Division of Chemical Health & Safety
Executive Committee ACS Spring 2016 Meeting

Sunday, April 2, 8 AM to Noon
Park Central Hotel, Franciscan I

Officer Reports (8:30am-9:30am)

Chair's Report – Harry Elston (see attachment 1)

JCHAS Editor's Report – Harry Elston (see attachment 1a)

Treasurer's Report – Neal Langerman and Mary Beth Koza (see attachment 2)

Visit from Peter Dorhout, approximately 9:15 AM

Secretary's Report – Ralph Stuart (see attachment 3)

Past Chair's report – John Palmer (see attachment 4)

Safety Guidelines for the Chemistry Professional – Ken Fivizzani (see attachment 5)

National ACS Safety Award Proposal – Bob Hill (see attachment 6)

New items (Neal Langerman):

- Corporation Associates report (see attachment 6a)
- Safety in ACS Journals Guidance (see attachment 6b)
- E learning course developments

Awards Committee Report – Doug Walters (see attachment 8)

Programming Committee – Debbie Decker (see attachment 9)

Government Relations Committee – Ellen Sweet (see attachment 10, 10A and 10B)

Long Range Planning Committee – Sammye Sigmann (see attachment 11)

Other reports from the floor

Attachment 1

Chair's Report
Spring 2017 – San Francisco
March 2017

Welcome to San Francisco!

This Spring will be one of the busiest national meetings we have had in recent history. Debbie Decker and Joe Pickel have put together a programming lineup that will be a week that will live in infamy. Likewise, Robin Izzo has lined up a great Social on Monday night just before SCIMIX.

There has been quite a bit of activity since the last National Meeting:

- The Division applied for an Alfred P. Sloan grant for the development and presentation of professional-level, risk based chemical safety training and also to recognize leaders in chemical safety through our awards program. Unfortunately, this request was not funded by the Alfred P. Sloan Foundation.
- We have acted on two requests by DAC for feedback on potential probationary divisions: Space Chemistry and Materials Chemistry
- Our Cannabis Subdivsion is having great success in networking and fundraising for Cannabis related programming. Additionally, their efforts have resulted in an increase in CHAS membership by approximately 100 new members. Ezra will have more on that.
- Since the last national meeting, the Society has adopted safety as a core value and ACS Journals now require safety information in publications. These two items occurred in December of 2016 and the Division's leadership was instrumental in these safety success stories!
- We are exploring the establishment of a Society-level award in safety – Dr. Robert Hill is spearheading that effort.
- We saw the completion of one CCS/CHAS guidance document in 2016 and will see another one at this meeting.
- The treasurer turn-over is moving forward smoothly. Mary Beth will be handling travel reimbursements for this meeting.

This division moves forward because of the whole-hearted dedication of individuals moving in the same direction with the same endpoint – connecting chemistry and safety. I am proud of our accomplishments so early in 2017. It will be an exciting remainder of the year!

I wish each of you a successful meeting in San Francisco.

Harry Elston

Attachment 1

JCHAS Editor's Report
Spring 2016
(San Francisco ACS Meeting)
Prepared 12 March 2017

Pipeline

The pipleline is complete through the Sep/Oct 2017 issue – we will be filling Nov/Dec 2017 next. Approximately five to eight manuscripts per month have been submitted since September of last year and of those five to eight, usually one or two will get through to the review stage. The primary causes for rejection at the top level are (1) English grammar/punctuation and (2) Outside the scope of the publication.

We have been getting some interesting articles that are within the scope of JCHAS but we are lacking the review expertise among the editorial board. These manuscripts are either heavy in engineering or toxicology. Pure toxicology and toxicology research are routinely referred to other journals, while occupational toxicology-related publications are taken for review. Manuscripts that are engineering-heavy and within the scope of the journal are also taken for review, but usually take a little longer as I need to find engineering folks to provide review.

Stuff at Elsevier

The SCOPUS Challenge has been permanently solved. JCHAS will continue to be listed in SCOPUS for the foreseeable future

EVISE (The new Electronic Submission System): This system went 100% Dilbert on Elsevier last year with a complete system meltdown for the journals that had migrated to it. Lily Khidr, our publisher, pulled all of her journals from migration when the system started to fail, so we did not get moved into the EVISE. Migration is on permanent hold until the EVISE is stable.

Thompson-Reuters Impact Factor: T-R's Impact Factor Metric was sold as a unit (for $3.5B) last year and Elsevier responded by developing their own metric called "CiteScore." JCHAS has a CiteScore, albeit not very large (0.17). The thought is that it's better to have a low metric than no metric. At this stage, we are not being cajoled to improve our CiteScore metric but we may see that in the future.

Attachment 2

TREASURER'S REPORT

San Francisco, 2017

Neal Langerman

Mary Beth Koza

Data as of 6 March 2017

Treasurer's comments

- Reimbursement requests due:
  - **27 April 2017**
  - Send reimbursement requests to
    - Mary Beth Koza (mbkoza2@gmail.com)
  - All receipts in single PDF
  - Name files: Yourlastname_SF_2017
- Financial condition of CHAS: Guarded
  - Unchanged from Fall, 2016 report

BALANCE SHEET SUMMARY

		As of …	22 July 2016	6 March 2017
ASSETS				
	Current Assets			
		Checking/Savings	$52,012	$48,115
	Investments			
	TIAA-CREF inception value as of 1/6/2015		$89514	$97374
TOTAL ASSETS			$122,088	
LIABILITIES & EQUITY	**Liabilities**		$0	$0
	Equity		$122,088	$145,489
TOTAL LIABILITIES & EQUITY			$122,088	$145,489

BUDGET SUMMARY
Calendar Year, 2017

	Budget, $	Actual, $ To date
Income	$116,000	$8390
Expenses	$116000	$8745
Operating Gain/Loss	$0	($355)

CHAS/CCS Booth Costs

- Total costs by National Meeting

2010 – 1	$1063
2010 – 2	$1296
2011 – 1	$1629
2011 – 2	$1453
2012 – 1	$1000
2012 – 2	$1363
2013-1	$964
2013-2	$1713
2014-1	$1417
2014-2	$2451
2015-1	$2826
2015-2	$1937
2016-1	$3392
2016-2	$2716

FINANCIAL DETAILS

- Documentation Attached
  - Balance Sheet
  - Profit & Loss Statement
  - Graphical Representations
  - CCS/CHAS Booth cost
  - CANN P&L
  - CANN Transaction Statement

Division of Chemical Health & Safety

BALANCE SHEET

As of March 3, 2017

	TOTAL
ASSETS	
Current Assets	
Bank Accounts	
Bank Fee	1,359.99
CH1A CHECKING	48,114.99
Total Bank Accounts	**$49,474.98**
Other Current Assets	
1499 Undeposited Funds	0.00
Total Other Current Assets	**$0.00**
Total Current Assets	**$49,474.98**
Other Assets	
C INVESTMENTS & OTHER ASSETS	-1,420.89
C1 INVESTMENTS/ASSETS - UNRESTR.	
C1D2 AMERIPRISE MUTUAL	-8,199.14
C1D2-1 FMV Adjustment, Ameriprise	8,226.70
C1D2-2 Ameriprise Setrtlement Fund	-27.56
Total C1D2 AMERIPRISE MUTUAL	**0.00**
Total C1 INVESTMENTS/ASSETS - UNRESTR.	**0.00**
C4 TIAA-CREF	97,374.00
Total C INVESTMENTS & OTHER ASSETS	**95,953.11**
Total Other Assets	**$95,953.11**
TOTAL ASSETS	**$145,428.09**
LIABILITIES AND EQUITY	
Liabilities	
Current Liabilities	
Credit Cards	
CHAS DEBIT CARD	0.00
Total Credit Cards	**$0.00**
Total Current Liabilities	**$0.00**
Total Liabilities	**$0.00**
Equity	
1110 Retained Earnings	140,529.74
Net Income	4,898.35
Total Equity	**$145,428.09**
TOTAL LIABILITIES AND EQUITY	**$145,428.09**

Division of Chemical Health & Safety

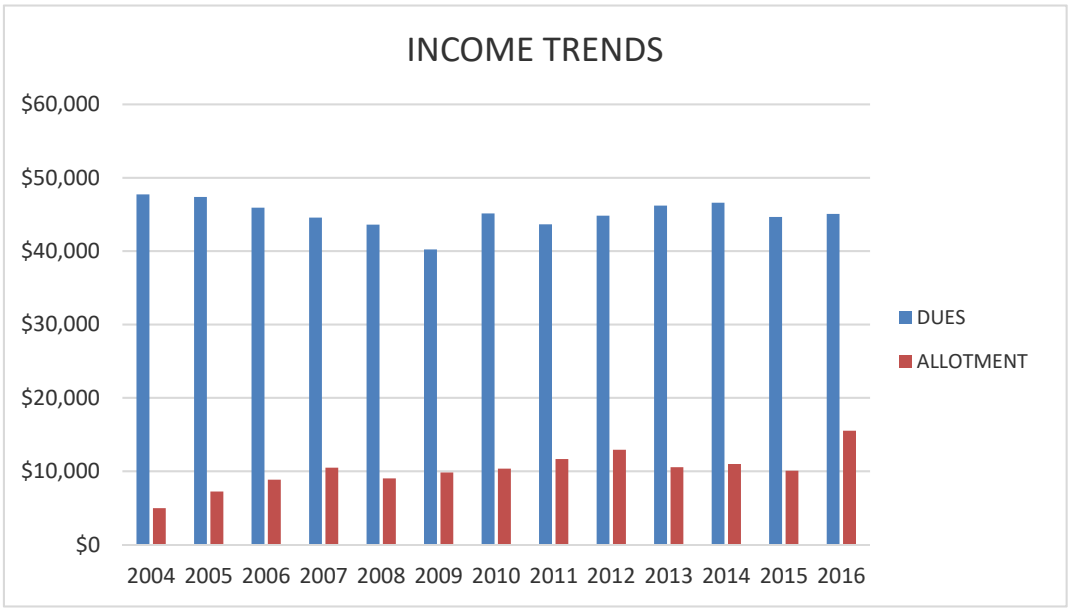
PROFIT AND LOSS

January 1 - March 3, 2017

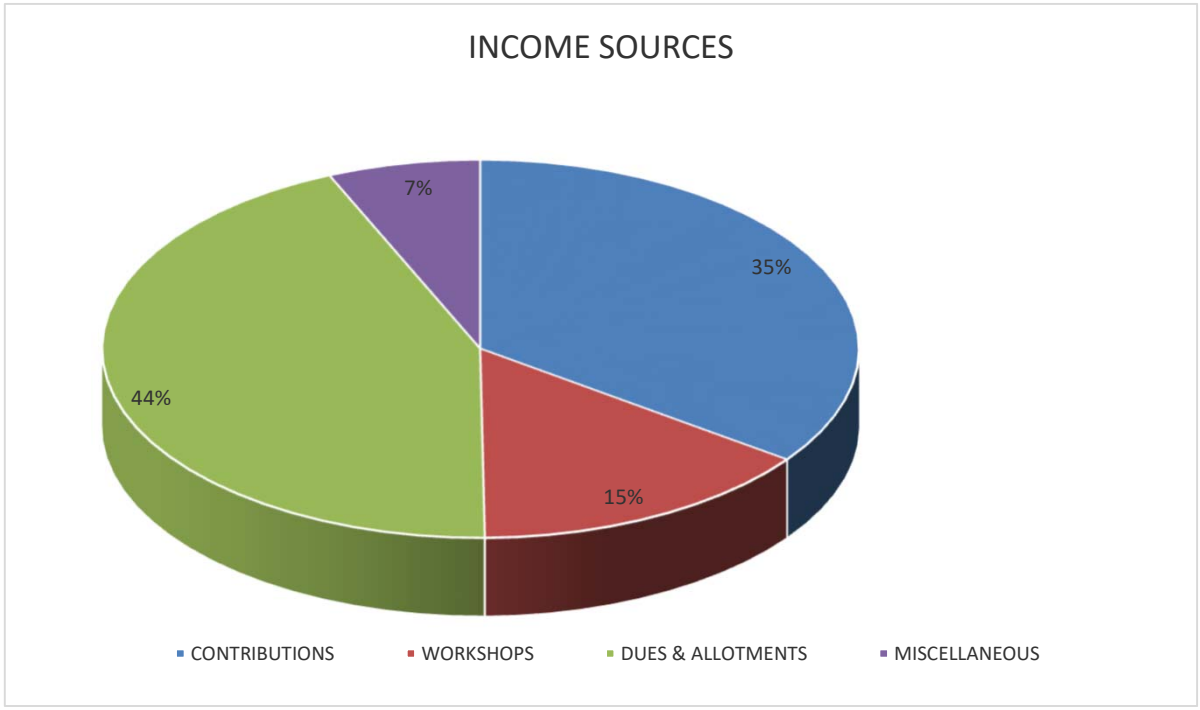
	TOTAL
INCOME	
A1 CONTRIBUTIONS	
A1F DONATIONS	
A1F2 DONATION CANN SUBDIVISION	540.00
A1F2A Heidolph North America	7,500.00
Total A1F2 DONATION CANN SUBDIVISION	**8,040.00**
Total A1F DONATIONS	**8,040.00**
Total A1 CONTRIBUTIONS	**8,040.00**
A4 CONF/WORKSHOPS/MEETINGS	
A4A WORKSHOPS	-75.00
A4A1 CHO WORKSHOP	425.00
Total A4A WORKSHOPS	**350.00**
Total A4 CONF/WORKSHOPS/MEETINGS	**350.00**
A6 INVESTMENTS (OPERATING)	5,253.14
Total Income	**$13,643.14**
GROSS PROFIT	**$13,643.14**
EXPENSES	
B1 CONTRIBUTIONS EXP.	
B1B INNOVATIVE FUNDING EXPENSE	
B1B1 MENTORING PROGRAM	1,000.00
Total B1B INNOVATIVE FUNDING EXPENSE	**1,000.00**
Total B1 CONTRIBUTIONS EXP.	**1,000.00**
B2 NATIONAL MEETING EXPENSES	
B2E PLANNING EXPENSES	
B2E1 EXEC. COMM. MEETING	
B2E1c SUPPLIES & MATERIALS	78.00
Total B2E1 EXEC. COMM. MEETING	**78.00**
B2E2 STRATEGIC PLANNING	40.00
Total B2E PLANNING EXPENSES	**118.00**
Total B2 NATIONAL MEETING EXPENSES	**118.00**
B5 PUBLICATION EXPENSES	
B5F OTHER	
B5F1 JCHAS Expenses	
B5F1a JCHAS (Subs paid Elsevier)	5,730.00
Total B5F1 JCHAS Expenses	**5,730.00**
Total B5F OTHER	**5,730.00**
Total B5 PUBLICATION EXPENSES	**5,730.00**
B7 ADMINISTRATIVE	
B7F DLC/P2C2 CONF EXP	
B7F1 DLC ATTENDEE EXP	534.64

	TOTAL
Total B7F DLC/P2C2 CONF EXP	**534.64**
Total B7 ADMINISTRATIVE	**534.64**
B8 OTHER EXP (9G)	
B8A CREDIT CARD PROCESSING FEE	12.15
B8D EXHIBIT HALL PRESENCE	1,350.00
Total B8 OTHER EXP (9G)	**1,362.15**
Total Expenses	**$8,744.79**
NET OPERATING INCOME	**$4,898.35**
NET INCOME	**$4,898.35**

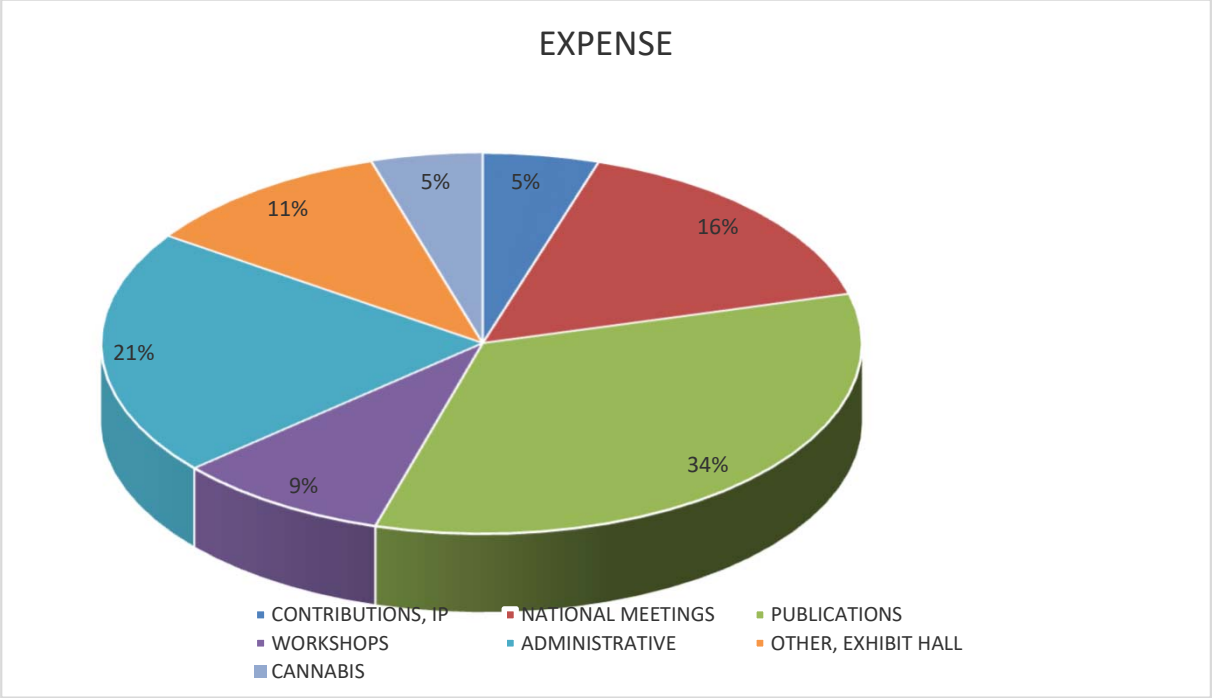
	INCOME	
	DUES	ALLOTMENT
2004	$47,732	$4,954
2005	$47,376	$7,235
2006	$45,919	$8,842
2007	$44,563	$10,480
2008	$43,599	$9,020
2009	$40,223	$9,814
2010	$45,135	$10,340
2011	$43,649	$11,648
2012	$44,833	$12,908
2013	$46,208	$10,550
2014	$46,601	$10,985
2015	$44,656	$10,061
2016	$45,056	$15,505
2017		



		%
CONTRIBUTIONS	$48,495	35%
WORKSHOPS	$20,549	15%
DUES & ALLOTMENTS	$60,541	44%
MISCELLANEOUS	$9,050	7%
TOTAL INCOME	$138,635	

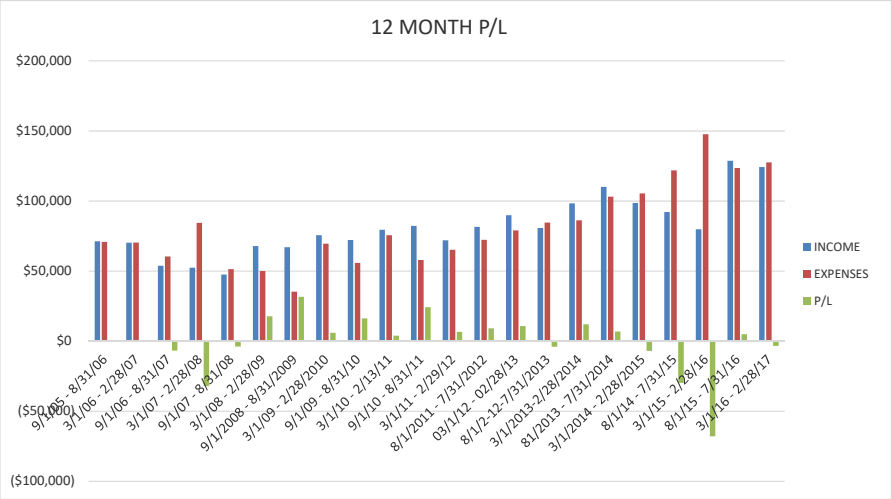


CONTRIBUTIONS, IP	$6,126	5%
NATIONAL MEETINGS	$19,808	16%
PUBLICATIONS	$42,003	34%
WORKSHOPS	$11,300	9%
ADMINISTRATIVE	$26,081	21%
OTHER, EXHIBIT HALL	$13,379	11%
CANNABIS	$5,879	5%
TOTAL EXPENSES	$124,576	

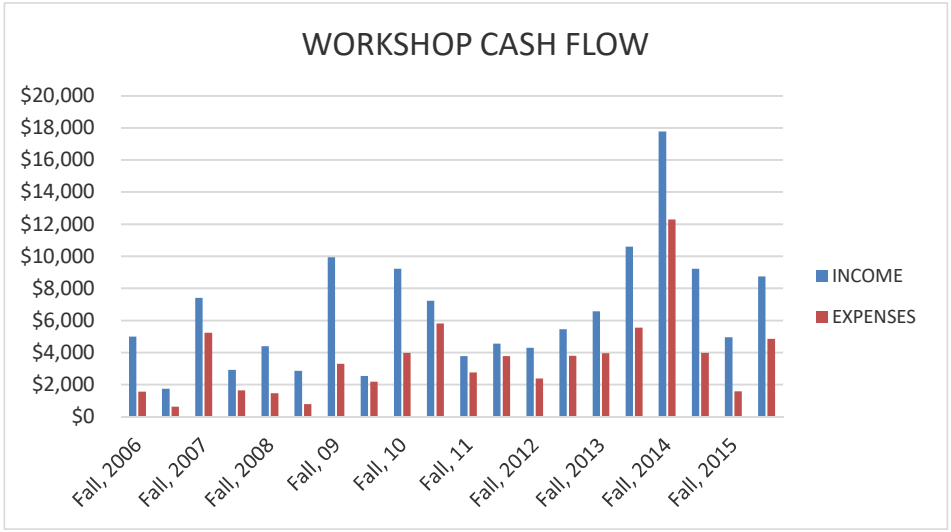


CHAS Financial Metrics - 3/3/2017

	INCOME	OVERALL EXPENSE	P/L
9/1/05 - 8/31/06	$71,348	$70,872	$476
3/1/06 - 2/28/07	$70,356	$70,450	($94)
9/1/06 - 8/31/07	$53,881	$60,500	($6,619)
3/1/07 - 2/28/08	$52,524	$84,443	($31,919)
9/1/07 - 8/31/08	$47,615	$51,427	($3,812)
3/1/08 - 2/28/09	$67,939	$50,108	$17,831
9/1/2008 - 8/31/2009	$67,091	$35,377	$31,714
3/1/09 - 2/28/2010	$75,679	$69,675	$6,004
9/1/09 - 8/31/10	72,263	55,937	$16,326
3/1/10 - 2/13/11	$79,585	$75,647	$3,938
9/1/10 - 8/31/11	$82,255	$58,001	$24,254
3/1/11 - 2/29/12	$72,017	$65,235	$6,782
8/1/2011 - 7/31/2012	$81,584	$72,356	$9,228
03/1/12 - 02/28/13	$89,904	$79,063	$10,841
8/1/2-12-7/31/2013	$80,796	$84,635	($3,839)
3/1/2013-2/28/2014	$98,395	$86,284	$12,111
81/2013 - 7/31/2014	$110,174	$103,187	$6,987
3/1/2014 - 2/28/2015	$98,659	$105,502	($6,843)
8/1/14 - 7/31/15	$92,244	$121,906	($29,662)
3/1/15 - 2/28/16	$79,887	147,726	($67,839)
8/1/15 - 7/31/16	$128,727	$123,654	$5,073
3/1/16 - 2/28/17	124,285	127,571	($3,286)



	BY MEETING	
	INCOME	EXPENSE
Fall, 2006	$4,993	$1,563
Spring, 2007	$1,734	$619
Fall, 2007	$7,400	$5,238
Spring, 2008	$2,929	$1,634
Fall, 2008	$4,400	$1,466
Spring, 09	$2,850	$779
Fall, 09	$9,950	$3,292
Spring. 10	$2,550	$2,186
Fall, 10	$9,225	$3,972
Spring, 11	$7,225	$5,803
Fall, 11	$3,775	$2,757
Spring, 2012	$4,545	$3,782
Fall, 2012	$4,300	$2,372
Spring, 2013	$5,450	$3,788
Fall, 2013	$6,571	$3,963
Spring, 2014	$10,600	$5,561
Fall, 2014	$17,772	$12,302
Spring, 2015	$9,225	$3,972
Fall, 2015	$4,950	$1,584
Spring, 2016	$8,750	$4,856
fFall, 2016	$13,175	$7,145



Division of Chemical Health & Safety

CANN P&L

All Dates

	TOTAL
INCOME	
A1 CONTRIBUTIONS	
A1F DONATIONS	
A1F2 DONATION CANN SUBDIVISION	20,135.00
A1F2A Heidolph North America	7,500.00
Total A1F2 DONATION CANN SUBDIVISION	**27,635.00**
Total A1F DONATIONS	**27,635.00**
Total A1 CONTRIBUTIONS	**27,635.00**
Total Income	**$27,635.00**
GROSS PROFIT	**$27,635.00**
EXPENSES	
B9 CANNABIS SUBDIV EXP	3,794.17
Total Expenses	**$3,794.17**
NET OPERATING INCOME	**$23,840.83**
NET INCOME	**$23,840.83**

Division of Chemical Health & Safety

TRANSACTION REPORT

January 1, 2016 - March 6, 2017

DATE	TRANSACTION TYPE	NUM	NAME	MEMO/DESCRIPTION	ACCOUNT	SPLIT	AMOUNT	BALANCE
Invoice								
02/17/2016	Invoice	75	JEFFREY RABER	Donation to support CANN activity	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	1200 Accounts Receivable	500.00	500.00
02/18/2016	Invoice	76	Michele Romero	Donation to support CANN activity	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	1200 Accounts Receivable	2,500.00	3,000.00
08/12/2016	Invoice	134	JEN KITCHEN	Donation to support CANN activity	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	1200 Accounts Receivable	1,000.00	4,000.00
12/22/2016	Invoice	137	Michele Romero	Donation to support CANN activity	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	1200 Accounts Receivable	7,000.00	11,000.00
03/01/2017	Invoice	139	Heidolph North America	Scholarship Award administered by CANN	A1F2A CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION:Heidolph North America	1200 Accounts Receivable	7,500.00	18,500.00
Total for Invoice							**$18,500.00**	
Bill								
03/17/2016	Bill		Russ Phifer	CANN MATERIALS	B9 CANNABIS SUBDIV EXP	2000 Accounts Payable	558.60	558.60
03/23/2016	Bill		ADVANCED CHEMICAL SAFETY, INC.	BANNER	B9 CANNABIS SUBDIV EXP	2000 Accounts Payable	109.03	667.63
03/31/2016	Bill		EZRA PRYOR	EXHIBIT HALL MATERIALS	B9A1 CANNABIS SUBDIV EXP:Advertising/Promotional	2000 Accounts Payable	181.75	849.38
05/27/2016	Bill		BETH WATERFALL	SUPPORT FOR CANN EVENT PER EP	B9 CANNABIS SUBDIV EXP	2000 Accounts Payable	250.00	1,099.38
06/20/2016	Bill		American Chemical Society	DUES FOR KYLE BOYAR CANN	B9 CANNABIS SUBDIV EXP	2000 Accounts Payable	78.00	1,177.38
09/19/2016	Bill		MELISSA JANINE WILCOX	CANN EXPENSES PHL	B9 CANNABIS SUBDIV EXP	2000 Accounts Payable	149.53	1,326.91
09/19/2016	Bill		EZRA PRYOR	CANN EXPENSES PHL	B9 CANNABIS SUBDIV EXP	2000 Accounts Payable	1,078.01	2,404.92
11/17/2016	Bill		TYRELL TOWLE	NETWORKING EVENT	B9A1 CANNABIS SUBDIV EXP:Advertising/Promotional	2000 Accounts Payable	155.60	2,560.52
11/28/2016	Bill		EZRA PRYOR	DENVER EVENT	B9A1 CANNABIS SUBDIV EXP:Advertising/Promotional	2000 Accounts Payable	247.50	2,808.02
Total for Bill							**$2,808.02**	
Deposit								
02/03/2016	Deposit			BKOFAMERICA ATM 02/03 #000004263	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	300.00	300.00
03/02/2016	Deposit			BKOFAMERICA MOBILE 03/02 3422984	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	1,995.00	2,295.00
05/13/2016	Deposit			SC LABORATORY	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	500.00	2,795.00
05/25/2016	Deposit		EZRA PRYOR	EZRA PRYOR	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	300.00	3,095.00
06/30/2016	Deposit		EZRA PRYOR	EZRA PRYOR	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	500.00	3,595.00
08/12/2016	Deposit			SUNX LAB	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	500.00	4,095.00
08/18/2016	Deposit		PayPal	PAYPAL DES:TRANSFER ID:4PXJ29SQ7	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	1,000.00	5,095.00
08/31/2016	Deposit			GOOSE GREENS	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	1,000.00	6,095.00
09/07/2016	Deposit		EZRA PRYOR	HEIDOLPH NA LLC	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	2,000.00	8,095.00
10/06/2016	Deposit		EDEN LABS LLC	CANN DONATION	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	500.00	8,595.00

DATE	TRANSACTION TYPE	NUM	NAME	MEMO/DESCRIPTION	ACCOUNT	SPLIT	AMOUNT	BALANCE
01/03/2017	Deposit		SC LAB	BKOFAMERICA ATM 01/03 #000004792	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	500.00	9,095.00
01/30/2017	Deposit		EDEN LABS LLC	BKOFAMERICA MOBILE 01/29 3519876	A1F2 CONTRIBUTIONS:DONATIONS:DONATION CANN SUBDIVISION	CH1A CHECKING	40.00	9,135.00
Total for Deposit							**$9,135.00**	
Expense								
02/24/2016	Expense			CHECKCARD 0222 AMERICAN CHEMICAL	B9 CANNABIS SUBDIV EXP	CH1A CHECKING	78.00	78.00
02/24/2016	Expense			CHECKCARD 0222 AMERICAN CHEMICAL	B9 CANNABIS SUBDIV EXP	CH1A CHECKING	78.00	156.00
02/24/2016	Expense			CHECKCARD 0222 AMERICAN CHEMICAL	B9 CANNABIS SUBDIV EXP	CH1A CHECKING	37.00	193.00
02/24/2016	Expense			CHECKCARD 0222 AMERICAN CHEMICAL	B9 CANNABIS SUBDIV EXP	CH1A CHECKING	78.00	271.00
03/17/2016	Expense			SD EXHIBIT HALL SPACE	B9 CANNABIS SUBDIV EXP	CH1A CHECKING	1,300.00	1,571.00
06/10/2016	Expense			CHECKCARD 0609 INFORMATION FOREC	B9A1 CANNABIS SUBDIV EXP:Advertising/Promotional	CH1A CHECKING	1,500.00	3,071.00
Total for Expense							**$3,071.00**	
TOTAL							**$33,514.02**	

Attachment 1

Secretary's Report, March 2017

1. The DCHAS annual report for 2016 was filed on time in February 2017. The report included a nomination for the Division for its Support for the ACS's Core Value of "Safety" over time. This nomination cited many 2016 events as culminations of groundwork put in place throughout the history of the Division, but with an emphasis on the last 5 years of active technical and cultural activities within the ACS as a whole.

2. The 2017 Divisional election will proceed as soon as the nominations slate is finalized. Monique Wilhelm has been monitoring secretarial activities in preparation for running for a three year term for this post in 2017.

3. The web site has been updated with various news items about monthly. A new feature, the "Editor's Spotlight" on specific JCHAS articles has been helpful in maintaining the currency of the site. Similarly, DCHAS-L has continued to be an active asset of the Division. The list was moved to Princeton University's computer host in September with minimal resulting confusion.

Attachment 1

Past-Chair Report

Before I review some of our 2016 accomplishments I'd like to first thank my fellow officers and other members of our Executive Committee (EC), most notably Harry Elston (2017 Chair), Neal Langerman (Treasurer), Ralph Stuart (Secretary), and Joe Pickle (2017 Chair-Elect) for their much-needed support and hard work. And we are indeed indebted to Debbie Decker, Frankie Wood-Black, and Joe for keeping the Division's "Technical Programs" so full and for bringing very relevant information to our members. Ezra Pound and the "CANN" sub-division leaders have not only made great inroads in getting the sub-division going and organizing several outreach activities -- but have lead the way in Division growth by bringing in over a hundred new members and they raised much needed seed money through donations -- which will help in attracting even more safety conscious "cannabis chemists" to our fold. Truly -- I must include "every" member of our leadership team in my thanks -- since they all pulled their weight and contributed to the Division's success, so I'll simply point to our "About Us" page of the Division's website and note that all deserve our support and cheers because they are some of the hardest working volunteers you'll find in the American Chemical Society… (http://dchas.org/about-us/)

Perhaps the most important accomplishment in 2016 for the Division was to engage the ACS Board of Directors and Society leaders in very meaningful discussions about how fundamental "Safety" is to our profession. We were successful in getting "SAFETY" inserted into Society's "Core-Values" and we've got the direct support of the Society's President, Chair-of-the-Board, Secretary, and Executive Director in emphasizing how crucial safety is to chemistry and how central it should be in shaping our everyday professional activities. Allison Campbell (2017 ACS President) is working with us to organize a "Presidential Symposium" directed at further identifying best-practices and developing inroads towards bringing a "Culture" of safety to the entire profession and "across" the entire Chemistry Enterprise. Her Symposium is slated for the "Fall National Meeting" in Washington, D.C. Also, the ACS Leaders have sought and received (a great deal of) our help in crafting "ACS policy statements" on safety. Those updated policy statements are now ready for release to the public and to fellow members of our profession.

In our 2015 "Strategic Planning" retreat division leaders that participated identified several important goals. In 2016 our leadership team began the work to reach those goals. We've been successful at getting a co-sponsored "Innovative Project Grant" ($10,000) for a broader "professionally developed" survey of ACS members and other individuals to really understand how we might identify and be more effective at meeting member and society needs in the area of Chemical Safety. We also sought and won another Innovative Project Grant ($5.000) to join with the ACS (Senior ACS Leadership is contributing an additional $15,000) in sponsoring part of the 2018 "Safety-by-Design" NIH hosted "Workshop" that should tap a broad spectrum of talent and further explore how to best nurture a culture of safety in our educators, business leaders, and, of course, our youngest members of the chemical profession as they begin their careers.

I again thank all of you for your help and support in leading our small division forward and I wish Harry and Joe even greater success in our 2017/2018 divisional activities.

Sincerely,

John Palmer, (immediate "Past-Chair")

2017 “candidates for [open] elected divisional leadership positions”

- Proposed-for-nomination -

1. Chair-Elect (2018) — Sammye Sigmann

2. Secretary — Monique Wilhelm

3. Councilor (2018-2020) / Alternate Councilor (2018-2020)
   (*Note: higher number of votes = councilor, runner-up = alternate councilor*)
   Frankie Wood-Black, Brandon Chance

4. Member-at-Large — Ellen Sweet, Kimi Brown

Attachment 1

Safety Guidelines for the Chemistry Professional:
Understanding Your Role and Responsibilities – 02/14/17 – final draft

Over the past decade, there has been steadily increasing professional and public concern about the effectiveness of chemical safety programs. Specific incidents in academic, industrial, and public settings have led to the need for a clear statement of the responsibilities of chemistry professionals regarding Environmental Health and Safety (EH&S) issues. However, no chemistry professional works in isolation, and any effective EH&S program is a partnership between individual chemistry professionals and the organizations for which they work. For this reason, this document, jointly authored by the Committee on Chemical Safety and the Division of Chemical Health and Safety of the American Chemical Society (ACS), outlines prudent expectations for the EH&S roles and responsibilities for both chemistry professionals and their organizations. In addition to these expectations, this guideline identifies ACS resources which support these expectations.

Responsibilities of chemistry professionals include:

1. The chemistry professional has an **ethical**[1] and **legal**[2] responsibility to work with chemicals safely. Chemistry professionals must protect themselves, their communities, and the wider environment from the risks associated with the hazards of chemicals. Chemistry professionals must also address safety and health issues when contributing to the scientific literature.
2. Chemistry professionals need to develop competency in **evaluating hazards, conducting assessments, and mitigating the risks of those hazards**. In this process, chemistry professionals need to work with other EH&S stakeholders when planning for particularly hazardous activities and for potential emergencies. In this work, chemistry professionals need familiarity with and access to **electronic sources of safety information**, including technical data, broader safety literature, and literature on organizational culture.[3]
3. Chemistry professionals must actively participate in their organizational culture concerning the safe practice of chemistry. Chemistry professionals need to understand and observe **policies and procedures** at their institutions. As science professionals, they must contribute to the continuous improvement of their organization's safety programs.
4. Safety skills need to be included as part of the formal **education** of chemistry professionals. Safety is not incidental to chemical education, but an essential component of how chemistry professionals work. For this reason, students need to learn how to incorporate both technical and cultural safety considerations in their work.
5. Chemistry professionals assume a crucial role in providing chemical safety information to impacted parties. This role includes providing information appropriately to **support employer and professional organization communication** with the general public around health and safety issues.

[1] ACS Chemical Professional's Code of Conduct
[2] While a variety of regulatory agencies can impact chemical work, OSHA, EPA and DOT requirements should be the first consulted to determine specific impacts.
[3] See *Safe Science: Promoting a Culture of Safety in Academic Chemical Research* (2014) from the National Academy of Sciences for an outline of the cultural information appropriate for this work.

Responsibilities of organizations that employ chemistry professionals include:

1. There is an essential connection between scientific excellence and excellence in safety; this connection must be recognized and encouraged. Safety attitude and activities must be important parts of **performance evaluation and career development**. Service on safety committees or in safety-oriented positions should be recognized and rewarded.
2. They should expect that managers, faculty/Principal Investigators, and chemistry professionals understand their EH&S responsibilities and are empowered to assure a safe environment. Organizations need to provide **appropriate resources and support** for safety programs as the science they use evolves, with particular attention during times of rapid change in science and laboratory practice.
3. Organizations need to set **clear expectations that new chemistry professionals** be knowledgeable in and committed to safe practices and provide specific training that supports these expectations. In academia, information on policies and procedures needs to be effectively communicated to teaching and research professionals, support staff, and students. Buy-in and personal responsibility need to be supported by a proactive safety culture.[4] Good safety programs include a commitment to **protect the environment**. Organizations should provide effective emergency response capabilities, consistent promotion of responsible recycling and waste disposal, and consideration of concepts such as sustainability and inherent safety. Uncontrolled or intentional release of hazardous material is unacceptable anywhere in the chemistry enterprise.

In research communities, ongoing attention to **all aspects of chemical health and safety** should be prioritized. The ACS models this leadership role by producing state-of-the-art technical support materials (see Appendix).

ACS safety professionals recognize that any technological change incurs some level of risk. By managing this risk based on **continuous improvement of safety performance**, chemistry professionals and their organizations can meet their obligations to support the ACS commitment to ***"improving people's lives through the transforming power of chemistry."***

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[4] See *A Guide to Implementing a Safety Culture in Our Universities* from the APLU Council on Research Task Force on Laboratory Safety for specific organizational tools to support such a safety culture.

Appendix: ACS Chemical Safety Resources

Technical Resources

1. **Committee on Chemical Safety:** CCS is a Committee of the Society that provides technical and educational leadership within the Society with regard to safety issues. The Committee produces peer reviewed documents which provide guidance with regard to technical and management issues related to chemical safety in the laboratory, particularly in the educational setting. These can be found at **http://www.acs.org/safety**
2. **Division of Chemical Health and Safety:** CHAS is a Technical Division of the Society that pursues research into all elements of chemical and laboratory safety, including technical and management aspects. The Division hosts technical symposia at national and regional meetings, publishes a bi-monthly peer-reviewed journal (*Journal of Chemical Health and Safety*), and hosts educational workshops at national and regional meetings. **http://www.dchas.org**
3. **C&EN Safety Zone Blog:** The C&EN blog site includes the *Safety Zone* which provides ongoing updates on chemical and laboratory safety events and trends to the ACS membership and general public.
4. **Technical Programming:** Many ACS technical divisions include symposia specific to safety issues in their specialties in their international, national, and regional meeting programs.
5. ACS publications: ACS publications require technical papers they publish to identify hazards and risk management strategies associated with the work they describe, either through direct discussion of these issues or through citation of appropriate safety literature applicable to this work.

Educational Resources

1. Division of Chemical Education Safety Committee: is a new Committee of the Division of Chemical Education established in 2015. The CHED safety committee is reviewing safety guidance documents published by the division and plans outreach to members around safety issues. **http://www.divched.org/committee/safety**
2. **Committee on Professional Training:** The CPT provides guidance about how to including expectations address laboratory safety education in the undergraduate curriculum. http://www.acs.org/cpt
3. **American Association of Chemistry Teachers:** The AACT provides safety programming as part of its outreach to high school chemistry teachers. https://teachchemistry.org
4. **Society Committee on Education:** SOCED provides *"Guidelines and Recommendations for the Teaching of High School Chemistry."*

Environmental Resources

1. **Committee on Environmental Improvement:** The CEI supports environmental stewardship of the chemical enterprise and its products. https://www.acs.org/content/acs/en/about/governance/committees/cei.html
2. **Green Chemistry Institute:** The ACS GCI advocates for research and development of Green Chemistry practices in both research and industrial settings. https://www.acs.org/content/acs/en/greenchemistry.html

Attachment 1

PROPOSAL FOR

ACS NATIONAL AWARD FOR ACHIEVEMENT IN SAFETY

Recent developments within the American Chemical Society (ACS) demonstrate safety is an essential component of all research, teaching, education, and outreach efforts. The 2017 ACS Strategic Plan[1] includes safety as a core value, and ACS Publications implemented new reporting requirements for safety in all ACS journals. The ACS/CCS guidelines on safety culture[2], hazard assessment[3], and safety education[4,5] reflect the concern and movement to promote safety, especially within the academic community. ACS must continue to recognize these important efforts in safety and go further by recognizing those individuals or teams across the chemical enterprise who are making exceptional contributions to the safety field. Researchers, educators, and investigators making meaningful contributions to safety should be recognized on a national level to highlight those achievements in the public arena.

Currently, the Division of Chemical Health and Safety (CHAS) annually recognizes contributions to our field with three awards[6]: The Howard Fawcett Award, the Safety Stratus College and University Award, and the Tillsmanns-Skolnik Award. Yet these are more focused divisional awards that offer only very limited recognition to the larger ACS audience, the media, and the general public. Considering that CHAS is the one of the few, if not only, divisions whose chief theme transcends all other ACS divisions and the public at large, it is time to elevate publicly the progressive work of those who have committed themselves to chemical health and safety in research, teaching, and outreach. There is currently **no** ACS National Award that recognizes achievements in safety.

Herein we propose to establish a new ACS National Award for *Achievement in Safety*. This award would recognize an individual or a team:

- For outstanding contributions to develop or promote: new safety innovations; exceptional efforts in promoting safety education and teaching; or recognized exemplary safety cultures within organizations or broader venues.
- For outstanding leadership that demonstrates the pursuit and promotion of excellence in safety as recognized by results, outcomes, and testimonies. This leadership would be an example for others to emulate.
- For outstanding achievements in safety that have clear, recognized safety-related impact at local, regional, national or international levels.

In addition to ACS standards for nomination and award, nominees from all facets of the chemical enterprise are eligible. The awardee or at least one member of the team should be an ACS member. Our initial expectation is for the award to be presented every other year, and as funding becomes adequate, we envision this will become an annual award.

Criteria for nomination includes:

1. Detailed description of the safety-related contributions, achievements, and targeted audience including especially new, innovative contributions, achievements, products, or approaches
2. Impact of the safety-related contributions at the local, regional, national, or international level
3. Experience and credentials of the nominee or team including involvement in volunteer efforts for the ACS
4. Recommendations (not to exceed five) - these are letters that provide support and testimony of the worthiness of the nominee for this award (for example, department chairs/managers, supervisors, peers within or outside the institution/company, professionals who value these contributions, or previous students or mentees who understand the contributions of this nominee or team).

CHAS will seek to ensure the quality of these awards by requiring a minimum of 5 nominations are received per award cycle, and review these to ensure that there are always new nominations, not just the same ones each year that did not win previously.

CHAS will seek external funding to support this award. We believe there will be interest in supporting this from many sources. Financial commitment for this award must provide:

- Financial support must be stable and sufficient to support the award
    - Endowment
        - $300,000 for annual awards for non-profits
        - $200,000 for biannual awards (every other year)
        - $450,000 for single supporter (for profit) with name recognition for the award
        - $25,000 of these funds will be temporarily restricted (not available for expenditure) to cover shortfalls in expenses
        - Single supporter
        - Multiple supporters (a National ACS Safety Award Coalition)
- Costs of award (Approximately $10,000 per award)
    - $5000 Cash to awardee or team
    - $500 Certificate
    - $2500 Travel (Maximum allowed)
    - $1420 Administrative Fee for ACS

References

1. American Chemical Society Strategic Plan for 2017 & Beyond, found at http://strategy.acs.org/ (accessed March 2017).

2. ACS Committee on Chemical Safety, *Creating Safety Cultures in Academic Institutions,* ACS, Washington, DC, 2012.
3. ACS Committee on Chemical Safety, Hazard Assessment in the Laboratory found at https://www.acs.org/content/acs/en/about/governance/committees/chemicalsafety/hazard-assessment.html (accessed March 2017); Based on the CCS, *Identifying and Evaluating Hazards in the Research Laboratories,* ACS, Washington, DC, 2015.
4. ACS Committee on Chemical Safety, *Guidelines for Chemical Laboratory Safety in Secondary Schools,* ACS, Washington, DC, 2016.
5. ACS Committee on Chemical Safety, *Guidelines for Chemical Laboratory Safety in Academic Institutions,* ACS, Washington, DC, 2016.
6. Division of Chemical Health and Safety website, found at http://dchas.org (accessed March 2017)

Attachment 1

CORPORATION ASSOCIATES ACTIVITY

Submitted by Neal Langerman

16 March 17

The ACS Committee on Corporation Associates (CA) met for a Strategic Planning retreat in February, 2017. Three safety-related action items developed during the meeting and are moving forward.

1. CA decided to ask the ACS Board, via Budget & Finance, to provide funds to move the Student eLearning Certificate of Participation program forward. This decision was led by Diane Schmidt (Past President, ACS) and Peter Dorhout (President-Elect, ACS), Chris Bodurow, and Dorothy Philips (current ACS Board Members), Susan Butts and Katie Hunt (Past ACS Board Members) and approved unanimously.
    a. A New Concept Proposal has been submitted to B&F and is pending action.
2. CA has adopted safety as a core value.
3. CA has set up a formal Safety Subcommittee. The Sub-committee's information is attached.

CA and CHAS/CCS should work together to help ACS Divisions and Committees establish safety working groups/subcommittees. The results of the 2016 DAC/Schmidt survey are attached and should be a guide to this activity.

American Chemical Society
Board Committee on Corporation Associates
2017 CA Sub-Committee on Safety
Information Sheet

Sub-Committee Name	Safety
Type	CA Sub-committee
Sub-committee Mission Statement	Foster competitive advantages through corporate safety culture
Responsibilities & Duties	• Maintain safety as part of all CA conversations • Improve safety practices in internal and external research and development • Lead ACS Committees in safety awareness • Improve safety awareness among new-hire candidates • Leverage and support ACS industry efforts to improve safety culture throughout the chemical enterprise
Normal Meeting Schedule	Reports 2 times per year during national meetings. Between national meetings the sub-committee meets on relevant topics. The subcommittee conducts its business via web conference between each national meeting. All CA members are invited to participate in all sub-committee calls.
Chair	Neal Langerman
Sub-Committee Members	All of CA
Sub-Committee Staff Liaison	TBD
Deliverables	**2017** • Prepared & submitted "New Concept Form" to ACS Budget & Finance • Progress towards Implementing Student Safety eLearning Project in cooperation with DCHAS/CCS contingent upon approval of B&F funding proposal in 2017 • Reach out to technical division Executive Committees to consider establishing a safety sub-committee. o This should be done in cooperation with CHAS/CCS and be based on the DAC survey in October 2016 **2018** • Completion of Implementation of Student Safety eLearning Project-contingent upon 2017 funding via 2017 B&F funding request
Date of Issue	16 March 17
Date for last review	
Frequency of review	Annual by subcommittee chair and CA chair

Learning More About ACS Divisions and The Issue of Safety

	Division	Response	Officer responding	Contact
1	AGFD	AGFD does not have one.	Michael Tunick, Secretary	
2	AGRO			
3	ANYL	In response to this query, the ANYL division does not have a sub-committee on Health, Safety and Environmental Subcommittee or a related working group. It is something we can take under advisement and communicate as appropriate in the future.	Doug Duckworth, Chair	
4	BIOL			
5	BIOT	BIOT does not have a divisional subcommittee or point of contact.	Eric Boder, Chair	
6	BMGT	BMGT does not have a Health, Safety and Environmental Subcommittee or Working Group.	Joe Stoner, Chair	
7	CARB			
8	CATL			
9	CELL	The Cellulose and Renewable Materials Division (CELL) does not have a Health, Safety and Environmental Subcommittee or working party.	Sheila Murphy, Chair	
10	CHED	We in CHED have a Safety Committee, currently chaired by Dave Finster, copied on this message. Dave may have some other information to suggest. Thanks for doing this!	Cathy Middlecamp, Chair	
10	CHED	The Division of Chemical Education has a Safety Committee that is in its first year and one of our newest committees. The Chair of the Safety Committee is Dr. David C. Finster **dfinster@wittenberg.edu**	Resa Kelly, Councilor	
10	CHED	This is a response to an inquiry from DAC about the presence of a safety group in CHED. A Safety Committee in CHED was constituted in 2015. Our Mission and Vision statements are: Vision Statement: Education that embeds accurate chemical safety instruction at all educational levels. Mission Statement: To provide resources and strategies to chemical and science educators in order to prepare chemists and others to function safely when using chemicals. Much of our work will have a natural overlap with CHAS and CCS and there are many members of the CHED Safety Committee who are active in either or both CHAS and CCS. One of our first projects has been a major overhaul of "Safety Guidelines for Chemical Demonstrations" which we expect to be formally approved in Philadelphia and then widely distributed. As chair of the committee, I will be the contact person David C. Finster <**dfinster@wittenberg.edu**>.	David Finster, Chair, CHED Safety Committee	David C. Finster <**dfinster@wittenberg.edu**>

11	CHAS	Since I happened to be a party to some of the discussions that led to the DAC "e-mail" request I'll simply say that any member of our exec. leadership could be considered as a "safety-contact" for the Division of Chemical Health & SAFETY…;-) You can feel free to contact me (2016-Chair) at any time on "safety" -- along with any and, quite frankly, all of our executive team (Chair, Chair-Elect, Secretary and Treasurer – all of which are represented on the cc line). I'm sure our past-chair, members-at-large, councilors, alternate-councilors, etc. also 'all' stand ready to serve the division in matters of "safety" leadership. We obviously don't need a subcommittee -- since our entire division is involved in all matters of EH&S but we'll be more than willing to share how we serve our members if that helps. On the other side of the question – I want to offer our thanks to you, and Rod and John for helping us make contacts and inroads across all of our fellow technical divisions! We'd love to see the responses you get and we stand ready to help encourage division leaders where no response is forthcoming (after all – many of us are members of multiple divisions!)…	John Palmer, Chair	
12	CINF			
13	CHAL	The following information is for Chemistry and the Law Division (CHAL) (1) Can you let us know if you have a Health, Safety and Environmental Subcommittee or Working Group? No, we do not. (2) Can you give us the name and e-mail address for a safety point-of-contact within your division? We do not currently have one.	Justin McShane, Chair	
14	COLL			
15	COMP	Division of Computers in Chemistry does **not** have a Health, Safety and Environmental Subcommittee or Working Group (1) Can you let us know if you have a Health, Safety and Environmental Subcommittee or Working Group? **No;** (2) Can you give us the name and e-mail address for a safety point-of-contact within your division?	Veerabahu (Veer) Shanmugasundaram, Secy	
16	ENFL	ENFL does not have a working group or subcommittee for HSE	Michelle Kidder. Chair	
17	ENVR	The Division of Environmental Chemistry does not have a separate safety or health committee. These topics and themes are woven into most of our programming and more technical committee work. Thank you for compiling this information for ACS.	George Cobb, Chair	
18	FLUO	The Division of Fluorine Chemistry does not have have a subcommittee or working group for Health, Safety and Environment at the moment. We do understand the importance of safety and will discuss this matter in our next Divisional Business Meeting. In the meantime, I would like to ask the DAC to send any questions or comments about safety and health related to Fluorine Chemistry directly to myself, the Fluorine Division Chair at **haiges@usc.edu**.	Ralf Haiges, Chair	

19	GEOC	Geochemistry Division do not have a Health, Safety and Environmental Subcommittee or Working Group.	Young-Shin, Chair	
20	HIST	The HIST Division does NOT have a have a Health, Safety and Environmental Subcommittee or Working Group, nor any plans to add one.	Vera Mainz, Sec/Treas	
20	HIST	Alas, the History of Chemistry Division does not have a "safety" group. Perhaps we could institute a working group on the history of industrial safety in chemistry.	Gary Patterson, Chair	
21	I&EC			
22	INOR	Although the Division of Inorganic Chemistry does not currently have a safety officer, our immediate past Chair, Jim Boncella (copied here), has agreed to serve as our safety representative.	Claudia Turro, Chair	
23	MEDI	The MEDI Division does not have anything like this.	Eric Walters, Secretary	
23	MEDI	The medicinal chemistry division doesn't have a standing Health, Safety and Environmental Subcommittee or Working Group. The safety issues of medicinal substances is obviously very important to all of us in the field and to the public at large, but the field of medicinal chemistry is far too broad to permit one or even a few people to be a reliable and readily available source for safety information, policies, and procedures on medicinal substances. We advise anyone with inquiries about specific medicinal substances and associated safety issues to consult the MSDS (materials safety data sheet) for that substance, as MSDS information is readily available online. Also, the organic chemistry division may be able to help you, if they have designated point people for such issues, since the general safety issues of medicinal chemistry, at least with respect to manufacturing and chemical synthesis, are the same as for organic chemistry.	Thomas Bannister, Chair	
24	NUCL			
25	ORGN	The Division of Organic Chemistry does not have a health, safety and environmental subteam. The Organic Division does have a webpage/Facebook page on Green Chemistry Resources. **https://www.organicdivision.org/green**	Paige Mahaney, Chair	
26	PHYS	Thanks for your note. The short answer to your question for the PHYS Division is "no", we don't have a safety subcommittee or working group.	Daniel Crawford, Secretary-Treasurer and Newsletter Editor	
27	POLY	We do not have an HSE sub-committee or working group at this time.	Karl Haider, Chair	
28	PMSE	No formal Health, Safety and Environmental Subcommittee or Working Group in PMSE. The industrial membership is fairly active. For example, Debbie Davis, (+12818345003, deborah.j.davis@exxonmobil.com) has contacted various ACS Committees and offered to help and share the PALS (partners in academic laboratory safety) that she leads.	Jay Dias, Councilor	
29	PROF	The Division of PROF (DPR) covers this topic in its subdivision on ethics, as we consider safety to be an ethical topic.	Susan Schelble, Secretary	

30	RUBB	The Rubber Division does not have a Health, Safety and Environmental Subcommittee or Working Group; however, we do offer presentations periodically on these issues through our Technical Symposia and Advanced Materials in Healthcare Conferences. There is no safety point-of-contact within our division.	Ed Miller, Executive Director	
31	SCHB	The SCHB does not have a Committee on Health, Safety and Environmental issues nor a Subcommittee or Working Group. The SCHB bylaws names only 8 standing committees but Health, Safety and Environmental is not one of them. We plan to discuss formation of a new Subcommittee and/or a Task Force under a suitable Standing Committee in our next monthly conference call; then we may send a definitive response. In the interim, please send communications related to this matter directly to **Chair@acs-schb.org** (or to my personal email: **a.rahman@arphotonics.net**).	Anis Rahman, Chair	
32	TOXI	The Division of Chemical Toxicology (TOXI) does not have a Health, Safety, and Environmental Subcommittee or Working Group. At the National Meeting in August, I will recommend to our Executive Committee that we set up such a committee. Until the committee is in place, I will serve as the safety point-of-contact in our division.	Paul Hollenberg, Chair	

Attachment 1

GUIDELINES FOR COMMUNICATING SAFETY IN ACS JOURNALS

PURPOSE: This document serves as guidance to editors, authors and reviewers who implement the ACS Publications requirement for documenting appropriate safety information in submitted manuscripts. Safety information in a manuscript should be included to alert readers to unusual hazards or procedures that present high risk, or special control measures beyond those reasonably anticipated to be commonly present in a chemistry research setting. The intent is to help those using the information in your manuscript to understand unusual/special risks or experiences with these reported methods. Common laboratory safety measures need not be included. The information included is subject to the professional judgment of authors, editors and reviewers. It is expected that scientists following these procedures will appropriately prepare for commonly known hazards in their field of study.

Select categories, from various hazard classes (physical and health) used in the Globally Harmonized System (GHS), are listed in Table 1. Chemicals in these classes and categories (many of these chemicals carry the "Danger" signal word) should be considered for inclusion in safety statements as there is an expectation of significant risk of their use in each situation. Safety information should be based on the assessed risks of the experimental processes.

Table 1 – GHS Hazards to Consider when Writing Hazard Statements for Manuscripts[1]

GHS Hazard Class	Category	Code(s)	Hazard Description
Explosive	Div. 1.1 Div. 1.2 Div. 1.3	H201 H202 H203	Substances which have an explosion hazard, whether mass or projection.
Flammable	1	H220 H222 H224 H228	Substances (gases, aerosols, liquids, or solids) which are readily ignitable under the reaction conditions.
Self-Reactive	Type A Type B Type C	H240 H241 H242	Substances which can detonate, deflagrate, or self-heat under storage or handling conditions.
Pyrophoric	1	H250	Substances (liquids or solids) which ignite upon contact with air.
Self-Heating	1	H251	Substances which self-heat sufficiently to ignite.
Organic Peroxide	Type A	H240	Any organic peroxide which, as stored or handled, can detonate or deflagrate rapidly
Acute Toxicity	1	H310 H330	Concentration varies in this category based on the route of entry. $LD_{50} \leq 50$ mg/kg bodyweight (dermal) or $LC_{50} \leq 100$ ppmV; ≤ 0.5 mg/L; ≤ 0.05 mg/L (inhalation of gases, vapors, dusts & mists - respectively)
Respiratory Sensitizer	1A	H334	Substance shows a high frequency of occurrence for respiratory sensitization in humans based on testing and/or severity.
Germ Cell Mutagenicity	1A	H340	Positive evidence from human epidemiological studies.
Carcinogenicity	1A, 1B	H350	Known to, or presumed to have carcinogenic potential for humans based on human (1A) or animal evidence (1B).
Reproductive Toxicity	1A, 1B	H360	Known to, or presumed to be a human reproductive toxicant based on human (1A) or animal evidence (1B).
Specific Target Organ Toxicity (STOT), Single Exposure	1	H370	Substances that have produced significant toxicity in humans based on reliable human or animal evidence.

[1] Categories listed are for pure chemicals. Mixtures may require further evaluation. See OSHA Appendices A & B under "GHS" in Appendix 2 (Tools and Resources) of this document.

Other physical hazards and chemical conditions or activities for consideration include:

- Elevated pressure or temperature where apparatus or conditions could reasonably lead to a fire, explosion, or loss of containment
- Oxygen at greater than 25% or oxygen/fuel mixtures which are ignitable
- Compounds with a C:N ratio less than 5 carbons per nitrogen (e.g. pentaerythritol tetraazide)
- Oxidations of organic molecules, particularly at elevated temperature and/or gram scale or greater
- Processes with an exothermicity, which could lead to a run-away reaction
- Processes in which the energetics of scalability are insufficiently defined or require special cooling
- The addition of complexity (such as biological pathogens) into the research

IMPLEMENTATION: As suggested in the ACS Style Guide, the format of the information should be in a separate paragraph and introduced by the heading "Caution:".[2] The author(s) should include a brief statement of significant and unusual hazards, the risks that they pose, and a description of any specific risk mitigation procedures.

This information should generally be in proximity to the experimental procedures and based on the author's experience with, and knowledge of, the chemistry being reported. While the GHS Classification information may be obtained from a Safety Data Sheet (SDS), the information provided by authors is not expected to repeat the SDS. Information which appears in Bretherick's Handbook of Chemical Hazards should be considered. [3]

The type of information to include (as applicable) in a well- crafted safety statement would be:

- All compounds and substances involved, including products, intermediates, solvents, catalysts, etc. (as known and disclosable)
- Noted GHS hazard classifications and possible adverse outcome(s)
- Any key information about concentration and scale to maintain control, or where control was lost (e.g., upper limits for scale)
- Any key information about conditions and process to maintain control, or where control was lost (e.g., temperature or pressure control)
- Any key information about laboratory equipment to maintain control, or where control was lost (e.g., shield, cannula transfer procedure, etc.)
- Appropriate mitigation strategies beyond basic Personal Protective Equipment (PPE) (e.g., glove box)
- Appropriate emergency equipment beyond standard laboratory equipment (e.g., metal fire suppressant)

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[2] Coghill, A. M; Garson, L. R., Eds. The ACS Style Guide: A Manual for Authors and Editors, 3rd ed.; American Chemical Society: Washington, DC, 2006, p 23.

[3] Urben, P. G. *Bretherick's Handbook of Reactive Chemical Hazards,* 7th Edition; Elsevier: New York, 2007; Vol. 1 and Vol. 2.

When writing the actual safety information, authors may want to apply the principles of safety expressed with the use of *RAMP* – *R*ecognize hazards, *A*ssess the risks of hazards, *M*inimize the risks of hazards, and *P*repare for emergencies.[4]

Some information, such as an exothermic reaction revealed by Differential Scanning Calorimetry (DSC) or a reactive decomposition observed while determining a melting point, should be included, whereas the strong oxidation properties of nitric acid or potassium permanganate need not be mentioned unless they introduce a non-obvious risk to the chemistry process. Specifics of PPE should be noted only when the risk from the agents, conditions, and activities are very high (e.g., dimethylmercury, hydrofluoric acid, TMS-Diazomethane, radiation, scale up, etc.).

[4] Hill, R. H., Jr; Finster, D. C. *Laboratory Safety for Chemistry Students*, 2nd Edition; John Wiley & Sons, Inc.: Hoboken, NJ, 2016.

APPENDIX 1: EXAMPLES

The information in this Appendix is to assist Journals in developing their own Instructions to Authors with some examples of warnings. The expectation is that each Journal will provide examples relevant to their discipline.

The suggested format of the information (using JACS as an example) is: "**EXPERIMENTAL SECTION** Safety Information …"

The wording might be that a specific hazard is not present, as was done by Pollack, et al.[5]

- *Compound 1 shows a sharp melting point at 125 °C. No obvious thermal anomaly was detected by differential scanning calorimetry (DSC).*

Alternatively, the wording could reflect a different situation.

- *Compound 2 decomposed with gas release at 125 °C. A 40 kJ/mol exotherm at 108 °C was detected by differential scanning calorimetry (DSC).*

Statements may combine the hazard and risk mitigation.

- *Reaction 1 may undergo a thermal run-away. Synthesis apparatus should be placed behind a blast shield and temperature should be carefully monitored. A dry ice/propylene glycol slurry should be available for rapid, external quenching.*

When appropriate, specialized emergency control equipment may be mentioned.

- *When using metal alkyls, have dry sand or powdered sodium bicarbonate immediately available for fire suppression.*

Quantity or the scale of the reported experiment should be considered in evaluating the risks.

- *This reaction has not been evaluated at a scale greater than 100 mg per batch.*
- *The exothermic nature of this reaction increases the fire risk during scale-up and appropriate mitigation should be considered.*

Unexpected events during the research should be noted.

- *A sudden 25 °C temperature increase occurred when the reaction was run in THF. No such thermal event occurred in hexane or octane.*

Special control equipment or maintenance requirements should be noted.

- *An acrylic shield was installed in front of the vacuum line.*
- *Serious fouling of the over-pressure relief valve necessitated cleaning the valve after every reaction.*

[5] Pollak, D.; Goddard, R.; Pörschke, K. R. $Cs[H_2NB_2(C_6F_5)_6]$ Featuring an Unequivocal 16-Coordinate Cation. *J. Am. Chem. Soc.* **2016**, *138*, 9444–9451.

To assist authors in developing valid safety statements, the following specific examples from the literature are provided.

> $TMSN_3$ was transferred from the commercial container to a pressure bomb excluding air and moisture. In laboratory scale, $TMSN_3$ was always handled in a ventilated enclosure (fume hood) to prevent exposure to HN_3 vapors. On kilogram scale, handling of $TMSN_3$ was done using double gloves (inner-nitrile surgical style, outer-silvershield), a silvershield apron, *and a supplied air respirator*.[6]

> **DO NOT store the resulting solution in a closed system, as pressure may build up** as a result of cyanate decomposition. Always check the compatibility of all constituents of the aqueous cyanide solution with H_2O_2.
>
> **Stability of N-Acetyl Hydrazine.** N-acetylhydrazine was found to be very hygroscopic and prone to decomposition giving N, N′-di-acetylhydrazine along with hydrazine. The decomposition is relatively fast at room temperature. After a few months already, the solid material has turned into a semi-liquid mass, with product concentrations going <80%. At 4 °C, however, in a triple polyethylene bag with a desiccant present, the product is reasonably stable (no decomposition after 3 months). N-acetylhydrazine HCl was found to be stable at room temperature (no change after 4 months). [7]

> *Caution: Sodium azide and $TMSN_3$ release hydrazoic acid (HN_3) in acidic media. Hydrazoic acid is a volatile, highly toxic and explosive compound. Fuming sulfuric acid is capable of causing very severe burns and reacts violently with water. Reactions with these reagents should not be undertaken without proper safety precautions put in place.*[8]

---

[6] González-Bobes, F.; Kopp, N.; Li, L.; Deerberg, J.; Sharma, P.; Leung, S.; Davies, M.; Bush, J.; Hammand, J.; Hrytsak, M. Scale-up of Azide Chemistry: A Case Study. *Org. Process Res. Dev.* **2012**, *16*, 2055.

[7] De Knaep, A. G. M.; Vandendriessche, A. M. J.; Daemen, D. J. E.; Dingenen, J. J.; Laenen, K. D.; Nijs, R. L.; Pauwels, F. L J.; Van den Heuvel, D. F.; Van der Eycken, F. J.; Vanierschot, R. W. E.; van Laar, G. M. L. W.; Verstappen, W. L. A.; Willemsens, B. L. A. Development Summary towards a Manufacturable Process for R 83842 [(*S*)-6-[(4-chlorophenyl) (1H-1,2,4-triazol-1-yl)methyl]-1-methyl-1H-benzotriazole]. *Org. Process Res. Dev.* **2000**, *4*, 166.

[8] Gutmann, B.; Elsner, P.; O'Kearney-McMullan, A.; Goundry, W.; Robergeand, D. M.; Kappe, C. O. Development of a Continuous Flow Sulfoxide Imidation Protocol Using Azide Sources under Superacidic Conditions. *Org. Process Res. Dev.* **2015**, *19*, 1066.

APPENDIX 2: USEFUL TOOLS AND INFORMATION RESOURCES

Table A1 – Links to Tools and Resources (*Many of these resources are openly available to the public, unless otherwise noted.*)

Information About	Source	Use(s)	Link
GHS (Globally Harmonized System of Hazard Classification)	Occupational Safety and Health Standards on Toxic and Hazardous Substances (OSHA)	Appendix A To §1910.1200—Health Hazard Criteria	https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10100
		Appendix B To §1910.1200—Physical Criteria	https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10101
	Sigma Aldrich GHS Guide	Concise explanation of GHS elements	http://www.sigmaaldrich.com/safety-center/globally-harmonized.html
	United Nations Economic Commission for Europe (UNECE)	United Nations, Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 5th Edition, 2013 [Official UN Documentation]	http://www.unece.org/fileadmin/DAM/trans/danger/publi/ghs/ghs_rev05/English/ST-SG-AC10-30-Rev5e.pdf
General & SDS Information	Prudent Practices in the Laboratory: Handling and Management of Chemical Hazards, Updated Version	A web version of this book is available from the National Academies Press. This resource can be read online or downloaded in pdf format	http://www.nap.edu/catalog/12654/prudent-practices-in-the-laboratory-handling-and-management-of-chemical
	Sigma Aldrich SDS Search and Product Safety Center	Here one has access to numerous safety related items and tools available from Sigma Aldrich – Including their Technical Bulletins	http://www.sigmaaldrich.com/safety-center.html
	Safety Emporium	Numerous links to information about and where to locate SDSs on the Internet	http://www.ilpi.com/msds/#Internet

Tools	NIST Chemistry WebBook	Tabulate thermochemical data & calculation tools	http://webbook.nist.gov/
	Third Millennium Ideal Gas and Condensed Phase Thermochemical Database for Combustion (Argonne National Laboratory, Technion Israel Institute of Technology)	Thermochemical data	Overview: http://burcat.technion.ac.il/dir/BURCAT.BAK
			Direct link to files: http://burcat.technion.ac.il/dir/
	AiChE Design Institute for Physical Properties	*By Subscription*	http://www.aiche.org/dippr
	National Oceanic and Atmospheric Administration (NOAA) in	Computer-Aided Management of Emergency Operations (CAMEO Chemicals) – Reactivity Prediction	https://cameochemicals.noaa.gov/reactivity
Risk Assessment	American Chemical Society Committee on Chemical Safety (ACS CCS)	Hazard Assessment in Research Laboratories The ACS website highlighting the CCS document, "Identifying and Evaluating Hazards in Research Laboratories" – Contains methodology for assessing risk	https://www.acs.org/content/acs/en/about/governance/committees/chemicalsafety/hazard-assessment.html

Incidents	Bretherick's Handbook of Reactive Chemical Hazards	Urben, P. G. *Bretherick's Handbook of Reactive Chemical Hazards*, 7th Edition; Elsevier: New York, 2007; Vol. 1 and Vol. 2. (Note: some content available/linked through HSDB, ChemIDPlus, PubChem LCSS)	http://www.sciencedirect.com/science/book/9780123725639 *(by Subscription)*
	Chemical & Engineering News (ACS)	C&EN Safety Letters – Compiled from C&EN Letters to the Editor, also included in the Chemical Safety Library	http://pubs.acs.org/cen/safety/
	Pistoia Alliance	Chemical Safety Library – Shared incident reports from life sciences companies (coming in Q1, 2017)	http://www.pistoiaalliance.org/projects/chemical-safety-library/
Safety Related Data Sources (selected)	US Department of Health & Human Services (HHS)	ChemIDPlus Advanced – National Library of Medicine search system	http://chem.sis.nlm.nih.gov/chemidplus/
		Hazardous Substance Data Bank (HSDB) – National Library of Medicine database	https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
	The National Institute for Occupational Safety and Health (NIOSH)	Fact sheets and hazard reports from the National Institute for Occupational Safety and Health	http://www.cdc.gov/niosh/pubs/type.html
	PubChem LCSS	National Library of Medicine aggregated chemical information database	https://pubchem.ncbi.nlm.nih.gov/lcss/
Journals/Safety Related Research	Journal of Chemical Health & Safety	*By Subscription*	https://www.journals.elsevier.com/journal-of-chemical-health-and-safety/

Attachment 1

Awards Committee Awards Report

The 2017 CHAS awards will be presented at the Fall meeting in DC to the following:

The SafetyStratus College and University Award for an outstanding undergraduate safety program
Stanford University
Chemistry Department
Office of Environmental Health and Safety

Howard H. Fawcett Award for outstanding contributions to the science, technology, education and communication of chemical health and safety:
Monona Roosol, MS, MFA, Industrial Hygienist
President: Arts, Crafts & Theater Safety, Inc.
Safety Officer: Local USA829, IATSE
New York City

Tillmanns-Skolnick Award for outstanding long-term to the Division:
Robert H. Hill,Jr., PhD
Past CCS and CHAS Chair
Stone Mountain Georgia

New Awards Established (2018):
The **Cannabis Sub-division (CANN)** and the CHAS Awards Committee announces the establishment of:

The Heidolph North America (HNA) CANN Award administered by CHAS for:
Three outstanding research papers related to chemical health and safety aspects of cannabis growth, use, and effects.
Funds are committed for 5 years for 3 annual awards beginning in 2018.
Funds are provided for travel, expenses and plaques for 3 individuals yearly to present their findings at the annual CHAS Awards Symposium
at the fall ACS meeting.

Report submitted by:
Douglas B. Walters, PhD, FACS,CCHO
CHAS Awards Chair

Sunday Sessions

Park Central Hotel, Olympic Room

Best Practices in Selecting & Presenting Safety Training Content-Oral

Cosponsored by CCS

Organizers: D.M. Decker, F. K. Wood-Black

1:30: Introductory Remarks.

1:35: Connecting safety culture to the educational mission. *R. Stuart*

1:55: Preliminary results of the chemical safety information and education survey. *E. Sweet*

2:15: Building safety culture through targeted training. *M.R. Wilhelm*

2:35: Flipped classroom techniques in safety training. *R.M. Izzo*

2:55: Relevant content, positive attitude, and memorable presentation. *K.P. Fivizzani*

3:15: Closing Remarks.

Ask Dr. Safety: Chemical & Occupational Safety in the Cannabis Industry-Oral

Cosponsored by CCS

Organizers: H.J. Elston, N.R. Langerman

3:35: Introductory Remarks.

3:40: Sensible approach to workplace drug testing for cannabis. *J. Marcu, R.W. Phifer, E.M. Pryor*

4:00: Ask Dr. Safety: Chemical & occupational safety in the cannabis industry. *N.R. Langerman, H.J. Elston*

WORKSHOPS

(see http://www.dchas.org for registration information)

All workshops are at the Moscone Center from 8:30AM-4:00PM

Fri. March 31st

- **Laboratory Safety Workshop**
  Moscone 121

Sat. April 1st

- **How to be a More Effective Chemical Hygiene Officer**
  Moscone 121
- **Reactive Chemical Management**
  Mosconse 125

CHAS Member: $325.00/early registration $250
Non-CHAS Member: $375.00/early registration $300
Coffee is available at 8:00 AM
One hour (no host) lunch break.

Committee on Chemical Safety

Date: Monday April 3rd
Time: 7:00 AM - 11:30 AM
Location: Hilton SF Union, Continental Ballroom 6

Executive Committee Breakfast

Date: Sunday April 2
Time: 8:00 to 12:00
Location: Park Central Hotel, Franciscan I

Social Hour

Monday Evening, April 3, 2017
6:00 PM - 8:00 PM

Jillian's at Metreon

175 Fourth St., Corner of 4th and Howard
Hosted by CHAS & CHAL

Monday, Sci-Mix

Moscone Center, Hall D

Sponsored by CELL, Cosponsored by AGFD, ANYL, CHAS and I&EC

Organizer: J. Pickel

8:00 - 10:00

- Perception of risk in a quantitative analytical teaching laboratory. *S. Haxton, S.D. Wiediger*
- Absence of safety education in chemistry curriculum, and Normalization of Deviance. *R.H. Hill*
- Revisiting and revising The Safety Ethic. *R.H. Hill*
- Assessing risk for undergraduate research and demonstrations. *R. Stuart, S.B. Sigmann*
- Division of Chemical Health and Safety information poster. *J.M. Pickel*
- Cannabis analysis: A complex job under complex circumstances. *M.J. Wilcox, J. Marcu*
- Implementing sustainable practices in hands-off academic research labs. *K.A. Miller*
- Safety as a core value of a student chapter. C. Wilhelm
- Improving the Safety Culture of the University of California, Irvine Through a Graduate Safety Fellowship. *T. Endean*
- Assessing secondhand marijuana smoke using biological markers. *B. Wei, L. Wang*

ACS Chemistry for Life™

253th ACS National Meeting & Exposition

San Francisco, CA
April 2-6, 2017

CH&S
CONNECTING CHEMISTRY AND SAFETY

DIVISION OF CHEMICAL HEALTH AND SAFETY

Debbie Decker,
Frankie Wood-Black,
& Joseph Pickel
Program Chairs

Please plan on attending the Division of Chemical Health and Safety's Technical Program and Workshops in San Francisco, April 2017. We have listed for your consideration our workshops and technical programming. We believe we have put together the best technical program to help you be successful and work safely in your laboratory.

Monday Sessions

Park Central Hotel, Olympic Room

Cannabis: Emerging Challenges in Regulations, Product Analysis & Processing-Oral

Cosponsored by AGFD, CCS, CHAL, & SCHB

Organizer & Presiding: J. Marcu, E.M. Pryor

9:00: Introductory Remarks.

9:05: Cannabis analysis: An overview of testing requirements and challenges in a rapidly emerging industry. *M.J. Wilcox, J. Marcu*

9:25: Quality control analysis of contaminants in the medical cannabis market in California: Pesticide, plant growth regulators, residual solvents, and microbiological contaminants in cannabis, cannabis extracts, and cannabis infused products. *J. Wurzer*

9:45: States as cannabis laboratories: The far-reaching implications of federal non-recognition in the regulation of marijuana contaminants. *J. Angermann, J. Strull*

10:05: Intermission.

10:20: Assessing regulatory compliance at medical cannabis operations in the United States for patient focused certification. *J. Marcu, K. Nevedal, S. Sherer*

10:40: Challenges cannabis laboratories face in product analysis representative samples. *D. Chen*

11:00: Hemp as a nutritional supplement: Ensuring potency, safety, and regulatory compliance in manufacturing cannabis-derived health products. *A. Pham*

11:20: Concluding Remarks.

Luncheon by Waters Corporation

12:00 PM - 1:30 PM

@ Park Central, Concordia Room

1:30: Introductory Remarks.

1:35: Residual solvent contaminants in cannabis concentrates. *J.T. Fischedick, D. Egerton*

1:55: Cannabis grow facilities: Identification and handling of hazardous wastes, a problem for Environmental Health Departments. *D. Keenan, M. Duazo*

2:15: Thermal decomposition of THC on preparation of a distilled hash oil: A case study. *D. Lane*

2:35: Intermission.

2:50: THCA and CBDA: More than simply inactive precursors. *G. Moreno*

3:10: Emerging challenges in cannabis regulations. *R. Mirkarimi*

3:30: CANN History: The first year as a subdivision at the ACS. *E.M. Pryor, J. Marcu, M.J. Wilcox, E.L. Oltermann, A. Pham*

3:50: Panel Discussion.

Tuesday Sessions

Park Central Hotel, Olympic Room

Information Flow in Environmental Health & Safety-Oral

Cosponsored by CCS and CINF

Organizer: R. Stuart

9:00: Introductory Remarks.

9:10: Chemical safety requires a system, not a solution. *R. Stuart*

9:35: Chemical information necessary to establish laboratory ventilation control bands. *E. Sweet*

10:00: Reaction safety information: Engaging the community in collecting and sharing of safety learnings. *C. Nitsche, G. Whittick, M. Manfredi*

10:25: Intermission.

10:35: Chemical management applications for the University of California. *P. Painter, C. Carcamo*

11:00: Comparing GHS hazard statements between different sources. *B.S. Clark, B. Murphy, P.D. Tran, D. Berleant, R. Stuart, R.E. Belford*

11:25: Talking chemical safety: Terminologies and keywords in various information sources. *L. McEwen*

11:50: Panel Discusion.

Break

1:30: Introductory Remarks.

1:35: Consult the SDS. *S. Sigmann*

2:00: Graduate student perspective on the ACS online tool Hazard Assessment in Research Laboratories. *K. Leahy*

2:25: .Unique one-stop access to a multitude of chemical safety resources. *A. Lederman*

2:50: Intermission.

3:05: EPA CompTox chemistry dashboard: An online resource for environmental chemists. *A.J. Williams, C. Grulke, J. Smith, K. Mansouri, A. McEachran, K. Dionisio, K. Phillips, G. Patlewicz, J. Fitzpatrick, T. Martin, A. Richard, J. Edwards*

3:30: Exposure driven risk assessment of nanoparticles: Towards a re-equilibration of the traditional risk = hazard x exposure equation. *A. Masion, C. de Garidel-Thoron, S. Pekar, M. Auffan, J. Rose, M. van Tongeren, P.K. Westerhoff*

3:55: Assessing the activity and toxicity profile of small-molecules using freely accessible software and data: The contributions of chemical ontologies, metabolism prediction, and spectra prediction. *Y. Djoumbou Feunang*

Wednesday Sessions

Park Central Hotel, Olympic Room

What Have We Learned & Where Are We Going: Post-Settlement in the University of California-Oral

Cosponsored by CCS

Organizers: D. Decker, J. Palmer

9:00: Introductory Remarks.

9:05: Moving from compliance to safety in UC laboratories. *C.A. Merlic*

9:30: 2700 Miles and a big step forward: The UC settlement and Princeton University. *R.M. Izzo*

9:55: Beyond compliance: Building safety culture at UCLA. *C. Dimock, S. Hsieh*

10:20: Intermission.

10:35: Moving on after the settlement - the approach of a small University of California campus. *K. Smith*

11:00: Continuous improvement opportunities in the UC system post-settlement agreement. *C.A. Jakober, D.M. Decker*

11:25: Concluding Remarks.

Break

1:30: Introductory Remarks.

1:35: Establishing a student-enforced safety culture in academic research labs. *K.A. Miller*

2:00: Successfully implementing a positive safety culture in an R1 research laboratory as a graduate safety officer. *B. Armstrong, A.K. Franz*

2:25: Heavy lifting of compliance: A graduate student perspective. *A. Manlove, B. Anderson, N. Nunez*

2:50: Intermission.

3:05: UC-Davis: SOP task force committee. *P.N. Serrano*

3:30: Continuing to promote careful chemistry in the post-settlement era. *J.G. Palmer, L.S. Wong*

3:55: Concluding Remarks.

Other Events

Presidential symposium and companion poster session: Building a Safety Culture Across the Chemical Enterprise

Save the date
Fall National Meeting in

Attachment 10

Report of Activities of the Government Relations Committee:

March 2017

Submitted by Ellen Sweet

1) Sent to the ACS Office of Public Affairs (OPA) nominations for the EPA Science Advisory Committee on Chemicals (SACC). The purpose of this committee is "to provide independent advice and expert consultation on the scientific and technical aspects of risk assessments, methodologies, and pollution prevention measures or approaches." Neither Anthony Noce, of ECI, nor Neal Langerman, were accepted. However, the following ACS members did make the committee:

    - Concepcion (Conchita) Jimenez-Gonzalez, GlaxoSmithKline
    - William J. Doucette, Utah State University
    - John C. Kissel, University of Washington
    - Christopher L. Waller, Pfizer

    I have expressed to the OPA our interest in assisting with any technical input we can offer for this and any other ACS interactions with regulatory agencies.

2) ACS submitted comments to FR # EPA-HQ-OPPT-2016-0636 titled "Procedures for Prioritization of Chemicals for Risk Evaluation Under the Toxic Substances Control Act". These comments included ACS Public Policy Statements titled Chemical Risk Assessment and Regulatory Decision Making, and Safety in the Chemistry Enterprise. https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0636-0005

3) Members of the Division have worked with the CCS and the OPA to write a guidance document on safety responsibilities. This writing team is chaired by Ken Fivizzani who is providing a report on the status of this work.

4) The committee is making edits to the Administrative Manual concerning the process this committee must take to submit comments on behalf of the Society. Sammye will discuss this in her report.

5) The division sent 2 members to an initial committee meeting for the revision of the ANSI Z358 standard on Emergency Eyewash and Shower Equipment. Our comments are attached to this report.

6) This committee has continued to track OSHA and EPA regulatory announcements and agendas for items that the Division can provide useful input on.

Attachment 1

ANSI/ISE Z358.1-2014

American National Standard for Emergency Eyewash and Shower Equipment

ANSI/ISEA Z358.1-2014
Revision of
ANSI/ISEA Z358.1-2009

American National Standard for
Emergency Eyewash and Shower Equipment

Secretariat
International Safety Equipment Association

Approved January 8, 2015
American National Standards Institute, Inc.

American National Standard

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer. Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution. The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he/she has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards. The American National Standards Institute does not develop standards and will in no circumstance give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretation should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken to reaffirm, revise, or withdraw this standard no later than five years from the date of publication. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Published by

International Safety Equipment Association
1901 North Moore Street, Suite 808, Arlington, Virginia 22209

Printed in the United States of America

Foreword (This Foreword is not part of American National Standard ANSI/ISEA Z358.1-2014)

This revision updates ANSI Z358.1-2009 and was prepared by the Emergency Eyewash and Shower Group of the International Safety Equipment Association, whose members are thoroughly knowledgeable in the design, installation, and use of this important safety equipment. The following companies were members of the group at the time of the approval of the standard: Bradley Corporation, Encon Safety Products, FSI International, Guardian Equipment, Honeywell Safety Products, Hughes Safety Showers, Prevor, Inc., Sellstrom Manufacturing, Speakman Company, and VisionAid.

Updates to the 2009 version of the standard are reflected in this document, including improvement in language to emphasize that the location of the fluid flow and pattern delivery for emergency eyewashes and eye/face washes is the critical aspect in designing and installing these devices, rather than the positioning of the nozzles themselves. Additionally, illustrations have been updated to reflect contemporary design configurations that are known to meet the criteria in standard.

Suggestions for the improvement of this standard are welcome. They should be sent to the ISEA, 1901 N. Moore Street, Suite 808, Arlington, VA 22209 or isea@safetyequipment.org.

This standard was processed and approved using consensus procedures prescribed by the American National Standards Institute. The following organizations were contacted prior to the approval of this standard. Inclusion in this list does not necessarily imply that the organization concurred with the submittal of the proposed standard to ANSI.

Acorn Safety
APPA, Leadership in Educational Facilities
Alabama Power Company
Arts, Crafts & Theater Safety Inc.
Atlantic Health
Atlas Industrial Contractors, LLC
BASF Corporation
Baylor Scott & White Health
CalOSHA
Cardinal Health
County of Sacramento
Erdman
Green Conversion Systems
Haws Corporation
International Safety Equipment Association
Intertek
Lawler Manufacturing
Natural Resources Canada
North Carolina Department of Labor
Safety Equipment Institute
Special Graphic Imaging Association
State of Ohio Public Employment Risk Reduction Program
Syracuse Utilities
UL LLC
University of Georgia
University of Michigan
US Department of the Army
US Department of the Navy
Williams Energy

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ILLUSTRATIONS

APPENDICES

American National Standard for Emergency Eyewash and Shower Equipment

1. Scope

This standard establishes minimum performance and use requirements for eyewash and shower equipment for the emergency treatment of the eyes or body of a person who has been exposed to hazardous materials. It covers the following types of equipment: emergency showers, eyewashes, eye/face washes, and combination units.

This standard also includes performance and use requirements for personal wash units and drench hoses, which are considered supplemental to emergency eyewash and shower equipment.

2. Purpose

This standard is intended to provide uniform minimum requirements for the performance, use, installation, test procedures, maintenance and training of emergency eyewash and shower equipment.

3. Definitions

For the purpose of this standard, the following terms apply as defined:

Accessible: complying with applicable sections of the current edition of ICC ANSI A117.1 Standard for Accessible and Usable Buildings and Facilities and the U.S. Department of Justice's 2010 ADA Standards for Accessible Design

certified: A system whereby a certification organization determines that a manufacturer has demonstrated the ability to produce a product that complies with the requirements of this standard, authorizes the manufacturer to use a label on listed products that comply with the requirements of this standard, and establishes a follow-up program conducted by the certification organization as a check on the methods the manufacturer uses to determine continued compliance of labeled and listed products with the requirements of this standard.

certification organization: An independent third party organization that determines product compliance with the requirements of this standard with a labeling/listing/follow-up program.

combination unit: An interconnected assembly of emergency equipment supplied by a single source of flushing fluid.

drench hose: A supplemental device consisting of a flexible hose connected to a flushing fluid supply and used to provide fluid to irrigate and flush face and body areas.

emergency shower: A device specifically designed and intended to deliver flushing fluid in sufficient volume to cause that fluid to cascade over the entire body.

eye/face wash: A device used to provide fluid to irrigate and flush both the face and the eyes simultaneously.

eyewash: A device used to provide fluid to irrigate and flush the eyes.

flow pressure: The pressure in the water supply pipe near the water outlet while the faucet or outlet is fully open and flowing.

flushing fluid: Potable water, preserved water, preserved buffered saline solution or other medically acceptable solution manufactured and labeled in accordance with applicable government regulations.

flushing fluid column: The dispersion pattern of flushing fluid which is created by an emergency shower and meets the standard's prescribed coverage requirements. This pattern can be achieved by a variety of design configurations.

freeze protected equipment: Equipment designed to allow the emergency device to operate under freezing conditions.

freeze protection: A means to protect flushing fluid in an apparatus from freezing and rendering it inoperable. This can be achieved through several means including mechanical valves and electrical heat tracing.

hazardous material: Any substance or compound that has the capability of producing

Comment [jp1]: Link to ICC ANSI A117.1 – 2009: https://law.resource.org/pub/us/code/ibr/ansi.a117.1.2009.pdf
Link to 2010 ADA Standards for Accessible Design: https://www.ada.gov/regs2010/2010ADAStandards/2010ADAStandards_prt.pdf

Comment [EMS2R1]:

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adverse effects on the health and safety of humans.

personal wash: A supplementary device that supports plumbed and/or self-contained units, by delivering immediate flushing fluid to the eyes or body.

plumbed: A term used to describe equipment that is connected to a continual source of potable water.

potable water: Water that is suitable for drinking.

self-closing valve: A valve that closes automatically when released by the user.

self-contained: A term used to describe a stand-alone device containing flushing fluid.

tepid: A flushing fluid temperature conducive to promoting a minimum 15 minute irrigation period. A suitable range is 16 - 38º C (60 -100º F). (See Appendix B6).

valve actuator: A device connected to the valve to facilitate its operation.

4. Emergency Showers (See Illustrations 1, 2, 3)

4.1 Performance of Emergency Showers

4.1.1 A means shall be provided to ensure that a controlled flow of flushing fluid is provided at a velocity low enough to be non-injurious to the user.

4.1.2 Emergency showers shall be capable of delivering flushing fluid at a minimum of 75.7 liters per minute (20 gpm) for a minimum of 15 minutes. If shut off valves are installed in the supply line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.

4.1.3 Emergency showers shall provide a flushing fluid column that is at least 208.3 cm (82 in.) and not more than 243.8 cm (96 in.) in height from the surface on which the user stands.

4.1.4 The spray pattern shall have a minimum diameter of 50.8 cm (20 in.) at 152.4 cm (60 in.) above the surface on which the user stands, and the center of the spray pattern shall be located at least 40.6 cm (16 in.) from any obstruction. The flushing fluid shall be substantially dispersed throughout the pattern.

4.1.5 Emergency showers shall be designed, manufactured and installed in such a manner that, once activated, they can be used without requiring the use of the operator's hands.

4.1.6 Emergency showers shall be constructed of materials that will not corrode in the presence of the flushing fluid. Stored flushing fluid shall be protected against airborne contaminants.

4.1.7 Emergency showers shall be located on an accessible route so that they are usable by people with disabilities.

4.2 Performance of Control Valve

The valve shall remain open without the use of the operator's hands until intentionally closed. The valve shall be simple to operate and shall go from "off" to "on" in 1 second or less. The valve shall be resistant to corrosion. Manual or automatic actuators shall be easy to locate and readily accessible to the user. Valve actuators shall be located not more than 48 in above or lower than 15" on the level on which the user stands.. The valve shall comply with accessible operable parts requirements and not require any tight grasping, pinching or twisting of the wrist to operate, no more than 5 lbf to operate and a level, clear floor space that is at least 30 in. x by 48 in. shall be provided at the control valve.

4.3 Emergency Shower Enclosures

If used, enclosures shall provide for a minimum unobstructed area of 86.4 cm (34 in.) in diameter.

4.4 Testing Procedures for Certification

4.4.1 Plumbed Emergency Showers

Plumbed emergency showers shall be certified as follows:

(1) Connect a flowmeter to the unit to be tested or provide other means of measuring flushing fluid flow.

(2) Connect the unit per the manufacturer's specifications to a flushing fluid supply at a flow pressure of 207 kPa +3.4 kPa -0 kPa (30 psi +0.5 psi -0 psi).

(3) Open the valve on the unit and verify that it fully opens in one second or less and that it stays open.

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Comment [jp3]: The full text of accessible route components are found in Chapter 4 of the ADA Standards and ICC ANSI A117.1. Essentially, the route used to access the shower cannot involve the use of steps, must be at least 36" wide, and any changes in level along the accessible route leading to the shower that are between ¼" and ½" must be beveled with a slope no greater than 1:2. Elevation changes greater than ½" must be ramped in compliance with the ADA and ICC ANSI A117.1 standard.

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Comment [jp5]: Operable parts requirements in the ADA and ICC ANSI A117.1 are found in section 309.

Comment [jp6]: This section is tricky. If a shower is enclosed, to be accessible for all wheelchair users, a roll in shower is probably a *best practice*. Roll In showers must be at least 30" wide and at least 60" long. See ICC ANSI A117.1 608.2.2.1. While transfer showers are smaller in size (36" x 36"), they assume that someone will transfer to a seat to use the shower, which is not likely to occur in an emergency situation.

pattern. The flushing fluid column pattern

(4) Determine that flushing fluid is substantially dispersed throughout the

shall be at least 208 cm (82 in.) and no more than 243.8 cm (96 in.) from the surface on which the user stands. Measure the diameter of the flushing fluid pattern 152.4 cm (60 in.) above the surface on which the user stands. The diameter shall be a minimum of 50.8 cm (20 in.). Throughout the 15-minute test, verify that the flow rate is a minimum of 75.7 liters per minute (20 gpm).

4.4.2 Self-contained Emergency Showers

Self-contained emergency showers shall be certified as follows:

(1) Fill the unit with flushing solution.

(2) Connect a flowmeter to the unit to be tested or provide other means of measuring flushing fluid flow.

(3) Open the valve on the unit and verify that it fully opens in one second or less and that it stays open.

(4) Determine that flushing fluid is substantially dispersed throughout the pattern. The flushing fluid column pattern shall be at least 208 cm (82 in.) and not more than 243.8 cm (96 in.) from the surface on which the user stands. Measure the diameter of the flushing fluid pattern 152.4 cm (60 in.) above the surface on which the user stands. The diameter shall be a minimum of 50.8 cm (20 in.). Throughout the 15-minute test, verify that the flow rate is a minimum of 75.7 liters per minute (20 gpm).

4.5 Installation

It is the installer's responsibility to ensure that emergency showers shall:

4.5.1 Be assembled and installed in accordance with the manufacturer's instructions, including flushing fluid delivery requirements.

4.5.2 Be in accessible locations that require no more than 10 seconds to reach that are on an accessible route for people with disabilities. The emergency shower shall be located on the same level as the hazard and the path of travel shall be free of obstructions that may inhibit its immediate use. (See Appendix B5)

4.5.3 Be located in an area identified with a highly visible sign positioned so the sign shall be visible within the area served by the emergency shower. The area around the emergency shower shall be well-lit.

4.5.4 Be enclosed when located in public spaces, such as hallways.

4.5.5 Be positioned so that the shower pattern is dispersed such that the top of the flushing fluid column is at least 208.3 cm (82 in.) and not more than 243.8 cm (96 in.) from the surface on which the user stands. The center of the spray shall be at least 40.6 cm (16 in.) from any obstruction.

4.5.6 Be connected to a supply of flushing fluid per the manufacturer's installation instructions to produce the required spray pattern for a minimum period of 15 minutes. Where the possibility of freezing conditions exists, the emergency shower shall be protected from freezing or freeze-protected equipment shall be installed. If shut off valves are installed in the shower line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.

4.5.7 Deliver tepid flushing fluid. In circumstances where chemical reaction is accelerated by flushing fluid temperature, a facilities safety/health advisor should be consulted for the optimum temperature for each application.

4.5.8 When the plumbed emergency shower is installed, its performance shall be verified in accordance with the following procedures:

(1) With the unit correctly connected to the flushing fluid source and the valve(s) closed, visually check the piping connections for leaks.

(2) Open the valve to the full open position. The valve shall remain open without requiring further use of the operator's hands.

(3) With the valve in the fully opened position, measure the diameter of the spray pattern. It shall be a minimum of 50.8 cm (20 in.) at 152.4 cm (60 in.) above the standing surface. The flushing fluid shall be substantially dispersed throughout the pattern.

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Comment [EMS7]: The purpose of this statement is to try to remove the discomfort users have with stripping their clothes off iin order to lessen exposure to the chemical. It is better to require showers inside of the lab and not bring the hazard into a public space.

Comment [EMS8]: Cornell design standard uses 60-100 degrees with the ideal temperature of 85F. see definition in this ANSI standard

Comment [jp9]: Generally, accessibility standards, including ICC ANSI A117.1 Section 608.8 limit water temperature in accessible showers to 120 degrees F (49 degrees C) maximum.

(4) Using the flowmeter or other means, determine that the rate of flow is at least 75.7 liters per minute (20 gpm).

(5) Using a temperature gauge or other means, determine that the flushing fluid is tepid.

4.5.9 When the self-contained emergency shower is installed, its installation shall be verified in accordance with manufacturer's instructions.

4.6 Maintenance and Training

4.6.1 Manufacturers shall provide operation, inspection and maintenance instructions with emergency shower equipment. Instructions shall be readily accessible to maintenance and training personnel.

4.6.2 Plumbed emergency showers shall be activated weekly for a period long enough to verify operation and ensure that flushing fluid is available. (See Appendix B7)

4.6.3 Self-contained emergency showers shall be visually checked weekly to determine if flushing fluid needs to be changed or supplemented. Such inspection shall be conducted in accordance with manufacturer's instructions.

4.6.4 Employees who may be exposed to hazardous materials shall be instructed in the location and proper use of emergency showers.

4.6.5 All emergency showers shall be inspected annually to assure conformance with Section 4.5 requirements of this standard.

4.6.6 Part of the maintenance shall include ensuring that furnishings, equipment, or other items do not encroach on the accessible route to the emergency shower.

5. Eyewash Equipment (See Illustrations 4, 5, 6)

5.1 Performance of Eyewashes

5.1.1 A means shall be provided to ensure that a controlled flow of flushing fluid is provided to both eyes simultaneously at a velocity low enough to be non-injurious to the user.

5.1.2 The eyewash shall be designed and positioned in such a way as to pose no hazard to the user.

5.1.3 Nozzles and flushing fluid units shall be protected from airborne contaminants. Whatever means is used to afford such protection, its removal shall not require a separate motion by the operator when activating the unit.

5.1.4 Eyewashes shall be designed, manufactured and installed in such a manner that, once activated, they can be used without requiring the use of the operator's hands.

5.1.5 Eyewashes shall be located on an accessible route so that they are usable by people with disabilities.

5.1.6

5.1.7 Eyewashes shall be constructed of materials that will not corrode in the presence of the flushing fluid.

5.1.8 Eyewashes shall be capable of delivering flushing fluid to the eyes not less than 1.5 liters per minute (0.4 gpm) for 15 minutes. If shut off valves are installed in the supply line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.

5.1.7 Eyewashes shall be designed to provide enough room to allow the eyelids to be held open with the hands while the eyes are in the flushing fluid stream.

5.1.8 Eyewashes shall provide flushing fluid to both eyes simultaneously. A test gauge for making determination of a suitable eyewash pattern shall be a minimum 10.16 cm (4 in.) in length with two sets of parallel lines equidistant from the center (See Illustration 7). The interior set of lines shall be 3.18 cm (1.25 in.) apart and the exterior lines shall be 8.26 cm (3.25 in.) apart. Place the gauge in the stream of the eyewash. The flushing fluid shall cover the areas between the interior and exterior lines of the gauge at some point less than 20.3 cm (8 in.) above the eyewash nozzle(s).

5.2 Performance of Control Valve

The valve shall remain open without the use of the operator's hands until intentionally closed. The valve shall be simple to operate and shall go from "off" to "on" in 1 second or less. The valve shall be resistant to corrosion. Manual or automatic actuators shall be easy to locate and readily accessible to the user.

Valve actuators shall be located not more than 48 in above or lower than 15" on the level on which the user stands,. The valve shall comply with

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Comment [jp10]: The maximum height for accessible operable parts in the ADA and ICC ANSI A117.1 is 48" max. AFF. See Section 308 of the ICC ANSI A117.1 standard. The lowest height for an operable part is 15" AFF.

Comment [jp11]: Operable parts requirements in the ADA and ICC ANSI A117.1 are found in section 309.

accessible operable parts requirements and not require any tight grasping, pinching or twisting of the wrist to operate, no more than 5 lbf to operate and a level, clear floor space that is at least 30 in. x by 48 in. shall be provided at the control valve.

5.3 Testing Procedures for Certification

5.3.1 Plumbed Eyewashes

Plumbed eyewashes shall be certified as follows:

(1) Connect a flowmeter to the unit to be tested, or provide other means of measuring flushing fluid flow.

(2) Connect the unit to a flushing fluid supply per the manufacturer's instructions at a flow pressure of 207 kPa +3.4 kPa -0 kPa (30 psi +0.5 psi -0 psi).

(3) Open the valve on the eyewash and verify that it fully opens in one second or less and that it stays open.

(4) Throughout the 15 minute test, ensure that the unit is capable of delivering a minimum of 1.5 liters per minute (0.4 gpm) and that the flushing fluid covers the areas between the interior and exterior lines of the gauge at some point less than 20.3 cm (8 in.) above the eyewash nozzle(s) (Illustration 7).

5.3.2 Self-contained Eyewashes

Self-contained eyewashes shall be certified as follows:

(1) Set up the unit per the manufacturer's instructions.

(2) Fill the unit with flushing fluid or with the pre-packaged fluid provided by the manufacturer.

(3) Activate the unit and verify that it can be activated in one second or less and that it stays activated.

(4) Throughout the 15 minute test, ensure that the eyewash is capable of delivering a minimum of 1.5 liters per minute (0.4 gpm) and that the flushing fluid covers the areas between the interior and exterior lines of the gauge at some point less than 20.3 cm (8 in.) above the eyewash nozzle(s) (Illustration 7).

5.4 Installation

It is the installer's responsibility to ensure that eyewashes shall:

5.4.1 Be assembled and installed in accordance with the manufacturer's instructions, including flushing fluid delivery requirements.

5.4.2 Be in accessible locations that require no more than 10 seconds to reach that is on an accessible route. The eyewash shall be located on the same level as the hazard and the path of travel shall be free of obstructions that may inhibit its immediate use. (See Appendix B5)

5.4.3 Be located in an area identified with a highly visible sign positioned so the sign shall be visible within the area served by the eyewash. The area around the eyewash shall be well-lit.

5.4.4 Be arranged such that the flushing fluid flow pattern as described in Section 5.1.8 is not less than 83.8 cm (33 in.) and no greater than 134.6 cm (53 in.) from the surface on which the user stands and 15.3 cm (6 in.) minimum from the wall or the nearest obstruction.

5.4.5 Be connected to a supply of flushing fluid per the manufacturer's installation instructions to produce the required spray pattern for a minimum period of 15 minutes. Where the possibility of freezing conditions exists, the eyewash shall be protected from freezing or freeze-protected equipment shall be installed. If shut off valves are installed in the supply line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.

5.4.6 Deliver tepid flushing fluid. In circumstances where chemical reaction is accelerated by flushing fluid temperature, a facilities safety/health advisor should be consulted for the optimum temperature for each application.

5.4.7 When the plumbed eyewash is installed, its performance shall be verified in accordance with the following procedures:

(1) With the unit correctly connected to the flushing fluid source and the valve(s) closed, visually check the piping connections for leaks.

Comment [jp12]: Please see comments next to Illustration #4 at the end of this document related to the accessibility of plumbed eyewashes.

(2) Open the valve to the full open position. The valve shall remain open without requiring further use of the operator's hands.

(3) With the valve in the fully open position, make sure that both eyes will be washed simultaneously at a velocity low enough to be non-injurious to the user.

(4) Using the flowmeter or other means, determine that the rate of flow is at least 1.5 liters per minute (0.4 gpm). A test gauge similar to the one pictured in Illustration 7 can be used to verify minimum flow characteristics.

(1) Using a temperature gauge or other means, determine that the flushing fluid is tepid.

5.4.8 When the self-contained eyewash is installed, its installation shall be verified in accordance with manufacturer's instructions.

5.5 Maintenance and Training

5.5.1 Manufacturers shall provide operation, inspection and maintenance instructions with eyewashes. Instructions shall be readily accessible to maintenance and inspection personnel.

5.5.2 Plumbed eyewashes shall be activated weekly for a period long enough to verify operation and ensure that flushing fluid is available. (See Appendix B7)

5.5.3 Self-contained eyewashes shall be visually checked weekly to determine if flushing fluid needs to be changed or supplemented. Such inspection shall be conducted in accordance with manufacturer's instructions.

5.5.4 Employees who may be exposed to hazardous materials shall be instructed in the location and proper use of emergency eyewashes.

5.5.5 All eyewashes shall be inspected annually to assure conformance with Section 5.4 requirements of this standard.

5.5.6 Part of the maintenance shall include ensuring that furnishings, equipment, or other items do not encroach on the accessible route to the eyewash.

6. Eye/Face Wash Equipment (See Illustration 8)

6.1 Performance of Eye/Face Washes

6.1.1 A means shall be provided to ensure that a controlled flow of flushing fluid is provided to both eyes and face simultaneously at a velocity low enough to be non-injurious to the user.

6.1.2 Eye/face washes shall be designed and positioned in such a way as to pose no hazard to the user.

6.1.3 Nozzles and flushing fluid units shall be protected from airborne contaminants. Whatever means is used to afford such protection, its removal shall not require a separate motion by the operator when activating the unit.

6.1.4 Eye/face washes shall be designed, manufactured and installed in such a manner that, once activated, they can be used without requiring the use of the operator's hands.

6.1.5 Eye/face washes shall be constructed of materials that will not corrode in the presence of the flushing fluid.

6.1.6 Eye/face washes shall be capable of delivering flushing fluid to the eyes and face not less than 11.4 liters per minute (3.0 gpm) for 15 minutes. If shut off valves are installed in the line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.

6.1.7 Eye/face washes shall be designed to provide enough room to allow the eyelids to be held open with the hands while the eyes and face are in the flushing fluid stream.

6.1.8 Eye/face washes shall provide flushing fluid to both eyes simultaneously. A test gauge for making determination of a suitable eyewash pattern shall be a minimum 10.16 cm (4 in.) in length with two sets of parallel lines equidistant from the center (See Illustration 7). The interior set of lines shall be 3.18 cm (1.25 in.) apart and the exterior lines shall be 8.26 cm (3.25 in.) apart. Place the gauge in the stream of the eyewash. The flushing fluid shall cover the areas between the interior and exterior lines of the gauge at some point less than 20.3 cm (8 in.) above the eye/face wash nozzle(s).

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6.2 Performance of Control Valve

The valve shall remain open without the use of the operator's hands until intentionally closed. The valve shall be simple to operate and shall go from "off" to "on" in 1 second or less. The valve shall be resistant to corrosion. Manual or automatic actuators shall be easy to locate and readily accessible to the user. Valve actuators shall be located not more than 48 in. above or lower than 15" on the level on which the user stands,. The valve shall comply with accessible operable parts requirements and not require any tight grasping, pinching or twisting of the wrist to operate, no more than 5 lbf to operate and a level, clear floor space that is at least 30 in. x by 48 in. shall be provided at the control valve.

Comment [jp13]: The maximum height for accessible operable parts in the ADA and ICC ANSI A117.1 is 48" max. AFF. See Section 308 of the ICC ANSI A117.1 standard. The lowest height for an operable part is 15" AFF.

Comment [jp14]: Operable parts requirements in the ADA and ICC ANSI A117.1 are found in section 309.

6.3 Testing Procedures for Certification

6.3.1 Plumbed Eye/Face Washes

Plumbed eye/face washes shall be certified as follows:

(1) Connect a flowmeter to the unit to be tested, or provide other means of measuring flushing fluid flow.

(2) Connect the unit to a flushing fluid supply per the manufacturer's instructions at a flow pressure of 207 kPa +3.4 kPa -0 kPa (30 psi +0.5 psi -0 psi).

(3) Open the valve on the unit and verify that it opens in one second and stays open.

(4) Throughout the 15 minute test, ensure that the unit is capable of delivering a minimum of 11.4 liters per minute (3.0 gpm) and that the flushing fluid covers the areas between the interior and exterior lines of the gauge at some point less than 20.3 cm (8 in.) above the eye/face wash nozzle(s) (Illustration 7).

6.3.2 Self-contained Eye/Face Washes

Self-contained eye/face washes shall be certified as follows:

(1) Set up the unit per the manufacturer's instructions.

(2) Fill the unit with flushing fluid or with the pre-packaged fluid provided by the manufacturer.

(3) Activate the unit and verify that it can be activated in one second or less and that it stays activated.

(4) Throughout the 15 minute test, ensure that the unit is capable of delivering a

minimum of 11.4 liters per minute (3.0 gpm) and that the flushing fluid covers the areas between the interior and exterior lines of the gauge at some point less than 20.3 cm
(8 in.) above the eye/face wash nozzle(s) (Illustration 7).

6.4 Installation

It is the installer's responsibility to ensure that eye/face washes shall:

6.4.1 Be assembled and installed in accordance with the manufacturer's instructions, including flushing fluid delivery requirements.

6.4.2 Be in accessible locations that require no more than 10 seconds to reach that is on an accessible route. The eye/face wash shall be located on the same level as the hazard and the path of travel shall be free of obstructions that may inhibit the immediate use of the equipment. (See Appendix B5)

6.4.3 Be located in an area identified with a highly visible sign positioned so the sign shall be visible within the area served by the eye/face wash. The area around the eye/face wash shall be well-lit.

6.4.4 Be arranged such that the flushing fluid flow pattern as described in Section 6.1.8 is not less than 83.8 cm (33 in.) and no greater than 134.6 cm (53 in.) from the level on which the user stands and 15.3 cm (6 in.) minimum from the wall or nearest obstruction.

6.4.5 Be connected to a supply of flushing fluid per the manufacturer's installation instructions to produce the required spray pattern for a minimum period of 15 minutes. Where the possibility of freezing conditions exists, the eye/face wash shall be protected from freezing or freeze-protected equipment shall be installed. If shut off valves are installed in the supply line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.

6.4.6 Deliver tepid flushing fluid. In circumstances where chemical reaction is accelerated by flushing fluid temperature, a facilities safety/health advisor should be consulted for the optimum temperature for each application. (See Appendix B6)

6.4.7 When the plumbed eye/face wash is installed, its performance shall be verified in accordance with the following procedures:

(1) With the unit correctly connected to the flushing fluid source and the valve(s) closed, visually check the piping connections for leaks.

(2) Open the valve to the full open position. The valve shall remain open without requiring further use of the operator's hands.

(3) With the valve in the fully opened position make sure that both eyes and face will be washed simultaneously at a velocity low enough to be non-injurious to the user.

(4) Using the flowmeter or other means, determine that the rate of flow is at least 11.4 liters per minute (3.0 gpm). A test gauge similar to the one pictured in Illustration 7 can be used to verify minimum flow characteristics.

(1) Using a temperature gauge or other means, determine that the flushing fluid is tepid.

6.4.8 When the self-contained eye/face wash is installed, its installation shall be verified in accordance with manufacturer's instructions.

6.5 Maintenance and Training

6.5.1 Manufacturers shall provide operation, inspection and maintenance instructions with eye/face washes. Instructions shall be readily accessible to maintenance and inspection personnel.

6.5.2 Plumbed eye/face washes shall be activated weekly for a period long enough to verify operation and ensure that flushing fluid is available. (See Appendix B7)

6.5.3 Self-contained eye/face washes shall be visually checked weekly to determine if flushing fluid needs to be changed or supplemented. Such inspection shall be conducted in accordance with manufacturer's instructions.

6.5.4 Employees who may be exposed to hazardous materials shall be instructed in the location and proper use of eye/face washes.

6.5.5 All eye/face washes shall be inspected annually to assure conformance with Section 6.4 requirements of this standard.

6.5.6 Part of the maintenance shall include ensuring that furnishings, equipment, or other items do not encroach on the accessible route to the eye/face wash.

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7. Combination Units (See Illustration 9)

7.1 Performance of Combination Units

Components of combination units shall operate individually and simultaneously in accordance with the following sections:

7.1.1 Emergency showers shall meet the performance requirements of Section 4.

7.1.2 Eyewashes shall meet the performance requirements of Section 5.

7.1.3 Eye/face washes shall meet the performance requirements of Section 6.

7.1.4 Drench hoses shall meet the performance requirements of Section 8.2 at the pressure and flow specified by the manufacturer.

NOTE: The eyewash or eye/face wash section of a combination unit is not considered an "obstruction" in this context to allow for simultaneous use of emergency shower and eyewash equipment.

7.2 Performance of Control Valve

Each valve shall meet the applicable requirements of Sections 4, 5, 6, and 8.2.2, depending on which of the components listed in Section 7.1 are included.

7.3 Testing Procedures for Certification

Each part of the combination unit shall be certified individually and when activated simultaneously be in accordance with the procedures outlined in Sections 4, 5, 6 and 8.2, depending on which of the components listed in Section 7.1 are included.

7.4 Installation

It is the installer's responsibility to ensure that combination units shall:

7.4.1 Be assembled and installed in accordance with the manufacturer's instructions, including flushing fluid delivery requirements.

7.4.2 Be in accessible locations that require no more than 10 seconds to reach that is on an accessible route. The combination unit shall be located on the same level as the hazard and the path of travel shall be free of obstructions that may inhibit its immediate use. (See Appendix B5)

7.4.3 Be located in an area identified with a highly visible sign positioned so the sign shall be visible within the area served by the combination unit. The area around the combination unit shall be well-lit.

7.4.4 Be connected to a system capable of supplying adequate flushing fluid to meet the requirements of each component as outlined in Sections 4, 5, and 6 when all components are operated simultaneously. Combination unit components shall be positioned so that components may be used simultaneously by the same user. Where the possibility of freezing conditions exists, combination units shall be protected from freezing or freeze-protected equipment shall be installed.

7.4.5 Deliver tepid flushing fluid. In circumstances where chemical reaction is accelerated by flushing fluid temperature, a facilities safety/health advisor should be consulted for the optimum temperature for each application. (See Appendix B6)

7.4.6 When the combination unit is installed, its performance shall be verified in accordance with the following procedures:

(1) With the unit correctly connected to the flushing fluid source and the valve(s) closed, visually check the piping connections for leaks.

(2) Open the emergency shower and eyewash or eye/face wash valves to the full open position. The valves shall remain open without requiring further use of the operator's hands.

(3) Activate the valves and check the performance of the emergency shower, eyewash and eye/face wash valves as described in Sections 4.5.7, 5.4.7 and 6.4.7 respectively, while operating simultaneously.

(4) Using a temperature gauge or other means, determine that the flushing fluid is tepid.

NOTE: Where hand-held drench hoses are part of the combination unit, the flow and pressure shall be specified by the manufacturer.

7.5 Maintenance and Training

7.5.1 Manufacturers shall provide operation, inspection and maintenance instructions with combination units. Instructions shall be readily accessible to maintenance and inspection personnel.

7.5.2 Plumbed combination units shall be activated weekly for a period long enough to verify operation and ensure that flushing fluid is available. (See Appendix B7)

7.5.3 Self-contained combination units shall be visually checked weekly to determine if flushing fluid needs to be changed or supplemented. Such inspection shall be conducted in accordance with manufacturer's instructions.

7.5.4 Employees who may be exposed to hazardous materials shall be instructed in the location and proper use of combination units.

7.5.5 All combination units shall be inspected annually to assure conformance with Section 7.4 requirements of this standard.

7.5.6 Part of the maintenance shall include ensuring that furnishings, equipment, or other items do not encroach on the accessible route to the combination unit.

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8. Supplemental Equipment

The supplemental equipment listed below shall provide immediate flushing to support plumbed and self-contained emergency eyewash and shower equipment but shall not replace them.

8.1. Personal Wash Units (See Illustration 10)

8.1.1 Performance of Personal Wash Units

8.1.1.1 Personal wash units shall have the capacity to deliver immediate flushing fluid without being injurious to the user. Personal wash units do not meet the criteria of plumbed or self-contained eyewash equipment.

8.1.1.2 In circumstances where chemical reaction is accelerated by flushing fluid temperature, a facilities safety/health advisor should be consulted for the optimum temperature for each application. (See Appendix B6)

8.1.2 Installation

Personal wash units shall be protected from freezing and shall not be exposed to ambient temperatures exceeding 38 º C (100 º F).

8.1.3 Maintenance, Training and Storage

8.1.3.1 Manufacturers shall provide operation, inspection and maintenance instructions with personal wash units. Instructions shall be readily accessible to maintenance and inspection personnel.

8.1.3.2 All personal wash units shall be inspected and maintained in accordance with manufacturer's instructions and shall meet applicable regulatory requirements.

8.1.3.3 Employees shall be instructed in the location, proper use and application of personal wash units.

8.1.2.4 All personal wash units shall be inspected annually to assure conformance with Section 8.1 requirements of this standard.

Part of the maintenance shall include ensuring that furnishings, equipment, or other items do not encroach on the accessible route to the eyewash.

8.2 Drench Hoses (See Illustrations 11, 12)

8.2.1 Performance of Drench Hoses

Drench hoses shall be designed to provide a controlled flow of flushing fluid to a portion of the body at a velocity low enough to be non-injurious to the user.

NOTE: A drench hose may be considered an eyewash or eye/face wash if the device meets the performance requirements of Section 5 and/or Section 6.

8.2.2 Performance of Control Valve

The valve shall be simple to operate and shall go from "off" to "on" in 1 second or less. The valve shall be resistant to corrosion. Manual or automatic actuators shall be easy to locate and be readily accessible to the user.

Valve actuators shall be located not more than 48 in. above or lower than 15" on the level on which the user stands,. The valve shall comply with accessible operable parts requirements and not require any tight grasping, pinching or twisting of the wrist to operate, no more than 5 lbf to operate and a level, clear floor space that is at least 30 in. x by 48 in. shall be provided at the control valve.

8.2.3 Installation

It is the installer's responsibility to ensure that drench hoses shall:

8.2.3.1 Be assembled and installed in accordance with the manufacturer's instructions.

8.2.3.2 Be located in an area identified with a highly visible sign positioned so the sign shall be visible within the area served by the drench hose. The area around the drench hose shall be well-lit, and free of debris that may inhibit its immediate use.

8.2.3.3 Be connected to a supply of flushing fluid. Where the possibility of freezing conditions exists, drench hoses shall be protected from freezing or freeze-protected equipment shall be installed. If shut off valves are installed in the supply line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.

8.2.3.4 Deliver tepid flushing fluid. In circumstances where chemical reaction is accelerated by flushing fluid temperature, a facilities safety/health advisor should be consulted for the optimum temperature for each application.

8.2.4 Maintenance and Training

8.2.4.1 Manufacturers shall provide operation, inspection and maintenance instructions with drench hoses. Instructions shall be readily accessible to maintenance and inspection personnel.

8.2.4.2 Plumbed drench hoses shall be activated weekly for a period long enough to verify operation and ensure that flushing fluid is available.

8.2.4.3 Self-contained drench hoses shall be visually checked weekly to determine if flushing fluid needs to be changed or supplemented. Such inspection shall be conducted in accordance with manufacturer's instructions.

8.2.4.4 Employees who may be exposed to hazardous materials shall be instructed in the location and proper use of drench hoses.

8.2.4.5 All drench hoses shall be inspected annually to assure conformance with Section 8.2.3 requirements of this standard.

8.2.4.6 Part of the maintenance shall include ensuring that furnishings, equipment, or other items do not encroach on the accessible route to the eyewash

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Illustrations

The illustrations included in ANSI/ISEA Z358.1-2014 are included as examples of configurations capable of meeting the criteria set forth in this standard. Other configurations may be acceptable if they meet the performance criteria established in this standard.

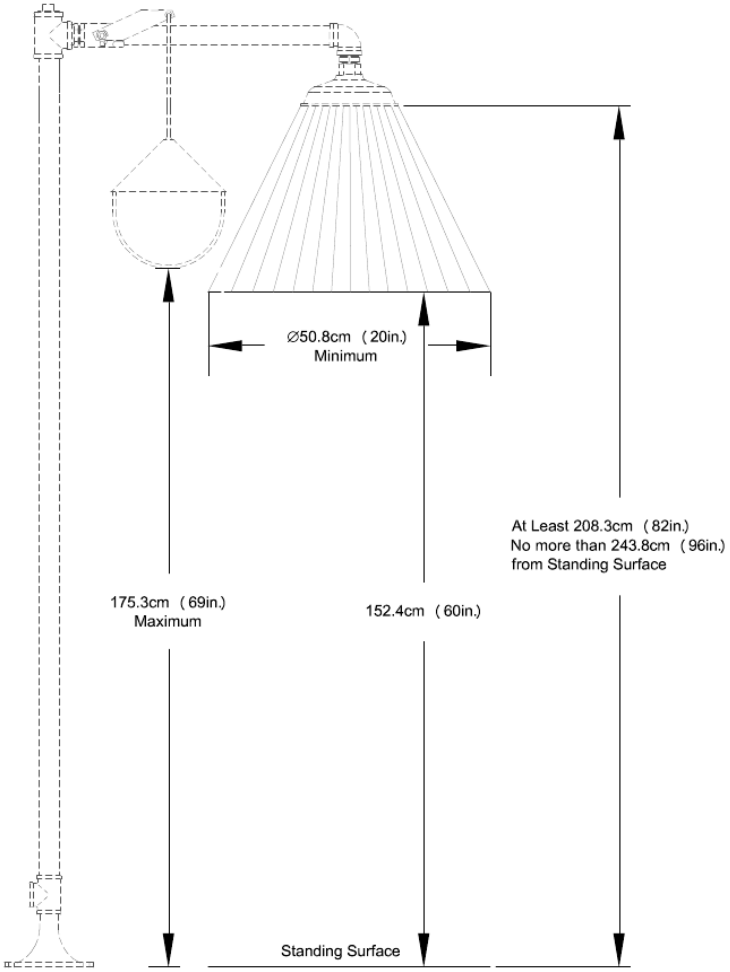

Illustration 1
Emergency Shower – Overhead Type

Comment [jp15]: The height of the operable part cannot exceed 48" AFF if the intent is for it to be accessible.

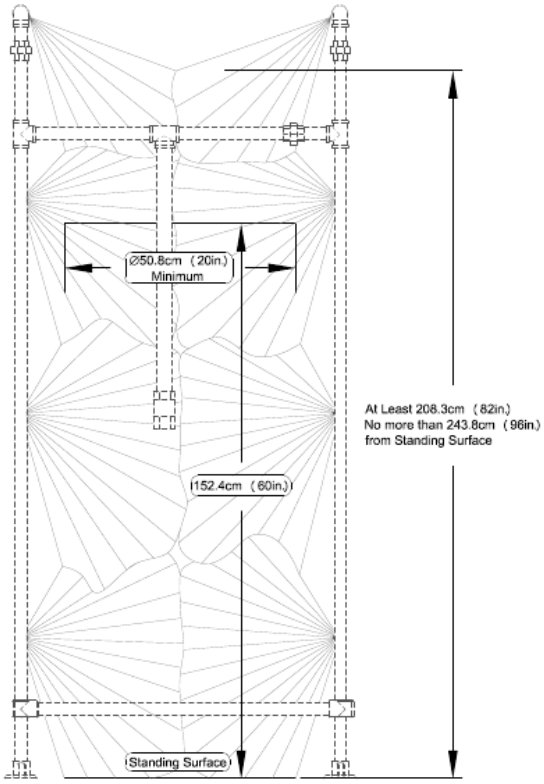

Illustration 2
Emergency Shower – Multi-Nozzle

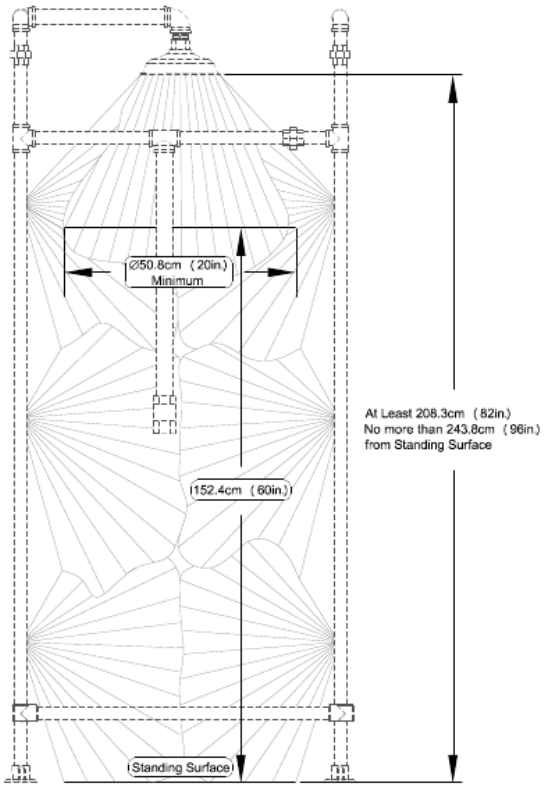

Illustration 3
Emergency Shower – Multi-Nozzle with Overhead Fixture

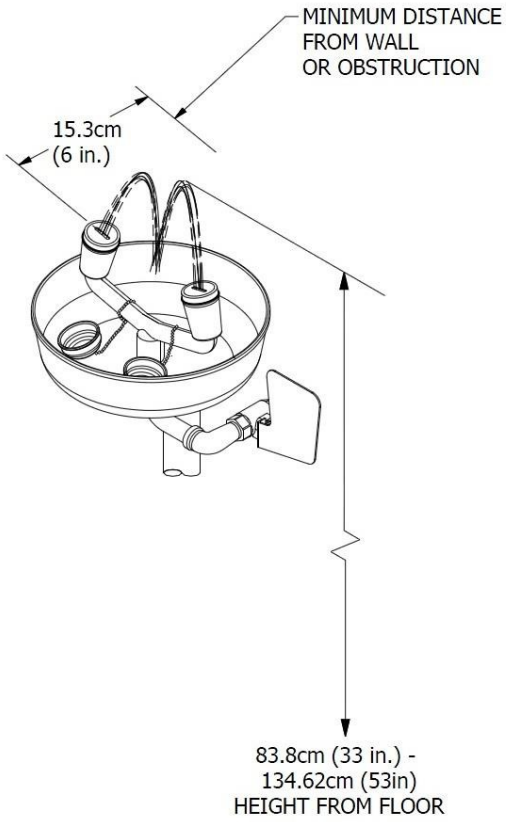

Illustration 4
Plumbed Eyewash

Comment [jp16]: This type of eyewash would require clear floor space at least 30” x 48” wide for a wheelchair user to access the unit. Additionally, at least 27” of knee clearance is needed underneath the unit. Re: the height of the “spray”, accessible drinking fountains require that the spout is no higher than 36” above finish floor – which might provide insight re: optimal height for the “sprayers”. Additional review of the standards for accessible drinking fountains may provide further insight into accessibility that can be applied to the eyewash (see section 602 in ICC ANSI A117.1) as this is the closest type of element to the eyewash addressed in the standard.

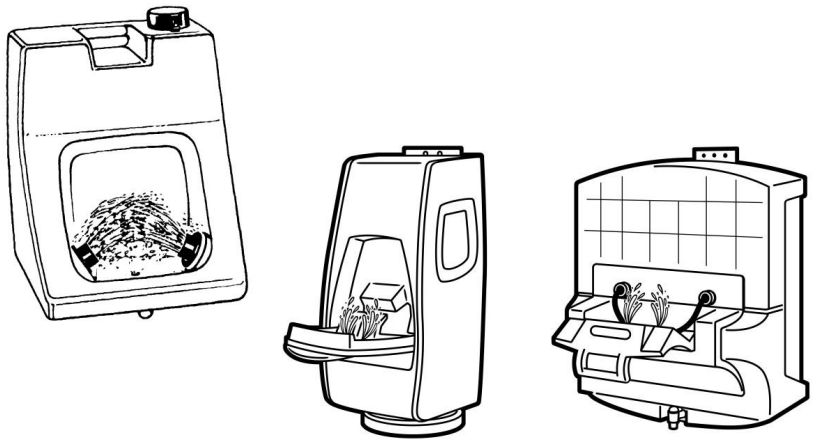

Illustration 5
Non-Pressurized Self-Contained Eyewash

Comment [jp17]: This type of unit would require knee clearance of at least 27" underneath the ledge of the unit as well as toe clearance (17" – 25" underneath the unit) for a wheelchair user to get close enough to the unit and bend over to use it.

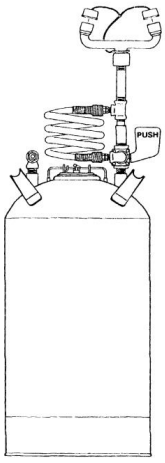

Illustration 6
Pressurized Self-Contained Eyewash

Comment [jp18]: I am not familiar with the operable parts for this type of unit, but they would have to not require any tight grasping, pinching or twisting of the wrist to operate. They also cannot require more than 5 lbf and the height of the controls must be within 15" – 48" AFF.

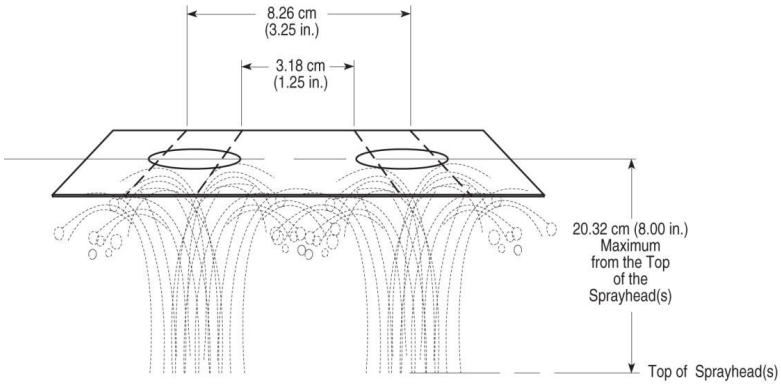

Illustration 7
Typical Eyewash Gauge

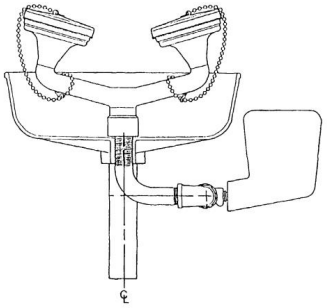

Illustration 8
Eye/Face Wash

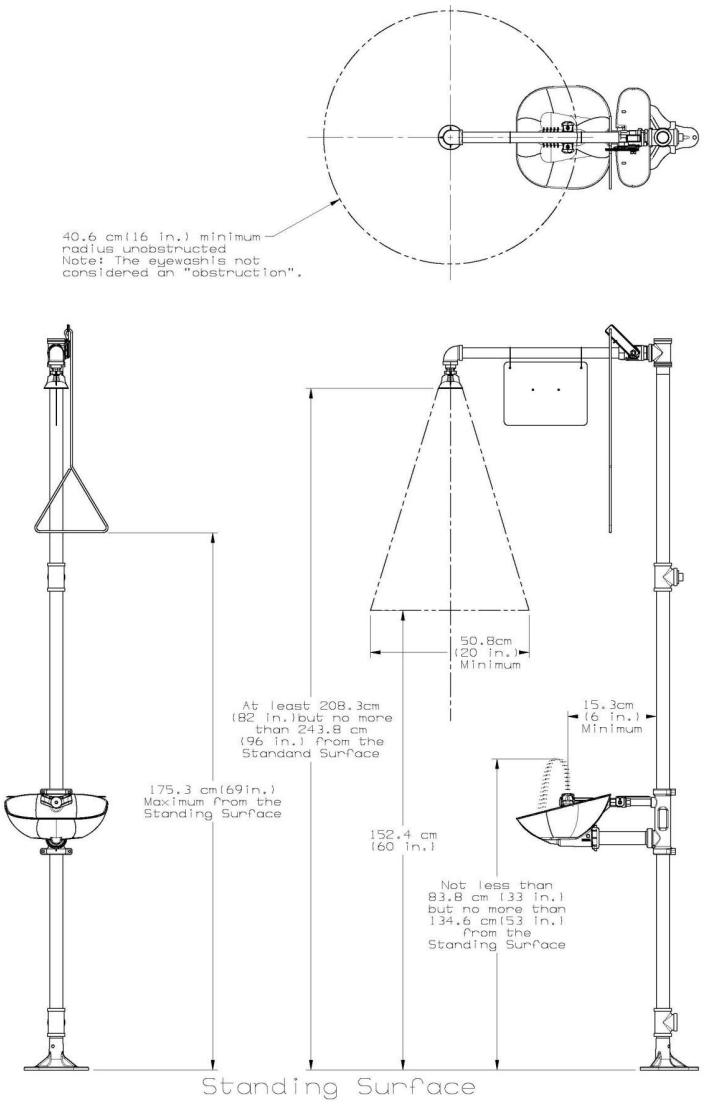

Illustration 9
Combination Unit

Comment [jp19]: Height of the operable part cannot exceed 48" AFF. Also, knee clearance at least 27" high underneath the unit for the eyewash.

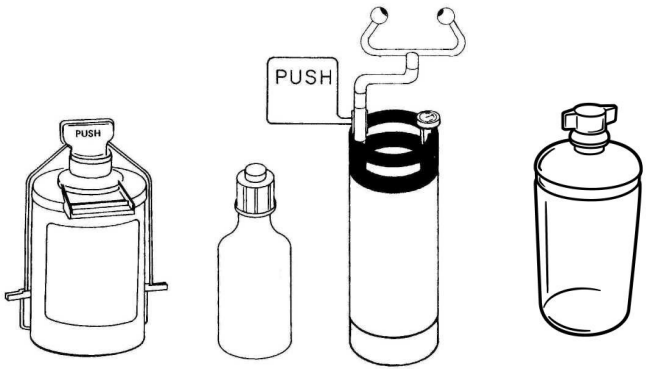

Illustration 10
Personal Wash Units

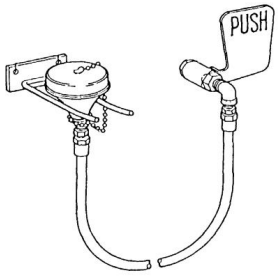

Illustration 11
Drench Hose

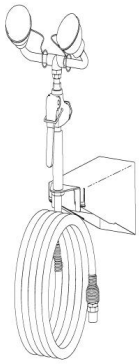

Illustration 12
Drench Hose with Eyewash Attachment

Appendices (The appendices are not part of ANSI/ISEA Z358.1-2014, but are included for information only.)

APPENDIX A – SAFETY CONSIDERATIONS

A1. Personal Wash Unit

The first seconds following an eye injury are often critical to keeping eye injury to a minimum. A personal wash unit may be kept in the immediate vicinity of employees working in a potentially hazardous area. The main purpose of these units is to supply immediate flushing. With this accomplished, the injured individual should then proceed to a plumbed or self-contained eyewash and flush the eyes for the required 15-minute period.

A2. First Aid Practices

A physician or other appropriate professional should provide guidance on specific workplace hazards and should provide instruction on the use of emergency eyewash and shower equipment.

A3. Waste Disposal

Consideration should be given to the proper disposal of waste flushing fluids from operating emergency eyewash and shower equipment. Freezing temperatures, drainage, elevated showers and pollutants are some, but not all, of the considerations. Consult authorities for assistance with applicable local, state and federal regulations.

A4. Personal Protective Equipment

Emergency eyewash and shower equipment is not a substitute for proper primary protective devices. As a defense against flying solid particles and splashing injurious liquids, workers should wear personal protective equipment as needed.

APPENDIX B – INSTALLATION CONSIDERATIONS

B1. Supply Lines

Installation procedures should be in accordance with proper plumbing practices and supply piping adequately sized to meet flow requirements.

B2. Water Capacity

The ANSI/ISEA Z358.1-201x standard includes reference to a flow pressure of 207 kPa (30 psi) only in the certification-related sections for plumbed equipment. This is to ensure that the testing for certification purposes is consistent and that reproducible results can be generated regardless of the laboratory conducting the testing. It is the responsibility of the designer and owner to ensure proper flushing fluid delivery at possible low points of pressure in the plumbing system and to ensure that the plumbed equipment is installed in accordance with the flushing fluid delivery requirements specified by the equipment manufacturer. The weekly activation of plumbed emergency eyewash and shower equipment is to be conducted at normal facility operating pressures. Excess flow pressure can deliver water to the equipment at velocities that could injure the user or render the equipment inoperable. Caution should be exercised with flow pressures over 0.552 kPa (80 psi).

B3. Valve Operation

In the interest of safety, a control valve remaining open is most desirable to allow the user the use of both hands for disrobing or holding the eyes open. However, a self-closing valve may be permitted in a school laboratory situation as a limited exception only where the enforcing authority is of the opinion that the hazard posed is not a serious threat.

B4. Alarm Devices

In addition to the equipment identification required by ANSI/ISEA Z358.1-2014, users may also want to use audible alarms or warning lights to indicate that the unit is in operation. These are particularly important in remote areas. Many companies connect valves electrically to warning lights or buzzers in central dispatch areas to alert the appropriate authorities when the unit is in use.

B5. Placement of Emergency Eyewash and Shower Equipment

Emergency eyewash and shower equipment should be available for immediate use, but in no instance should it take an individual longer than 10 seconds to reach the nearest facility.

There are several factors that might influence the location of emergency facilities. It is recognized that the average person covers a distance of approximately 55 ft. (16.8 m) in 10 seconds when walking at a normal pace. The physical and emotional state of a potential victim (visually impaired, with some level of discomfort/pain, and possibly in a state of panic) should be considered along with the likelihood of personnel in the immediate area to assist. The installer should also consider other potential hazards that may be adjacent to the path of travel that might cause further injury. A single step up into an enclosure where the equipment can be accessed is not considered to be an obstruction. Additionally, installers should allow for adequate overhead clearance to accommodate the presence of cabinets over counter- or faucet- mounted emergency eyewashes, so as not to create an additional hazard that could be encountered when using the device.

A door is considered to be an obstruction. Where the hazard is not corrosive, one intervening door can be present so long as it opens in the same direction of travel as the person attempting to reach the emergency eyewash and shower equipment and the door is equipped with a closing mechanism that cannot be locked to impede access to the equipment.

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Comment [EMS20]: This point is extremely important for a mobility impared person.

Comment [jp21]: A single step eliminates the availability of the emergency equipment to be used by many individuals that use mobility devices. Providing emergency equipment on an accessible route will ensure that the equipment can serve all users.

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In situations that might warrant the placement of emergency eyewash and shower equipment close to the hazard, such as exposure to highly corrosive chemicals, the appropriate professional should be contacted for advice on the proper distances. Equipment should be located adjacent to the hazard, but situated in such a manner such that exposure to the splash hazard or other hazards (e.g., exposed electrical conductors) does not occur while using the eyewash.

B6. Delivered Flushing Fluid Temperature

Continuous and timely irrigation of affected tissues for the recommended irrigation period are the principal factors in providing first aid. Providing flushing fluid at temperatures conducive to use for the recommended irrigation period is considered an integral part of providing suitable facilities. Medical recommendations suggest a flushing fluid at tepid temperatures be delivered to affected chemically-injured tissue. Temperatures in excess of 38°C (100°F) have proven to be harmful to the eyes and can enhance chemical interaction with the skin and eye tissue. Consideration should be given to the impact of isolated ambient temperature changes. Colder ambient temperature might require an enclosure for added protection. Warmer ambient temperature might require a re-evaluation of the water temperature.

While cold flushing fluid temperatures provide immediate cooling after chemical contact, prolonged exposure to cold fluids affect the ability to maintain adequate body temperature and can result in the premature cessation of first aid treatment. Recent information indicates that a temperature of 16°C (60°F) is suitable for the lower parameter for tepid flushing fluid without causing hypothermia to the equipment user.

B7. Weekly Activation for Plumbed Emergency Eyewash and Shower Equipment

The intent of the weekly activation to be conducted on plumbed emergency eyewash and shower equipment is to ensure that there is a flushing fluid supply at the head of the device and to clear the supply line of any sediment build-up that could prevent fluid from being delivered to the head of the device and minimize microbial contamination due to stagnant water. The duration of this test is dependant on the volume of water contained in the unit itself and all sections of pipework that do not form part of a constant circulation system (also known as “dead leg” portions). Water in these sections is stagnant until a flow is activated by opening a valve. The goal is to flush out stagnant water in the dead leg completely. Where mixing valves are used, both the hot water and cold water supplies to the valve must be considered.

REFERENCES

Independent study results: Placement Dimension Verification, provided by Anthrotech, Yellow Springs, OH, 2002

ASPE Plumbing Engineering Design Handbook Vol. 4, Chapter 1*,* American Society of Plumbing Engineers, 2012

Emergency Eyewash and Shower Equipment: A Comprehensive Literature Review and Comparison, American Society of Plumbing Engineers Research Foundation, 2008

Clinical Ophthalmology, Harper & Row, 1992, Vol. 2, Chapter 21

Human Engineering Guide to Equipment Design, Woodson, W. E. and Conover, D. W., Army, Navy, Air Force Steering Committee, United States Government, 1972

Human Engineering Guide for Equipment Designers, University of California Press, 1964, 2nd ed.

United States Air Force Flight Surgeon's Manual, Chapter 20, 1991,Third ed.

United States Coast Guard lifesaving and fire safety standards for commercial ships and recreational boats – Cold Water Survival

Attachment 1

New Business: Accepted Book Proposal

Provided by Ellen Sweet

ACS has accepted my proposal for a book based on the Philadelphia symposium titled "*Americans with Disabilities Act and Accommodations in the Laboratory*". This is a collaboration between the ACS Committee on Chemists with Disabilities (CWD) and the Northeast ADA Center, located on the Cornell University campus. I am one of 3 editors, therefore CHAS will be receiving a third of the royalties because it was the sponsoring division for the symposium.

Attachment 11

Long Range Planning Committee Report – S17, San Francisco

ITEM 1: Progress on Issuance Updates Discussed S16, SD

i. AI 504 "Treasurer Description and Duties" – **Update complete.**

ITEM 2: Progress on Issuance Updates Discussed F16, Philadelphia

i. AI 07 Records Retention – **In progress**
ii. AI 111 Social Committee – **Update complete**
iii. AI 112 – **Update complete**
iv. Workshop Committee Responsibilities – **No changes needed**
v. AI 506/507 – Educational Program Team and Workshop Manual – **Update complete** "Organizer" now consistently "Presenter"
vi. AI 507 – Workshop Manual – George Wahl removed – **Update complete**
vii. Clarification of election process for subdivisions – **Not addressed**
viii. AI 203 – Clarification on reimbursement for EC service – **Update complete**

ITEM 3: Issuance Updates for Discussion – S17, SF

i. **Clarification of election process for subdivisions**

Any updates on this?

ii. **At the F16 meeting the updates suggested by Neal were reviewed. Items discussed in Philadelphia were updated.**

Though I had contacted Dave Smorodin (the ACS Assistant General Counsel) asking if he could review our suggested retention times (RT) on documents, as of the fall meeting he had not replied. I was finally able to obtain comments from Dave on AI07 for this report. Dave's mark-ups are shown below. NOTE: Dave did not change any RTs.

AI 07 - Record Retention

DIVISION OF CHEMICAL HEALTH AND SAFETY Administrative Issuance 07

0 Records Retention

1 Function:

To preserve division records and history.

2 Date:

Original Issuance: ~~9/26/08~~08/21/2016
Revised/Effective Date: [Date the Division adopts the Policy]

3 Background

The records of the Division of Chemical Health and Safety ("CHAS") of the American Chemical Society ("ACS") are important assets. Records include essentially all records produced whether paper or electronic. A record may be as obvious as a memorandum, an e-mail, a contract or a case study, or something not as obvious, such as a computerized desk calendar, an appointment book or an expense record.

The law requires CHAS to maintain certain types of records, usually for a specified period of time. Failure to retain those records for those minimum periods could subject CHAS to penalties and fines, cause the loss of rights, obstruct justice, spoil potential evidence in a lawsuit, place CHAS in contempt of court, or seriously disadvantage CHAS in litigation.
The CHAS Record Retention Policy was developed to be consistent with the Society regulations, which state:

Disposition of Old Files. The officers and heads of SOCIETY activities for which funds are budgeted by the SOCIETY are authorized and instructed to destroy from time to time, in their discretion, old and useless papers not of permanent value, in accordance with retention schedules approved by the Executive Director. Unless other requirements apply, or unless otherwise specified by the Board of Directors, the period of retention of files is seven (7) years.

4 Definition

Record: Correspondence, reports, memoranda, governing documents, contracts, patents, copyrights, employment documents, emails, and other records ~~regardless of form of media~~whether in paper or electronic format.

5 Responsibilities:

The Treasurer with cooperation of the Secretary and Committee Chairs organize and store the Divisions Records.

6 Suspension of Records Destruction Policy

Any records retention policy should take great care to forbid any behavior that could be construed as spoliation of evidence. Spoliation of evidence occurs when someone fails to preserve property for use by another as evidence in pending or future litigation. Spoliation is an extremely serious matter and can lead to court sanctions, civil liability, criminal charges and professional discipline.

a. This policy is intended to prevent spoliation or destruction of evidence. It may be necessary to suspend the records destruction policy set forth herein under the following circumstances:

(1) in the event of anticipated or pending civil or criminal litigation, or other legal action, or alternative dispute resolution proceeding such as arbitration or mediation;
(2) in the event of an anticipated or pending administrative action, government enforcement proceeding, investigation or audit;
(3) in the event of service of a summons or complaint, or receipt of a request for preservation of records; or
(4) in the event an officer learns of other circumstances in which the preservation of records may be required.

b. If an officer learns of any of the above circumstances, he or she should report them immediately to the ACS General Counsel, who may take appropriate action to suspend all destruction of potentially applicable records, including issuance of a litigation hold or preservation notice identifying which categories of records are to be labeled for retention until further notice..

~~6~~7 Record Disposition:

RT	-	Retained Until Termination, Cancellation or Completion (of contract, project, etc.)
PR	-	Permanently Retained
RS	-	Retained Until Superseded
LOP	-	Retained by Authority Until Record No Longer Serves a Legitimate Operational Propose

Type of Record	Retention Period	Authority
CORPORATE GOVERNANCE RECORDS		
1. Articles of Incorporation, Bylaws	RS	Treasurer
2. Administrative Manual	RS	Chair, LRP Committee
3.Federal and State Tax Exemption Certificates	PR	Treasurer
3. Federal and State Tax Exemption Certificates	PR	Treasurer
4. Executive Committee Meeting Agendas and Manuals	PR	Secretary
5. Working Papers and Miscellaneous Drafts/Transcripts for the Executive Committee	1 year	Secretary
6. Executive Committee Meeting Minutes	PR	Secretary
7. CHAS Annual Report Final Copy	5 years	Secretary
8. CHAS Annual Report (Secretary/Treasurer Portions)	5 years	Secretary/Treasurer
9. CHAS Committee Agendas & Minutes	5 years	Committee Head

CONTRACTS		
1. CHAS purchases of goods and services	RT + 4 years	Treasurer
2. CHAS sales of products and services	RT + 4 years	Treasurer
3. CHAS Workshop Records	4 years	Treasurer
4. Government Contracts	RT + 6 years	Treasurer
5. Other Contracts	RT + 4 years	Treasurer

INTELLECTUAL PROPERTY		
1. Copyright and Trademark Registrations	PR	Secretary
2. Registered Patents	PR	Secretary
3. Domain Name Registrations	PR	Secretary

MISCELLANEOUS		
1. General Correspondence	2 years or LOP	Originator
2. General Reading/Chronicle Files	2 years or LOP	Originator
3. Diaries/Calendar/Phone Logs/Meeting Notes/Minutes	1 year	Originator
4. Information Only/Memos/Forms not requiring follow-up	1 year	Originator
5. Working files/Project files	RT + LOP	Originator
6. Annual or Statistical Reports	5 years	Originator

PUBLICATIONS		
1. Copies of published journals (at least one archive copy)	PR	Editor, JCHAS
2. Copyright assignment forms	PR	Publisher

FINANCE ADMINISTRATION RECORDS		
1. Audits	No more than three on file	Treasurer
2. Bank Statements/Deposit Slips/Cancelled Checks	5 years	Treasurer
3. Bond Records	PR	Treasurer
4. Budgets (including worksheets and detail)	5 years	Treasurer
5. Fixed Asset/Capital Information	PR	Treasurer
6. Insurance Policies/Certificates of Insurance	RT + 4 years	Treasurer
7. Annual Financial Statements	PR	Treasurer/QUICKBOOKS
9. General Ledgers/Journals	PR	Treasurer/QUICKBOOKS
10. Income Tax Returns (correspondence and workpapers)	7 years	Treasurer
11. All Other (invoices, media, vouchers, account records)	5 years	Treasurer
12. Donor/Pledge/Sponsor Records	5 years	Treasurer
13. Investment Records	7 years	Treasurer
14. Expense Reports, Reimbursement Requests	5 years	Treasurer

LEGAL		
1. Litigation documents – In the event of litigation, a Defense committee will be established consisting of the elected officers and others as appropriate. All records of this group will be retained by the Treasurer.	RT + 4 years	Treasurer

MEMBERSHIP		
1. Monthly eRoster	RS	Membership Chair
2. Monthly JCHAS subscriptions	RS	JCHAS Editor

7 Storage

The respective officers, and committee chairs are responsible for keeping their reports and materials current and secure. Twice a year following each national meeting, officers and chairs should forward any revised material to the Treasurer for filing. The records should be stored electronically both on site and remotely as determined by the Treasurer. The document name shall have a title and include the date.

8 Document Naming

The document shall have a name and date in its title and file name. The following are examples of such file names

CHAS_990EZ_2015
Executive Committee Minutes Fall 2016
Executive Committee Agenda Fall 2016
ADMIN 2017 March
Presentations Fall 2016

iii. <u>Update of AI 105 – Regulatory and Public Affairs Committee Requested</u>

DIVISION OF CHEMICAL HEALTH AND SAFETY Administrative Issuance 105

0 Regulatory and Public Affairs Committee

1 Function:

The Regulatory and Public Affairs Committee will monitor regulatory issues and social awareness of chemical safety issues and prepare materials that can be used by ACS, Committee on Chemical Safety, and Division officers and division officers to comment on or respond to questions about these concerns.

2 Date:
Original Issuance:
Revision: 04/93, 08/15, 3/17

3 Tasks:

TASKS	TIME FRAME
The ~~Chair of this~~ committee should, ~~with the aid of a committee,~~ keep abreast of regulatory activities of interest to the Division. ~~and i~~If necessary, the ~~chair~~ committee will work with any ACS committee and the Office of Public Affairs to formulate ~~official~~ public comment. CHAS input in comments shall be approved by the elected CHAS Executive Committee. Public comments which have been approved by the CHAS EC shall ~~-~~be ~~to be~~ submitted to the soliciting agency by an official representative of the Society. See Bylaw II, Section 3(e)***	This is a continuous activity.
A written report detailing the committee's activities and regulatory developments relevant to the Division shall be submitted to the Division Secretary.	This should be done before each national ACS meeting. ~~on a semiannual basis.~~

*****From Larry**

The committee should cite the limitations placed on the division based on its bylaws.

Bylaw II

Section 1. The objects of the Division shall be those of the SOCIETY as stated in the Constitution of the SOCIETY.

Section 2. Nothing in these bylaws shall be inconsistent with the Charter, Constitution, and Bylaws of the SOCIETY.

Section 3. In particular, the objects of the Division shall be to:

(a) focus information on the properties of chemicals that affect humans directly or through the environment;

(b) monitor the technical aspects of the above;

(c) develop symposia and general sessions on topics related to the above at national, regional, divisional, and other meetings of the SOCIETY;

(d) foster publication and other modes of dissemination of information pertaining to the above; and,

(e) provide expertise in chemical health and safety to the SOCIETY and, in the public interest, to others as specified in the Charter of the SOCIETY.

Therefore to respond to solicitations for comments to a soliciting agency must be done through an ACS representative.

iv. <u>AI 804 Added – CHAS Underwriting Opportunities</u>

DIVISION OF CHEMICAL HEALTH AND SAFETY (Draft) Administrative Issuance 804

0 CHAS Underwriting Opportunities

1 Function:

To serve as a uniform statement to present to potential benefactors considering becoming a sponsor of CHAS events and awards.

2 Date:

Original Issuance: 1/20/17

CHAS UNDERWRITING OPPORTUNITIES

Thank you for considering becoming an underwriter of the Division of Chemical Health & Safety of the American Chemical Society. The Division is an IRS 501(c)(3) corporation and, as such, your generous donation may be deductible from your taxes. Donations can be made in response to an invoice, by check or credit card, or by PayPal. Current underwriting opportunities are described below.

CHAS Networking & Social Event

CHAS sponsors a networking and social event during each National meeting, usually on Monday evening. The event is generally held from 5-7 pm, and features finger-food and drinks. It is an excellent venue to meet health and safety professionals in a casual atmosphere.

CHAS requests a minimum donation of $500 per event, with no long-term commitment. CHAS will acknowledge the underwriter and provide a representative with a chance to formally greet the group. Underwriters may place one announcement on the CHAS list server (2200 safety professionals) in conjunction with the social event.

Upcoming National Meetings are San Francisco, April 2017 and Washington DC, August, 2017.

CHAS Awards

CHAS recognizes the contributions of individuals or groups annually during the Fall National Meeting. The awards can be supported by an underwriter, whose name is then associated with the award. Two of the three annual awards are currently available for sponsorship. These are:

- **TILLMANNS-SKOLNICK AWARD**

The Tillmanns-Skolnick Award was established in 1984 to recognize and honor outstanding, long-term service to the Division of Chemical Health and Safety. Originally named the Distinguished Service Award, it was renamed the Tillmanns-Skolnick Award in 1986 to honor Emma Jean Tillmanns-Skolnick. Nominees must have been an active member of the division for at least five years and have shown, though personal effort, outstanding support for the realization of CHAS's goals in Chemical Health and Safety. The award consists of a commemorative plaque and a $500 prize for expenses so the recipient

can be present at an award symposium at the fall ACS national meeting. The recipient is expected to invite presenters for the award symposium.

- **HOWARD FAWCETT CHEMICAL HEALTH AND SAFETY AWARD**

Established in 1983, the Howard Fawcett Chemical Health and Safety Award recognizes outstanding individual contributions to the field of Chemical Health and Safety. The award consists of a commemorative plaque and a $500 prize for expenses so the recipient can be present at an award symposium at the fall ACS national meeting. The recipient is expected to invite presenters for the award symposium.

The underwriter is asked to provide $750 per year for either of these awards and make a five- year commitment. The award will be known by the underwriter's name in conjunction with the current award name for the duration of the sponsorship. A representative of the underwriter is invited to present the award to the recipient during the Awards Symposium

- **COLLEGE AND UNIVERSITY HEALTH AND SAFETY AWARD**

The SafetyStratus College and University Health and Safety Award is given to recognize the comprehensive laboratory safety programs in higher education (undergraduate study only). The award consists of a commemorative plaque and a $1000 prize for expenses so the recipient can be present their program at an award symposium at the fall ACS national meeting. The current underwriter is committed through 2019, with a first right of continuation of their sponsorship.

Underwriters of any CHAS award may place up to six (6) announcements on the CHAS list server (2200 safety professionals) per year. They also will receive all list server traffic during the tenure of their underwriting. Additional information is available on the CHAS website: www.dchas.org

NIH "Safety by Design" Conference, 2018

This is a continuation of the 2016 conference organized and sponsored by the National Institutes of Health, Northwestern University, the University of California Center for Laboratory Safety, and the University of California Office of the President. The 2018 conference will be organized by NIH, National Science Foundation, and the ACS, among others. CHAS, through the ACS will be assisting with technical input. The details of this conference are not available currently, but it will most likely be during the first quarter of 2018 in the Washington DC area.

The underwriting opportunity is a single investment of $5,000. The funds do not need to be provided until sometime in 2017, but the commitment is needed soon. Since the funding will flow through CHAS, the tax-exempt status of the donation will be protected.

SCHOLARSHIPS

➢ CHAS MEMBERSHIP

Support a new member to CHAS, particularly a graduate student, or other interested chemist with no direct means of financing membership. The cost is $300 per year to support five (5) new members.

➢ WORKSHOP ATTENDANCE

Support attendance at any CHAS workshop, either at a National or Regional Meeting. CHAS will select the recipients from a pool of qualified chemists and scientists. The cost is $1,000 per year to support two workshop attendee scholarships. Additional scholarships may be added in $500 increments.

The point-of-contact for underwriters is the CHAS Treasurer.

v. AI 706 Added – The Heidolph North America (HNA) CANN Award

DIVISION OF CHEMICAL HEALTH AND SAFETY Administrative Issuance 706 (Draft)

0 The Heidolph North America (HNA) CANN Award administered by CHAS

1 Function:

2 Date:

Original Issuance: 3/17

3 Nature of the Awards

Criteria:
For three outstanding research papers related to chemical health and safety aspects of cannabis growth, use, and effects.

B. Panel of Judges:

C. Award:

Funds are committed for 5 years for 3 annual awards beginning in 2018.
Funds are provided for travel, expenses and plaques for 3 individuals yearly to present their findings at the annual CHAS Awards Symposium at the fall ACS meeting.

4 Administration of Award