LANL |
| 15:45-16:30 | Subcommittee Reports | |
| | Risk Communication | (Lisa Barker) |
| | Research Needs | (Mike McCawley) |
| | Technical Standards/Practices/Measures | (David Weitzman) |
| | Medical/Epidemiological | (Kathleen Noonan) |
| | Meetings and Symposia | (Linda Youmans-McDonald) |
| | Sampling and Analysis | (Amy Ekechukwu) |
| 16:30-16:45 | Wrap-up | |
| 16:45 | Meeting Closes | |

All times are local (Eastern Standard or GMT-5).

Closure of BHSC Sharepoint Collaboration Area

After some discussion with our webmaster at Sandia, the BHSC Board has voted to close down the Sharepoint portion of the BHSC web site. This is the portion of the site that is in the Sandia collaboration domain requiring a password for access. This does NOT include or affect the information available without a password through www.sandia.gov/BHSC, which will remain available to the public.

Maintenance requirements for the Sharepoint pages have become increasingly challenging over the last year or so. Use of the Sharepoint pages has not been substantial enough to justify the increasing level of effort to maintain the resource.

We are implementing the closure in several phases:

- First, effective immediately, no new users will be given access to the Sharepoint area.
- Second, effective March 11, 2010, access to the Sharepoint area will be restricted to BHSC Board members only. During the intervening two weeks, users are asked to check the Sharepoint area for any information they may want to retrieve. Subcommittee chairs will be asked to ensure that they copy any information they wish to retain.

Finally, effective March 25, 2010, access will be closed to all users. The Board will use this final two-week period (March 11-25) to transfer the information on the Sharepoint pages to other locations so that we do not lose the files entirely.

At this time, the Board has not identified an alternative resource for the information currently on our Sandia Sharepoint pages. This topic will be discussed at the Board's meeting in Washington, DC, on March 15.

Board: Lung disease risk too high at Hanford (cont.)

ease if exposed to fine particles of the metal. Beryllium was used at Hanford in the production of fuel for reactors, among other uses, and particles remain in the dust in some buildings. If workers test positive for the sensitivity to the metal, their risk of developing chronic beryllium disease may be reduced if they are not further exposed to the metal. Today the board will consider sending a letter to DOE highlighting its concerns with the program. It also is expected to issue advice that it discussed Thursday, saying that DOE should arrange an independent review of the beryllium program rather than doing it internally. If DOE does it itself, "it does not pass the snicker test" for affected workers, said Keith Smith, a board member. When the board sent recommendations to DOE last spring on its beryllium protection program, DOE replied that it was already doing everything suggested, according to the board. "Unfortunately, status quo is not adequate" given increasing cases of chronic beryllium disease, according to a draft letter the board will discuss sending to DOE today. DOE could be using easily available techniques to pinpoint the source of beryllium, the draft letter said. That includes questioning sensitized employees about where they have worked to determine potentially undiscovered sources of beryllium. Many Hanford workers are reluctant to be tested for beryllium sensitivity, the draft letter said. But DOE has not conducted a study to determine the reason employees are not being tested and to find ways to motivate them to be tested, the draft letter said. DOE needs to be more aggressive in letting retired workers know they may be at risk of chronic beryllium disease, the draft letter said. Some board members believe that most former workers have not heard of the disease. The board is hoping that a new prevention program that started being used across the site last month will better protect workers, even if further improvements are needed. Affected workers and union safety officials were directly involved in developing the new program, so DOE believes it will be accepted well by Hanford workers, Shoop said. It would provide uniform policies among contractors which would better protect workers such as electricians who may move from project to project. It also offers new training and more controls for beryllium, Shoop said. Last summer, leaders of the advisory board met with Ines Triay, the DOE assistant secretary for environmental cleanup, and told her they were concerned that the recommendations and commitments from two earlier independent reviews of Hanford's beryllium prevention programs had not been implemented, according to the board's proposed advice.



The **Beryllium Health and Safety Committee (BHSC)** is committed to preventing beryllium sensitization and chronic Beryllium Disease (CBD) and other adverse health effects that can be caused by workplace exposure to beryllium.

The Mission of the BHSC will be accomplished by:

- Promoting the safe use of beryllium
- Obtaining a better understanding of exposure risks
- Improving exposure monitoring
- Fostering improved controls
- Accumulating and Disseminating information concerning beryllium process best work practices, as well as, data from the health studies concerning the hazards associated with beryllium
- Training / mentoring of beryllium health professionals
- Identifying and promoting research that has the potential to enhance or improve our worker safety programs

BERYLLIUM HEALTH & SAFETY COMMITTEE

Use of DeconGel® for Beryllium Cleanup

Wins Department of Energy's Environmental, Security, Safety and Health Achievement Award

Honolulu, Hawaii, February 9, 2010 /PRNewswire

[Edited]

CBI Polymers, a subsidiary of Cellular Bioengineering, Inc., is pleased to announce that National Energy Technology Laboratory (NETL) and Safety and Ecology Corporation (SEC) have won the Environmental, Security, Safety and Health (ESSGH) Achievement Award in recognition of their innovative use of DeconGel® as a beryllium decontamination technique for the mitigation and abatement of hazardous particulate.

NETL, part of DOE's national laboratory system, is owned and operated by the U.S. Department of Energy (DOE). NETL testing and use of DeconGel® in beryllium decontamination reduced labor costs by a reported 70% compared to traditional methods due to decreased labor requirements, and significant reductions in the volume of waste generated.

DeconGel® reduced harmful potential exposure to workers. Traditional beryllium decontamination methods include the wet/wipe method, high detergent application and scrubbing technique, organic solvent application and removal, particulate vacuums, and sticky cloths. These methods are expensive, time consuming, and can be a safety hazard due to prolonged worker exposure and generation of airborne particles. "The problem with beryllium and other toxic substances is that traditional cleaning methods simply don't work well on rough porous surfaces to remove contaminants from microscopic pores. However, DeconGel® works effectively on both smooth and rough hard surfaces, even with complex three dimensional structures, and can generally reduce contamination to below safe levels with one single application," ended Stack.

DeconGel® is a safe, non-toxic, peel away hydrogel that requires minimal training to use and has a stable shelf life. While DeconGel® is gaining in use within the Department of Energy sites for remediation of radiological, nuclear, and hazardous chemical substances such as beryllium,

Full text article: <http://multivu.prnewswire.com/mnr/cellularbioengineering/40559/>

Jim Jenkins
BHSC NEWS, Editor

Industrial Hygiene
 B&W Y-12 National Security Complex
 Phone: 865-576-7180
 Fax: 865-576-2213
 E-mail: jenkinsjljr@y12.doe.gov