VIII-B-Chemical Heritage

September 23, 2015

To: SAS Governing Board

From: David S Trimble, Ph.D.

Subject: Chemical Heritage Foundation
SAS Delegate Report

The spring governance meetings of the CHF were held May 13, 2015. The draft minutes for that meeting are attached. I was not able to attend these meeting or Heritage Day due to serious family health issues. It is also my understanding that nobody from the SAS Executive Committee was unable to attend Heritage Day.

Brief Summary of Spring 2015 Meetings:

The meeting of the *Instruments and Artifacts Committee* was held per usual ahead of the general Heritage Council meeting. Dick Howe, who many of us know from PittCon involvements, is now the chair of the committee. The group discussed how they could provide new/better services to the CHF, specifically: 1) intellectual control of the current collection, 2) Enrich our knowledge of current collection holdings, 3) how can more innovative usage of the collection to engage the variety of audiences who visit/research the CHF.

Gray Patterson reported on the activities of the *Bolton Society* (a group focused on the written word and historically significant chemical texts):

- The Bolton Society continues to sponsor symposia at ACS HIST division meetings. The next two are "Preceptors of Chemistry" at San Diego (March 2016) and "Chemistry in America Before 1876" (Philadelphia, August 2016).
- A new issue of Boltonia is nearing completion.
- Another joint meeting with ACS HIST and the Society for the History of Alchemy and Chemistry (SHAC) is in the planning stages.

This is a fascinating group I had never heard of – SHAC – please visit their website: www.ambix.org .

A comprehensive presentation of the work done by CHF's Othmer Library of Chemical History in building and maintaining the archive was given by:

Patrick Shea, Chief Curator of Archives and Manuscripts

Andrew Mangavite, Senior Archivist

Hillary Kativa, Archivist for Photographic and Moving Image Collections

Sarah Newhouse, Digital Collections Archivist

I have forwarded copies of the power point presentations for the first three speakers to Bonnie – I am sure she will forward them to any interested parties.

Heritage Council Chair, Gary Patterson, brought up the concept of “working groups” for the Council during the fall 2014 meeting. These same groups re-convened to discuss 1) Instrumentation, 2) Membership (esp. internationalization), and 3) Communications/Messaging. Details are in the attached meeting minutes.

Future meeting dates for meetings of the Heritage Council include:

Wednesday, October 7, 2015
Wednesday, May 11, 2016
Wednesday, October 5, 2016

Respectfully Submitted,

Dave Trimble

Minutes of the Thirty-second Heritage Council Meeting
Held at Chemical Heritage Foundation in Philadelphia on
May 13, 2015

These notes summarize the discussions, decisions, and action items made during the thirtieth Heritage Council meeting on May 13, 2015 at CHF in Philadelphia and were prepared by Bob Kenworthy of CHF. The meeting was held on the day before Heritage Day and ran from 10:30AM – 5:30PM.

MEETING ATTENDEES:

Affiliate Representatives/Members-at-Large/Observers:

Gary D. Anderson – Alpha Chi Sigma Fraternity
Tom Archibald – AIChE
John P. Baltrus – PITTCON
Martha Carper – AATCC
Marc Donahue – Council for Chemical Research
Roger Egolf – Division of the History of Chemistry of the American Chemical Society
Ernest Gilmont – Société de Chimie Industrielle (by Go-To-Meeting)
L. Louis Hegedus – National Academy of Engineering (Observer)
Melissa Hockstad – American Fuel and Petrochemical Manufacturers
W. Richard Howe – Member-at-Large
Peter Lederman – Member-at-Large
David Manuta – American Institute of Chemists
Anne O'Brien – ACS
Gary Patterson – Member-at-Large
Joe Pilaro – Member-at-Large
Moayyed Al-Qurtas – Gulf Petrochemicals and Chemicals Association (GPCA)
Philip E. Rakita – Member-at- Large
John Rice – Chemical Educational Foundation (by Go-To-Meeting)
John Sharkey – ACS (by Go-To-Meeting)
Kevin Swift – American Chemistry Council
Barry Tarmy – AIChE

Guests

Ned Heindel – Board of Directors, **Robert Fox** – Board of Directors

Chemical Heritage Foundation Staff

Carsten Reinhardt, Ron Brashear, Shelley Geehr, Kathryn Humphreys, Hillary Kativa, Andrew Mangravite, Erin McLeary, Sarah Newhouse, Sarah Reisert, Jody Roberts, Patrick Shea, Brigitte Van Tiggelen, and Bob Kenworthy.

Thirty-second Meeting of the Heritage Council
of the Chemical Heritage Foundation
May 13, 2015
Agenda

This meeting of the Heritage Council members will focus on the development of the Working Group concept, additional learning about the collections of CHF, and information of interest to affiliates and their representatives.

10:30 a.m.	Welcome and Introductory Remarks – Gary Patterson Approval of October 8, 2014 Meeting Minutes
10:45 a.m.	Round Table Introduction and General Reports • Bolton Society • Instruments and Artifacts Committee • Joseph Priestley Society • Membership Committee • Nominating Committee
11:15 a.m.	Presentation on the Recently Published Gordon Moore Biography Arnold Thackray
12:00 noon	Luncheon
1:00 p.m.	In-Depth Review of Archiving Practices – Patrick Shea Outcome: Affiliates will gain an overall appreciation of archiving as a discipline and of CHF's approach to it. They also have the opportunity to interact with CHF Collections Leadership
3:00 p.m.	Break
3:30 p.m.	Continued Development of Working Groups Including New Additions. Established Working Groups are: • Instrumentation: • Membership (The World of Chemistry): • Messaging: Outcome: Affiliates will continue to develop, in a way that meshes with the overall CHF mission and strategy, being more active in smaller group settings.
5:00 p.m.	Meeting Review and "Messages to the Board" Outcome: Affiliates will review material presented and advise chair, Gary Patterson, about anything he should take to the Board of Directors on behalf of the Heritage Council
6:00 p.m.	Reception and Dinner for Heritage Day Awardees

Welcome and Opening Remarks

Chair, Gary Patterson, welcomed all to the meeting and offered introductory remarks describing the Heritage Council and setting the stage for the following discussions at this meeting.

Approval of Minutes

The Minutes from the October 8, 2014 meeting were approved unanimously.

General Reports

Bolton Society

Gary Patterson provided the report from the Bolton Society as follows: The Bolton Society continues to grow and develop. We are still gaining members, but we are also losing members to death and

disaster. The highlight of this meeting was the election of a new Chief Bibliophile: John Sharkey (a charter member). Additional items of interest are:

- The Bolton Society continues to sponsor symposia at ACS HIST division meetings. The next two are "Preceptors of Chemistry" at San Diego (March 2016) and "Chemistry in America Before 1876" (Philadelphia, August 2016).
- A new issue of Boltonia is nearing completion.
- Another joint meeting with ACS HIST and the Society for the History of Alchemy and Chemistry (SHAC) is in the planning stages.
- The collectors showcase was especially rich with an original paper in its wrappers written by Berzelius in Swedish. It describes his principles for mineralogy.
- Several books were donated to CHF by Ronald Smeltzer and Gary Patterson.

Instrument and Artifact Committee (HCIAC)

Dick Howe reported for the HCIAC. At their morning meeting, the HCIAC first enacted a resolution of commendation to Michael Grayson for the work he has done as a member of and chair of the HCIAC over the years. That letter of commendation is shown as Attachment I to these minutes. The committee then welcomed its newest member; Professor Charles Lyman, Lehigh University, and editor of Microscopy Today. Dick encouraged all to recommend additional members for the HCIAC as the originating group has diminished.

The committee discussed how they could provide enhanced service to CHF. Specifically, they discussed:

- Intellectual control of the current collection
  - How is the current inventory accessed via the web?
  - How can we best review the current inventory to determine existing voids and/or needless duplications?
  - What needs to be done with the evaluations that result from this review?
- Enriching the knowledge of what we hold in the collection now
  - What descriptive information exists for each item in the current inventory?
  - What additional fields could/should be added to better identify the importance and contributions made by each item in the collection?
  - How can this additional information be properly accumulated, verified and introduced to the existing data base?
- How can we identify innovative usage of our collection for engagement of the multiple CHF audiences?

Joseph Priestley Society

Bob Kenworthy gave the JPS report in the absence of Wayne Tamarelli. The full detailed report on JPS activities was given in writing with the agenda for this meeting and is attached to these minutes as Attachment II.

Membership Committee

Bob Kenworthy provided a brief report from the Membership Committee noting that the Gulf Petrochemicals and Chemicals Association (GPCA) had affiliated with CHF and was therefore a new member of the Heritage Council. Dr. Moayyed Al-Qurtas represented GPCA at this meeting.

Nominating Committee

There was no report from the Nominating Committee

Specific Reports

Presentation on the Recently Published Gordon Moore Biography

Arnold Thackray made a presentation to the Heritage Council about his authorized biography (co-authored with David Brock and Rachel Jones) of Gordon Moore—chemist, semiconductor pioneer, and cofounder of Intel Corporation, *Moore's Law: The Life of Gordon Moore, Silicon Valley's Quiet Revolutionary* (Basic Books, 2015). Excepted from that presentation and from the book is the following:

Moore was born in 1929 near San Francisco. Inspired by his early love for chemistry sets, Moore eventually earned a PhD in physical chemistry at the California Institute of Technology. In 1956 he joined the Shockley Semiconductor Laboratory of Beckman Instruments, where he worked for a year until his career took off in an interesting way.

In a bold move Moore left Beckman Instruments with the so-called traitorous eight and helped found Fairchild Semiconductor Corporation. Here Moore began his life-changing work on what would eventually become silicon microchips.

Moore realized that in order to produce cost-effective microchips the chemical technology behind them had to be improved and that this technology would develop rapidly. He hypothesized that microchips would double in complexity every year (later revised to every two years), and this realization is now referred to as Moore's law. In 1968 Moore left Fairchild and with Robert Noyce cofounded Intel, which is now the world's largest microchip maker, with Moore as its longest-serving CEO.

In-Depth Review of Archiving Practices

A comprehensive presentation of the work done by CHF's Othmer Library of Chemical History in building and maintaining the archive was given by:

Patrick Shea, Chief Curator of Archives and Manuscripts
Andrew Mangavite, Senior Archivist
Hillary Kativa, Archivist for Photographic and Moving Image Collections
Sarah Newhouse, Digital Collections Archivist

Their presentation slides are given as Attachments III through VI. Patrick Shea first gave a comprehensive overview of what an archivist and the archives profession are, complete with illustrative photographs to show the distinctions that exist in people's minds and in reality. His presentation was followed by Andrew Mangavite's presentation of what CHF's archival holdings are and how to access them.

Hillary Kativa presented CHF's photographic collection holdings and a discussion of the unique challenges of identification, description, preservation and copyright in an image archive. The final presentation of the day was by Sarah Newhouse who brought everyone into the 21st century with an overview of electronic records and digital collections. Following these presentations, the whole CHF archives group fielded questions from the members of the Heritage Council.

Breakout Discussion of Working Groups

After a short break, Gary Patterson reconvened the group with a request that three working groups formed at the October 2014 Heritage Council meeting re-gather to discuss the progress made and potential future actions. Those who joined each group and their reports back to the whole Heritage Council follow:

Instrumentation: Gary Anderson, Dick Howe, John Baltrus, David Manuta, Erin McLeary, and Jody Roberts.

The Instrumentation Working Group was composed essentially of the members of the HCIAC and so this session was a continuation of the morning meeting in many ways. In his afternoon report, Dick Howe emphasized the reliance that the group places on Erin McLeary and her team, noting that the HCIAC can provide meta data for the needed digitalization of the CHF collection. Other activities of this group will be assistance with the next exhibit in finding and acquiring (if needed) the instruments to be displayed; questions to ask potential donors of instruments; assistance with deaccession of instruments in the current collection; and, expanding the membership of the HCIAC.

Membership (Internationalization): Philip Rakita, Martha Carper, Joe Pilaro, Ann O'Brien, Peter Lederman, Brigitte Van Tiggelen, and Carsten Reinhardt.

Carsten Reinhardt gave the report from the Internationalization Working Group and noted that it had focused its discussion on establishing a more engaged relationship with professional societies in Europe. Beginning with the professional connections CHF already has to working professionals in many European countries, the creation of a value package that enables the creation of a kind of Heritage Council in Europe based on heritage, collections and patrimony was seen as the initial opportunity in this area. Carsten also noted plans of inroads by CHF into India through the oral history program. The Gulf Petrochemicals and Chemicals Association (GPCA) also may give CHF connection to the Middle East.

Messaging: Tom Archibald, Marc Donohue, Melissa Hockstad, Louis Hegedus, Roger Egolf, Gary Patterson, and Shelley Geehr.

Marc Donohue presented the work of the Messaging Working Group which focused its discussion on the societal image of chemistry and how to improve that image. The group recommended that attention be focused on high school and possibly middle school students through their teachers and school systems. The contribution that CHF can make in this area is in telling the stories of people who made a difference in the advancement of society and living standards. Who are they? What are their stories? How can 3-5 minute vignettes be created as part of a curriculum so that they are

understandable and relevant to a class? The group acknowledged that help from communications and education professionals will be required to make this work. For example, what makes up a good teaching guide that will be used? The group also noted that interest is heightened by competitions such as the *It's Elemental* video competition which was conducted during the International Year of Chemistry (2011).

Meeting Review and "Messages for the Board"

Gary Patterson agreed that the reports from the Working Groups provided him with enough information for his use in presenting to the CHF Board of Directors. All agreed that this meeting was a worthwhile and quality meeting.

The meeting adjourned at 5:30pm.

Planned Dates for Future Heritage Council meetings are:

Wednesday, October 7, 2015
Wednesday, May 11, 2016
Wednesday, October 5, 2016

Heritage Council of the Chemical Heritage Foundation
Mission Statement

The Heritage Council represents the broad community drawn from chemistry, chemical engineering and molecular sciences interested in chemical heritage. The Council:

- Supports and counsels the Chemical Heritage Foundation on its mission and ways to accomplish it;
- Provides and enhances communication and collaboration between CHF and its Affiliated Organizations;
- Encourages and coordinates volunteer activities to augment CHF staff in carrying out the work of CHF; and
- Provides networking opportunities and discussion forums for key individuals in academe, government, and industry who are interested in the history, progress and future of the chemical and molecular sciences and related technologies.