

**Agenda – February 25, 2019**  
**Group 9 (College of Engineering) Health and Safety Committee**

**1. Attending**

Eliot George for Fiona Spencer, AA  
Colleen Irvin, BioE  
Sean Yeung, CEE  
Michael Pomfret, CEI  
Kameron Harmon, ChemE  
S. Honeydew or M. Glidden, CoE DO  
Sophie Ostlund, CSE  
John Young, EE

Angie Haggard, EH&S  
Stacia Green, HCDE  
Sheila Prusa, ISE  
Bill Kuykendall, ME  
Chris Adams, MoES/NanoES  
Tatyana Galenko, MSE  
Darick Baker, WNF

**2. Previous Meeting Minutes**

- Jan 2018 – approve? Corrections/additions?
- Previous meeting minutes are posted at <https://www.engr.washington.edu/mycoe/safety#>

**3. Department Incident Reports (use “5 Why’s” analysis for one report)**

- MSE @ Wilcox – neck/chin splashed with base bath (Dec)
- WNF @ Fluke – near-miss silane gas exposure during planned maintenance (Jan)
- WNF @ Fluke – near-miss ammonia gas exposure during new equipment setup (Jan)
- AA @ AERB – possible reaction to water from drinking fountain (Jan)

**4. Group Business**

- PAB Tower elevator incident follow-up
- UWPD Safety Info document
- Update from UWPD’s Building Safety Task Force
- Update from Facilities’ Building Coordinator Guiding Coalition (BCGC)
- Update from UWEM’s Resilience Work Group, re: BARC/Husky Ready

**5. UW-Wide Meeting**

- Jan minutes attached
- Feb agenda attached. Highlights:
  - Group Reports – Group 3: N22 mobility impaired parking lot renovation this summer will block Stevens for several weeks; Group 4: 100-200 doors propped open daily; Group 5: in-house formalin training; Group 6: concerns about Facilities low staffing levels leading to safety issues
  - OSHA 300A Summaries (must post Feb-Apr)
  - EH&S Executive Sponsor meetings start in early March
  - Lab Safety Taskforce being formed by Provost now. Will have a few months to create policy on lab safety and create committee (EH&S included).
  - Bridge (learning management system) – EH&S trainings will be gradually moved to Bridge. First vendor courses from SafetySmart, then instructor-led course reg. UWIT managing Bridge contract (EH&S add some \$). Not using WorkDay info yet.
  - Inclement weather – President’s statement clarified protocol to report unsafe conditions (careteam@uw, 5-1900); 10 OARS S/T/F incidents reported so far.

**6. Department Updates**

***Next Meeting: March 25<sup>th</sup> at 3pm, in Loew 355***

# DRAFT Meeting Minutes

## Health and Safety Committee for Group 9 (College of Engineering)

Meeting Date: Jan 28, 2019

### Attended

Colleen Irvin, BioE

Kameron Harmon, ChemE

J. Sean Yeung, CEE

Michael Pomfret, CEI

Sophie Ostlund, CSE

John Young, EE

Angie Haggard, EH&S

Stacia Green, HCDE

Sheila Prusa, ISE

Chris Adams, MoIES/NanoES

Tatyana Galenko, MSE

Darick Baker, WNF

### Absent

Eliot George for Fiona Spencer, AA

Sonia Honeydew, DO

Bill Kuykendall, ME

### Previous Meeting Minutes

- Dec 2018 – draft approved with CORAL corrections/additions
- Previous meeting minutes are at: <https://www.engr.washington.edu/mycoe/safety#>

### Incident Reports

- MSE @ Wilcox – neck/chin splashed with base bath (Dec). Postpone to February.
- CSE @ PAB Tower – whiplash from elevator freefall (Dec). Student was trapped for hours. Elevator tech didn't have a flashlight, should be more prepared. Emergency kit also no flashlight (lead to emergency kit being updated). Are other departments' emergency kits up to date? Elevators are a common problem throughout campus. There is a significant need for training of elevator phone operator(s). All elevator incidents that occur must be reported in OARS, and there is additional L&I paperwork. Angie will supply the L&I findings when the report becomes available.

# DRAFT Meeting Minutes

## Health and Safety Committee for Group 9 (College of Engineering)

### Group Business

- Update from UWPD's Building Safety Task Force – N/A
- Group 9 speaker/expert/guest requests for 2019
  - Coral (Conrad)
  - UW Facilities report on success of recent re-org by end of 2019
  - Transportation Safety – safety, security of transportation, rideshare bikes
  - EH&S Tracy Harvey – common lab failures, chemical hazards checklist (i.e. peroxide formers)

### UW-Wide Meeting

- Dec minutes in packet.
- Jan agenda attached. Highlights:
  - Committee groups will be reorganized under Executive Sponsors (mainly Groups 1 and 2)
  - EH&S' first Annual Report, for 2018 (FY18 ended June 30<sup>th</sup>), is done and [online](#)
  - EH&S new employee Brett Konzek, supporting occupational health specialists
  - OSHA300 summaries coming in next month; must post Feb 1 through end April

### Department Updates

- BioE – Disgruntled person chucked pipe at Chair's window, shattering the outer pane. Person had vacated by the time UWPD arrived, despite prompt response. Cameras are being considered. UWPD has no issues with public space cameras. Signs available at UW Sign Shop. Make sure to update your record retention policy.

### Next Meeting

- Feb 25th 2018 at 3pm, in Loew 355



# University of Washington Accident / Incident Report

Report Number: 2018-12-065

Contact EH&S at 206-543-7388

## Person Reporting Incident

Last Name: [REDACTED]	First Name: [REDACTED]
Phone: +1 [REDACTED]	Email: [REDACTED]
Occupation/Position: RESEARCH ASSISTANT (E S UAW ASE)	Department: ENG: Materials Science and Engineering-MacKenzie Lab JM Student
Date Reported (yyyy/mm/dd): 2018/12/20	Time of Reporting: 02:48 PM

## Person Involved or Affected

Last Name: [REDACTED]	First Name: [REDACTED]
Phone: +1 [REDACTED]	Email: [REDACTED]
Occupation/Position: RESEARCH ASSISTANT (E S UAW ASE)	Department: ENG: Materials Science and Engineering-MacKenzie Lab JM Student

## Incident Details

Date of Incident (yyyy/mm/dd): 2018/12/17	Time of Incident: 8:30 AM	When Shift Begins: N/A
Campus: Seattle	Incident Location/Parking Lot: WILCOX HALL	
Room: 247	Other:	

Incident Details:  
 Please review attachment for detailed description.  
 Attachment: Yes

## Supervisor

Last Name: Mackenzie	First Name: John
Phone:	Email: jdmacken@uw.edu
Occupation/Position: ASSOCIATE PROFESSOR	Department: ENG: Materials Science and Engineering JM Academic

## Classification

Level 1:  
 Injury requiring first aid,  
 Injury requiring medical treatment (go to level 3 if in-patient hospitalization or amputation occurred),

## Type of Incident

Injury Description: Burn (Thermal, Chemical, Electrical),  
 Body Parts Affected: Face, Neck,  
 Cause of Injury or Damage: Chemicals, Slip or Trip (No Fall),

## Possible Causes

Equipment:  
 Environment:  
 Policies / Procedures:  
 Human Factors: Loss of Balance,

## Suggested corrective action by the affected party

The sink has a nozzle attached that increases the pressure of the water. Either we will attach a hose with a wider inner diameter that reduces the velocity of water moving out, or we will remove the nozzle from the faucet head.

### Supervisor's Comments

#### Root Causes:

(Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.)

**Too high a flow rate in the sink faucet was most significant factor causing splashback on to user.**

#### Recommendations/Preventive Measures:

**Remove hose barb nozzle adapter on faucet which causes increased flow rate.**

Corrective Actions Target Date (yyyy/mm/dd):

**2019/01/08**

Corrective Actions Complete Date (yyyy/mm/dd):

**2019/01/08**

#### Other Comments:

**Nozzle adapter that caused high flow was removed and checked to show lower, normal flow rate which will reduce chances of this happening again.**

### EHS Review

Last Name: **Haggard**

First Name: **Angelina M**

Phone Number: **+1 206 616-3442**

Email: **ahaggard@uw.edu**

Occupation/Position:

Department:

Comments: **12/31/18 forwarded to Tracy Harvey**

## OARS Incident Report

I was rinsing glassware stored in our base bath, which is a solution of dilute potassium hydroxide (KOH) dissolved in 1 part water and 4 parts isopropanol (IPA). I was wearing a lab coat, butyl gloves, closed-toe shoes, and lab goggles tight around my glasses because this solution is a known caustic. I had accidentally slipped forward due to a sudden pain in my right hip (chronic hip dysplasia) and involuntarily reached forward with my right hand to catch myself. My hand contacted one of the sink handles and accidentally turned up the flow of water, which sprayed off the gloves coated with base bath solution onto my neck and chin area. Considering the area was difficult to fully access with a safety shower, I moved to our other sink, which has a flexible hose that I could point upwards to the affected regions. I continuously ran water over the affected area for 20 minutes to wash off the solution. With my left hand I started a timer on my phone to confirm a 20-minute washing period. Afterwards, I found an MSDS sheet for a commercial grade of 0.1 M KOH in IPA) for next steps, and it recommended consulting a physician only if I had felt symptoms of a burn (tingling, numbness, irritation, etc.). Since I did not feel any symptoms of a burn for the rest of the day or Tuesday, I did not consult a physician.

However, Wednesday morning (12/19) I noted some mild numbness/tingling in the affected regions, so I visited a physician at UW's Hall Health ([REDACTED]). He performed a series of tests on my facial muscles (testing for strength, symmetric response, etc.) that I passed successfully. Therefore, he did not recommend any treatment. I discussed this incident to my advisor, Prof. J. Devin MacKenzie, in person today (Thursday 12/20/18), the first time I had seen him in person since I had visited the doctors office.



# University of Washington Accident / Incident Report

Report Number: 2019-01-010

Contact EH&S at 206-543-7388

## Person Reporting Incident

Last Name: <b>Patrick</b>	First Name: <b>Nicholas</b>
Phone: +1 206 221-1045	Email: <b>patricns@uw.edu</b>
Occupation/Position: <b>RESEARCH SCIENTIST/ENGINEER 3 (E S 8)</b>	Department: <b>ENG: Collaboration Core - WNF Staff</b>
Date Reported (yyyy/mm/dd): <b>2019/01/04</b>	Time of Reporting: <b>05:45 PM</b>

## Person Involved or Affected

Last Name: [REDACTED]	First Name: [REDACTED]
Phone: +1 [REDACTED]	Email: [REDACTED]
Occupation/Position: <b>RESEARCH SCIENTIST/ENGINEER 3 (E S 8)</b>	Department: <b>ENG: Collaboration Core - WNF Staff</b>

## Incident Details

Date of Incident (yyyy/mm/dd): <b>2019/01/04</b>	Time of Incident: <b>10:00 AM</b>	When Shift Begins: <b>N/A</b>
Campus: <b>Seattle</b>	Incident Location/Parking Lot: <b>FLUKE HALL</b>	
Room: <b>First Floor/WNF</b>	Other:	

Incident Details:

Hazardous process monitor (HPM) for the Washington Nanofabrication Facility on the first floor facility in Fluke Hall detected elevated levels of a hazardous gas on channel 32 above the event threshold programmed for that sensor. The sensor is designated to detect phosphine, which is toxic in minute concentrations. This triggered the first floor hazmat alarm and, in turn, the building fire alarm. All personnel evacuated appropriately until fire department could clear building.

HPM logs show a spike in gas detection shortly before 10am, increasing rapidly to a concentration around 250ppb, holding steady for approximately a minute, and then gradually decreasing back to zero levels.

Upon review, the detector in question is multi-purpose, so a number of gasses could set it off. This is as designed, as the materials that are sensitive to chemicals of this nature are almost always sensitive to a family of chemicals rather than one specific chemical. We have also had known false detection events, but this pattern of detection is consistent with a true detection.

Prior to the alarm, [REDACTED], [REDACTED] and [REDACTED] (both professional staff, RSE2, WNF), were engaged in planned maintenance activities that involved an unused section of exhaust line associated with the pyrophoric exhaust system. This system is under constant negative pressure, and the tool it was attached to was not in use, so the line was believed to be safe and devoid of hazardous elements. Upon cutting into the line there was no visible, audible, or other discernible signs of a problem until sensor 32 registered the elevated gas levels. Both engineers immediately evacuated when the alarms sounded, per standard procedure.

Records show that one system connected to the pyrophoric exhaust system, but on a separate branch, was in operation at the time. This system uses silane gas, and the same sensor that detects phosphine also detects silane. With this information, and the fact that the phosphine source bottle for the lab is not connected to the gas delivery system, we believe that cutting into the unused branch of the exhaust line created unforeseen turbulence in the gas flow which caused part of the exhaust from other branches to backstream to the cut point, pulling along small concentrations of silane with it, and setting off sensor 32.

Exposure levels were below the ACGIH exposure limits as indicated by the silane safety data sheet (SDS), which is 5ppm. Concentration levels were far below the auto-ignition level of >1%. Based on the observed exposure levels, no health hazard is believed to have been created, nor any fire or explosion hazard. No employees, including [REDACTED] and [REDACTED] have reported any of the symptoms of exposure and have not sought medical attention as a result, though have been advised to do so should any symptoms on the SDS manifest. Due to exposure levels appearing to fall well below the exposure limits established by the SDS, no general medical advisory was issued. No one occupying the lab at the time of incident has reported any symptoms or sought out medical attention.

ON FILE: Affected/Injured Employee's date of birth, gender, date of hire, and hours of employment.

Attachment:Yes

### Supervisor

Last Name:Patrick

First Name:Nicholas

Phone:+1 206 221-1045

Email:patricns@uw.edu

Occupation/Position:RESEARCH SCIENTIST/ENGINEER 3  
(E S 8)

Department:ENG: Collaboration Core - WNF Staff

### Classification

#### Level 1:

Near miss (No incident occurred but it could have),  
Injury or Exposure, no first aid required,

### Type of Incident

Injury Description: None,

Body Parts Affected: None,

Cause of Injury or Damage: Chemicals, Ventilation, Indoor Air Quality Issues,

### Possible Causes

Equipment:

Environment: Chemicals,

Policies / Procedures: Appropriate Procedures Non-existent,

Human Factors:

### Suggested corrective action by the affected party

Establish formal, written SOP for pyrophoric exhaust line work.  
Since back flow is now understood to be a possibility in this kind of work, SOP must include ensuring all pyrophoric gas delivery is halted/locked out before exhaust lines are opened.

### Supervisor's Comments

#### Root Causes:

(Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.)

No formal standard operation procedure for this type of work was in place.

Negative pressure on lines, by itself, is not sufficient precaution to fully prevent hazardous gas release.

Silane and other toxic gasses were left enabled and usable during work.

#### Recommendations/Preventive Measures:

Establish formal, written SOP for pyrophoric exhaust line work.

SOP must include lockout of hazardous gasses prior to opening any lines.

Corrective Actions Target Date (yyyy/mm/dd):  
2019/02/28

Corrective Actions Complete Date (yyyy/mm/dd):

#### Other Comments:

Employee has been working with EH&S in drafting SOPs for this process, but additional time is needed. Target date adjusted to end of February.

### EHS Review

Last Name:Haggard

First Name:Angelina M

Phone Number:+1 206 616-3442

Email:ahaggard@uw.edu

Occupation/Position:

Department:

Comments:forwarded to Scott Nelson, Adrian Santos, Denise Bender, and Tracy Harvey - January 7, 2019



### SECTION 1: Product and company identification

#### 1.1. Product identifier

Product form : Substance  
 Name : Silane  
 CAS No : 7803-62-5  
 Formula : SiH4  
 Other means of identification : Monosilane, silicon hydride, silicon tetrahydride, silicane

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Industrial use. Use as directed.

#### 1.3. Details of the supplier of the safety data sheet

Praxair, Inc.  
 10 Riverview Drive  
 Danbury, CT 06810-6268 - USA  
 T 1-800-772-9247 (1-800-PRAXAIR) - F 1-716-879-2146  
[www.praxair.com](http://www.praxair.com)

#### 1.4. Emergency telephone number

Emergency number : Onsite Emergency: 1-800-645-4633

CHEMTREC, 24hr/day 7days/week  
 — Within USA: 1-800-424-9300, Outside USA: 001-703-527-3887  
 (collect calls accepted, Contract 17729)

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flam. Gas 1                    H220  
 Liquefied gas                H280  
 Acute Tox. 4 (Inhalation:gas) H332

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :

  
 GHS02

  
 GHS04

  
 GHS07

Signal word (GHS-US) : DANGER

Hazard statements (GHS-US) :

- H220 - **EXTREMELY FLAMMABLE GAS**
- H250 - **CATCHES FIRE SPONTANEOUSLY IF EXPOSED TO AIR**
- H280 - **CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED**
- H332 - **HARMFUL IF INHALED**

Precautionary statements (GHS-US) :

- P202 - Do not handle until all safety precautions have been read and understood
- P210 - Keep away from Heat, Open flames, Sparks, Hot surfaces. - No smoking
- P222 - Do not allow contact with air
- P261 - Avoid breathing gas
- P271+P403 - Use and store only outdoors or in a well-ventilated place
- P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely
- P381 - Eliminate all ignition sources if safe to do so
- CGA-PG05 - Use a back flow preventive device in the piping
- CGA-PG06 - Close valve after each use and when empty
- CGA-PG10 - Use only with equipment rated for cylinder pressure

CGA-PG17 - Use only with equipment purged with inert gas or evacuated prior to discharge from cylinder

CGA-PG12 - Do not open valve until connected to equipment prepared for use

CGA-PG18 - When returning cylinder, install leak tight valve outlet cap or plug

CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F)

### 2.3. Other hazards

Other hazards not contributing to the classification : Spontaneously flammable in air  
May ignite spontaneously in contact with air.

### 2.4. Unknown acute toxicity (GHS US)

No data available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substance

Name	Product identifier	%
Silane (Main constituent)	(CAS No) 7803-62-5	100

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, trained personnel should give oxygen. Call a physician.

First-aid measures after skin contact : Wash with plenty of soap and water. If irritation persists, consult a doctor.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Contact an ophthalmologist immediately.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

### 4.2. Most important symptoms and effects, both acute and delayed

No additional information available

### 4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Escaping gas cannot be extinguished.

Unsuitable extinguishing media : **Do not use halon fire extinguisher..**

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : **DANGER! Pyrophoric, FLAMMABLE, high pressure gas..** If venting or leaking gas catches fire, do not extinguish flames. Flammable vapors may spread from leak, creating an explosive reignition hazard. Vapors can be ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharge, or other ignition sources at locations distant from product handling point. Explosive atmospheres may linger. Before entering an area, especially a confined area, check the atmosphere with an appropriate device.

Explosion hazard : **MAY FORM EXPLOSIVE MIXTURES WITH AIR.**

Reactivity : **The substance may spontaneously ignite on contact with air.**

### 5.3. Advice for firefighters

- Firefighting instructions : **DANGER! Pyrophoric, FLAMMABLE, high pressure gas.**
- Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.
- Special protective equipment for fire fighters : Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.
- Other information : Containers are equipped with a pressure relief device. (Exceptions may exist where authorized by DOT.).

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : **DANGER! Pyrophoric, FLAMMABLE, high pressure gas.** May ignite spontaneously in contact with air.. May form explosive mixtures with air. Immediately evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Remove all sources of ignition if safe to do so. Reduce vapors with fog or fine water spray, taking care not to spread liquid with water. Shut off flow if safe to do so. Ventilate area or move container to a well-ventilated area. Flammable vapors may spread from leak and could explode if reignited by sparks or flames. Explosive atmospheres may linger. Before entering area, especially confined areas, check atmosphere with an appropriate device.

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Try to stop release. Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

### 6.3. Methods and material for containment and cleaning up

No additional information available

### 6.4. Reference to other sections

See also sections 8 and 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Use only explosion-proof equipment
- Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g, wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store only where temperature will not exceed 125°F (52°C). Post “No Smoking/No Open Flames” signs in storage and use areas. There must be no sources of ignition. Separate packages and protect against potential fire and/or explosion damage following appropriate codes and requirements (e.g, NFPA 30, NFPA 55, NFPA 70, and/or NFPA 221 in the U.S.) or according to requirements determined by the Authority Having Jurisdiction (AHJ). Always secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand when the container is not in use. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods. For other precautions in using this product, see section 16

**OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE:** When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

### 7.3. Specific end use(s)

None.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Silane (7803-62-5)		
ACGIH	ACGIH TLV-TWA (ppm)	5 ppm
USA OSHA	Not established	

### 8.2. Exposure controls

Appropriate engineering controls : Use an explosion-proof local exhaust system. Local exhaust and general ventilation must be adequate to meet exposure standards. **MECHANICAL (GENERAL): Inadequate - Use only in a closed system.** Use explosion proof equipment and lighting.

In semiconductor process gas and other suitable applications, Praxair recommends the use of engineering controls such as gas cabinet enclosures, automatic gas panels (used to purge systems on cylinder changeout), excess-flow valves throughout the gas distribution system, double containment for the distribution system, and continuous gas monitors.

Eye protection : Wear safety glasses when handling cylinders; vapor-proof goggles and a face shield during cylinder changeout or whenever contact with product is possible. Select eye protection in accordance with OSHA 29 CFR 1910.133.

Skin and body protection : Wear metatarsal shoes and work gloves for cylinder handling, and protective clothing where needed. Wear appropriate chemical gloves during cylinder changeout or wherever contact with product is possible. Select per OSHA 29 CFR 1910.132, 1910.136, and 1910.138.

Respiratory protection : When workplace conditions warrant respirator use, follow a respiratory protection program that meets OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure. For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA). None necessary.

Thermal hazard protection : Wear cold insulating gloves when transfilling or breaking transfer connections.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Gas  
 Molecular mass : 32 g/mol  
 Color : Colorless.

Odor	: choking
Odor threshold	: Odor threshold is subjective and inadequate to warn for overexposure.
pH	: Not applicable.
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: Not applicable.
Melting point	: -186 °C
Freezing point	: No data available
Boiling point	: -111.5 °C
Flash point	: Not applicable.
Critical temperature	: -3.4 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: 1.4 - 96 vol %
Vapor pressure	: Not applicable.
Critical pressure	: 4840 kPa
Relative vapor density at 20 °C	: No data available
Relative density	: 0.55
Relative gas density	: 1.1
Solubility	: Water: No data available
Log Pow	: Not applicable.
Log Kow	: Not applicable.
Viscosity, kinematic	: Not applicable.
Viscosity, dynamic	: Not applicable.
Explosive properties	: MAY FORM EXPLOSIVE MIXTURES WITH AIR.
Oxidizing properties	: None.
Explosion limits	: 1 - 100 vol % Pyrophoric.

### 9.2. Other information

Gas group	: Liquefied gas
Additional information	: Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**The substance may spontaneously ignite on contact with air.**

### 10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

### 10.3. Possibility of hazardous reactions

May occur.

### 10.4. Conditions to avoid

Air contact. Moisture. Temperatures in excess of 400°C (752°F).

### 10.5. Incompatible materials

Air. Water, humidity. Bases. Oxidizing agents. Halogens. Chlorine. Halocarbons.

### 10.6. Hazardous decomposition products

Hydrogen. Silica dust. Silicon dioxide. **Powder produced in the absence of air may be flammable..**

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

# Silane

## Safety Data Sheet P-4649

This SDS conforms to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.  
Date of issue: 01/01/1980    Revision date: 10/24/2016    Supersedes: 03/19/2015

Acute toxicity : Inhalation:gas: HARMFUL IF INHALED.

Silane ( f )7803-62-5	
LC50 inhalation rat (ppm)	9500 ppm/4h
ATE US (gases)	9500.000 ppmV/4h

Skin corrosion/irritation : Not classified  
pH: Not applicable.

Serious eye damage/irritation : Not classified  
pH: Not applicable.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : No known ecological damage caused by this product.

#### 12.2. Persistence and degradability

Silane (7803-62-5)	
Persistence and degradability	Not applicable for inorganic gases.

#### 12.3. Bioaccumulative potential

Silane (7803-62-5)	
Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	No data available.

#### 12.4. Mobility in soil

Silane (7803-62-5)	
Mobility in soil	No data available.
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.

#### 12.5. Other adverse effects

Effect on ozone layer : None

Effect on the global warming : No known effects from this product

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Do not attempt to dispose of residual or unused quantities. Return container to supplier.

### SECTION 14: Transport information

In accordance with DOT

Transport document description : UN2203 Silane, 2.1

UN-No.(DOT) : UN2203

Proper Shipping Name (DOT) : Silane

Class (DOT) : 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Hazard labels (DOT) : 2.1 - Flammable gas



### Additional information

Emergency Response Guide (ERG) Number : 116

Other information : No supplementary information available.

Special transport precautions : Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers:  
- Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

### Transport by sea

UN-No. (IMDG) : 2203  
Proper Shipping Name (IMDG) : SILANE  
Class (IMDG) : 2 - Gases  
MFAG-No : 116

### Air transport

UN-No. (IATA) : 2203  
Proper Shipping Name (IATA) : Silane  
Class (IATA) : 2  
Civil Aeronautics Law : Gases under pressure/Gases flammable under pressure

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Silane (7803-62-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Reactive hazard Sudden release of pressure hazard
-------------------------------------	--

### 15.2. International regulations

#### CANADA

#### Silane (7803-62-5)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

#### Silane (7803-62-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)



# Silane

## Safety Data Sheet P-4649

This SDS conforms to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.  
Date of issue: 01/01/1980    Revision date: 10/24/2016    Supersedes: 03/19/2015

### 15.2.2. National regulations

#### Silane (7803-62-5)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Canadian IDL (Ingredient Disclosure List)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. US State regulations

#### Silane(7803-62-5)

U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

#### Other information

: When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product

Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc, it is the user's obligation to determine the conditions of safe use of the product

Praxair SDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current SDSs for these products, contact your Praxair sales representative, local distributor, or supplier, or download from [www.praxair.com](http://www.praxair.com). If you have questions regarding Praxair SDSs, would like the document number and date of the latest SDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (Phone: 1-800-PRAXAIR/1-800-772-9247; Address: Praxair Call Center, Praxair, Inc, P.O. Box 44, Tonawanda, NY 14151-0044)

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# Silane

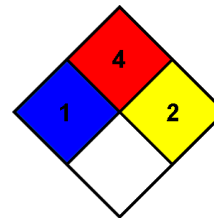
## Safety Data Sheet P-4649

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NFPA health hazard	: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard	: 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.
NFPA reactivity	: 2 - Normally unstable and readily undergo violent decomposition but do not detonate. Also: may react violently with water or may form potentially explosive mixtures with water.



### HMIS III Rating

Health	: 0 Minimal Hazard - No significant risk to health
Flammability	: 4 Severe Hazard
Physical	: 3 Serious Hazard

SDS US (GHS HazCom 2012) - Praxair

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*



# University of Washington Accident / Incident Report

Report Number: 2019-01-029

Contact EH&S at 206-543-7388

## Person Reporting Incident

Last Name: <b>Patrick</b>	First Name: <b>Nicholas</b>
Phone: +1 206 221-1045	Email: <b>patricns@uw.edu</b>
Occupation/Position: <b>RESEARCH SCIENTIST/ENGINEER 3 (E S 8)</b>	Department: <b>ENG: Collaboration Core - WNF Staff</b>
Date Reported (yyyy/mm/dd): <b>2019/01/10</b>	Time of Reporting: <b>08:22 AM</b>

## Person Involved or Affected

Last Name: [REDACTED]	First Name: [REDACTED]
Phone:	Email: [REDACTED]
Occupation/Position: <b>RESEARCH SCIENTIST/ENGINEER 2</b>	Department: <b>ENG: Collaboration Core - WNF Staff</b>

## Incident Details

Date of Incident (yyyy/mm/dd): <b>2019/01/09</b>	Time of Incident: <b>2:30 PM</b>	When Shift Begins: <b>N/A</b>
Campus: <b>Seattle</b>	Incident Location/Parking Lot: <b>FLUKE HALL</b>	
Room: <b>WNF Cleanroom, 125E</b>	Other:	

### Incident Details:

As part of setup/installation of a new tool set (ALD, Picosun), [REDACTED] (WNF, RSE 2) was working closely with an engineer from the Picosun (manufacturer) to leak test process gas lines and pump/purge the lines internal to the tool as is standard for the connection of any new gas supply for any system.

The intent was to pump out lines prior to introducing the gas to the tool. Not realizing the ammonia line was had already been leak checked, verified, and charged by WNF, the vendor opened the valve inside the tool intending to clear the line back to the supply/branch point feeding the system. Under normal operation this would not have been a problem as the gas would have entered the tool and been pumped away through the building exhaust system. With the leak checker in place, however, the gas was pulled through the leak checker and into the room.

### Result:

- 1) Leak checker noted gas flow as it is intended
- 2) The unrestricted gas flow from source to leak checker exhaust registered correctly as a high/excess flow condition tripping the gas panel for the ammonia source to shut off gas flow at the bottle. This also set condition yellow on the lab's Hazardous Process Monitor (HPM), notifying staff of a problem. No general evacuation alarm occurred.
- 3) Engineers noticed leak checker activity and HPM yellow status. Staff engineer [REDACTED] smelled ammonia at roughly the same time. Picosun engineer closed the valve and along with [REDACTED] evacuated the area. Total exposure time is estimated at 5-10 seconds.

No reports of symptoms were made, though employee was instructed to contact EH&S. EH&S advised employee to seek medical consultation at Hall Health. Employee complied, and was given material SDS. Employee has reported no symptoms, personnel at Hall Health cleared him same day with instruction to monitor himself for symptoms and return/seek medical attention should they manifest.

The installation work was suspended pending review of the event. After speaking with staff engineers the morning of January 10, 2019, I did authorize the work to resume with the caveat that prior to opening any valves everyone must be aware of what is about to happen and that it must be stated clearly whether or not the line in question is charged.

Attachment: **Yes**

## Supervisor

Last Name: <b>Patrick</b>	First Name: <b>Nicholas</b>
Phone: +1 206 221-1045	Email: <b>patricns@uw.edu</b>

Occupation/Position: <b>RESEARCH SCIENTIST/ENGINEER 3 (E S 8)</b>		Department: <b>ENG: Collaboration Core - WNF Staff</b>	
<b>Classification</b>			
Level 1: Near miss (No incident occurred but it could have), Injury or Exposure, no first aid required,			
<b>Type of Incident</b>			
Injury Description: <b>None,</b>			
Body Parts Affected: <b>Head, Face, Eyes, Nose, Body Systems: Internal Organs, Nervous System, Respiratory, etc.,</b>			
Cause of Injury or Damage: <b>Chemicals, Ventilation, Indoor Air Quality Issues,</b>			
<b>Possible Causes</b>			
Equipment:			
Environment: <b>Air Contaminants, Chemicals,</b>			
Policies / Procedures: <b>Appropriate Procedures Non-existent, Inadequate Planning, Preparation,</b>			
Human Factors: <b>Failure to Follow Established Protocol/Procedures,</b>			
<b>Suggested corrective action by the affected party</b>			
Establish SOP for new gas line connections including lockouts, clear communication/signage of line status, clear communication between all involved personnel prior to opening gas line valves, and ensuring all necessary sensors are in place and tested prior to introducing gas flows.			
<b>Supervisor's Comments</b>			
Root Causes: (Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.) <b>Insufficient communication between WNF staff and Tool vendor/engineer regarding gas line status. No formal SOP for new gas line connections.</b>			
Recommendations/Preventive Measures: <b>Establish formal SOP for new gas line connections with attention to any needed lockouts, signage and communication of gas line charge status, statement and confirmation of intention to open valves with statement and confirmation of current line charge status prior to opening any valves, and ensuring all necessary sensors are in place and functional prior to introducing any gasses.</b>			
Corrective Actions Target Date (yyyy/mm/dd): <b>2019/02/28</b>		Corrective Actions Complete Date (yyyy/mm/dd):	
Other Comments: <b>Employee has been working with EH&amp;S in drafting SOPs for this process, but additional time is needed. Target date adjusted to end of February.</b>			
<b>EHS Review</b>			
Last Name: <b>Haggard</b>	First Name: <b>Angelina M</b>	Phone Number: <b>+1 206 616-3442</b>	Email: <b>ahaggard@uw.edu</b>
Occupation/Position:		Department:	
Comments: <b>forwarded to Scott Nelson, Denise Bender, and Tracy Harvey on January 10, 2019</b>			

**SECTION: 1. Product and company identification**

**1.1. Product identifier**

Product form : Substance  
 Name : Ammonia  
 CAS No : 7664-41-7  
 Formula : NH3

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the substance/mixture : Industrial use. Use as directed.

**1.3. Details of the supplier of the safety data sheet**

Praxair, Inc.  
 10 Riverview Drive  
 Danbury, CT 06810-6268 - USA  
 T 1-800-772-9247 (1-800-PRAXAIR) - F 1-716-879-2146  
[www.praxair.com](http://www.praxair.com)

**1.4. Emergency telephone number**

Emergency number : Onsite Emergency: 1-800-645-4633

CHEMTREC, 24hr/day 7days/week  
 — Within USA: 1-800-424-9300, Outside USA: 001-703-527-3887  
 (collect calls accepted, Contract 17729)

**SECTION 2: Hazard identification**

**2.1. Classification of the substance or mixture**

**GHS-US classification**

Liquefied gas H280  
 Acute Tox. 4 (Inhalation:gas) H332  
 Skin Corr. 1B H314

**2.2. Label elements**

**GHS-US labeling**

Hazard pictograms (GHS-US) :



GHS04                      GHS05                      GHS07

Signal word (GHS-US) : DANGER

Hazard statements (GHS-US) : H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED  
 H314 - CAUSES SEVERE SKIN BURNS AND EYE DAMAGE  
 H332 - HARMFUL IF INHALED

Precautionary statements (GHS-US) : P202 - Do not handle until all safety precautions have been read and understood  
 P210 - Keep away from Heat, Open flames, Sparks, Hot surfaces. - No smoking  
 P260 - Do not breathe gas  
 P262 - Do not get in eyes, on skin, or on clothing  
 P271+P403 - Use and store only outdoors or in a well-ventilated place  
 P273 - Avoid release to the environment  
 P280 - Wear protective gloves, protective clothing, eye protection, face protection  
 P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely  
 P381 - Eliminate all ignition sources if safe to do so  
 P501 - Dispose of contents/container in accordance with container Supplier/owner instructions  
 CGA-PG05 - Use a back flow preventive device in the piping  
 CGA-PG20+CGA-PG10 - Use only with equipment of compatible materials of construction and rated for cylinder pressure

# Ammonia

## Safety Data Sheet P-4562

This SDS conforms to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Date of issue: 01/01/1981 Revision date: 10/13/2016 Supersedes: 03/23/2015

CGA-PG12 - Do not open valve until connected to equipment prepared for use  
CGA-PG06 - Close valve after each use and when empty  
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F)

### 2.3. Other hazards

Other hazards not contributing to the classification : Contact with liquid may cause cold burns/frostbite.

### 2.4. Unknown acute toxicity (GHS US)

No data available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substance

Name : Ammonia  
CAS No : 7664-41-7

Name	Product identifier	%
Ammonia	(CAS No) 7664-41-7	99.5 - 100

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

First-aid measures after skin contact : In case of contact, immediately flush affected areas with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse. Discard contaminated shoes.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Contact an ophthalmologist immediately.. Get immediate medical attention.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

### 4.2. Most important symptoms and effects, both acute and delayed

No additional information available

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat with corticosteroid spray as soon as possible after inhalation. Obtain medical assistance.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide, Dry chemical, Water spray or fog.

### 5.2. Special hazards arising from the substance or mixture

Reactivity : No reactivity hazard other than the effects described in sub-sections below.

### 5.3. Advice for firefighters

Firefighting instructions : Take care not to extinguish flames. If flames are accidentally extinguished, explosive re-ignition may occur. Allow fire to burn out

Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.

Protection during firefighting : Compressed gas: asphyxiant. Suffocation hazard by lack of oxygen.

Special protective equipment for fire fighters : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.

Other information : Heat of fire can build pressure in cylinder and cause it to rupture. No part of a cylinder should be subjected to a temperature higher than 125°F (52°C). Cylinders are equipped with a pressure-relief device. (Exceptions may exist where authorized by DOT, in this case where cylinders contain less than 165 pounds of product.) If leaking or spilled product catches fire, do not extinguish flames. Flammable and toxic vapors may spread from leak and could explode if reignited. Vapors can be ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharge, or other ignition sources at locations distant from product handling point. Explosive atmospheres may linger. Before entering area, especially confined areas, check atmosphere with an appropriate device. Reverse flow into cylinder may cause rupture. To protect persons from cylinder fragments and toxic fumes if a rupture occurs, totally evacuate the area if the fire cannot be brought under immediate control.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate personnel to a safe area. Appropriate self-contained breathing apparatus may be required. Approach suspected leak area with caution. Remove all sources of ignition, if safe to do so. Reverse flow into cylinder may cause rupture. Reduce gas with fog or fine water spray. Stop flow of product if safe to do so. Ventilate area or move container to a well-ventilated area. Flammable gas may spread from leak. Before entering the area, especially a confined area, check the atmosphere with an appropriate device.

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

### 6.3. Methods and material for containment and cleaning up

No additional information available

### 6.4. Reference to other sections

See also sections 8 and 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe gas/vapor. Avoid all contact with skin, eyes, or clothing. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Use only explosion-proof equipment

Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g. wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

# Ammonia

## Safety Data Sheet P-4562

This SDS conforms to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.  
Date of issue: 01/01/1981    Revision date: 10/13/2016    Supersedes: 03/23/2015

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a cool, well-ventilated place. Store and use with adequate ventilation. Store only where temperature will not exceed 125°F (52°C). Firmly secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods

**OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE:** When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

### 7.3. Specific end use(s)

None.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Ammonia (7664-41-7)		
ACGIH	ACGIH TLV-TWA (ppm)	25 ppm
ACGIH	ACGIH TLV-STEL (ppm)	35 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	35 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm
USA IDLH	US IDLH (ppm)	300 ppm
Ammonia (7664-41-7)		
ACGIH	ACGIH TLV-TWA (ppm)	25 ppm
ACGIH	ACGIH TLV-STEL (ppm)	35 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	35 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm

### 8.2. Exposure controls

- Appropriate engineering controls : Use a local exhaust system, if necessary, to prevent oxygen deficiency and to keep hazardous fumes and gases below all applicable limits in the worker's breathing zone. **MECHANICAL ENGINEERING CONTROLS:** Not recommended as a primary ventilation system to control worker's exposure. **USE ONLY IN A CLOSED SYSTEM.** An explosion-proof, corrosion-resistant, forced-draft fume hood is preferred.
- Personal protective equipment : Wear metatarsal shoes and work gloves for cylinder handling, and protective clothing where needed. Wear appropriate chemical gloves during cylinder changeout or wherever contact with product is possible. Select per OSHA 29 CFR 1910.132, 1910.136, and 1910.138.
- Eye protection : Wear safety glasses when handling cylinders; vapor-proof goggles and a face shield during cylinder changeout or whenever contact with product is possible. Select eye protection in accordance with OSHA 29 CFR 1910.133.
- Skin and body protection : Wear metatarsal shoes and work gloves for cylinder handling, and protective clothing where needed. Wear appropriate chemical gloves during cylinder changeout or wherever contact with product is possible. Select per OSHA 29 CFR 1910.132, 1910.136, and 1910.138.
- Respiratory protection : When workplace conditions warrant respirator use, follow a respiratory protection program that meets OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure. For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA).
- Thermal hazard protection : Wear cold insulating gloves when transfilling or breaking transfer connections.

Environmental exposure controls	: Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.
Other information	: Keep suitable chemically resistant protective clothing readily available for emergency use. Wear leather safety gloves and safety shoes when handling cylinders.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Gas
Appearance	: Colorless gas. Liquid under pressure.
Molecular mass	: 17 g/mol
Color	: Colorless.
Odor	: Ammoniacal.
Odor threshold	: No data available
pH	: Not applicable.
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: Not applicable.
Melting point	: -77.7 °C
Freezing point	: No data available
Boiling point	: -33.4 °C
Flash point	: No data available
Critical temperature	: 132.4 °C
Auto-ignition temperature	: 650 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: ≥ 16 vol % 25
Vapor pressure	: 860 kPa
Critical pressure	: 11350 kPa
Relative vapor density at 20 °C	: No data available
Relative density	: 0.7
Density	: 0.682 g/cm <sup>3</sup> (at -33 °C)
Relative gas density	: 0.6
Solubility	: Water: 517000 mg/l
Log Pow	: Not applicable.
Log Kow	: Not applicable.
Viscosity, kinematic	: Not applicable.
Viscosity, dynamic	: Not applicable.
Explosive properties	: Not applicable.
Oxidizing properties	: None.
Explosion limits	: No data available

#### 9.2. Other information

Gas group	: Liquefied gas
Additional information	: None

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Hazardous reactions may occur on contact with certain chemicals. (Refer to the list of incompatible materials section 10: "Stability-Reactivity").



### 10.4. Conditions to avoid

Avoid moisture in installation systems.

### 10.5. Incompatible materials

Gold, silver, mercury, Oxidizing agents, Halogens, Halogenated compounds, Acids, Copper, Zinc, Copper/Zinc alloys (Brass), Chlorates.

### 10.6. Hazardous decomposition products

The normal products of combustion are nitrogen and water. Hydrogen may be formed at temperatures above 1,544°F (840°C).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Inhalation:gas: HARMFUL IF INHALED.

Ammonia ( f )7664-41-7	
LC50 inhalation rat (ppm)	7338 ppm/1h
ATE US (gases)	3669.000 ppmV/4h
Ammonia (7664-41-7)	
LC50 inhalation rat (ppm)	7338 ppm/1h
ATE US (gases)	3669.000 ppmV/4h

Skin corrosion/irritation : CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

pH: Not applicable.

Serious eye damage/irritation : Not classified

pH: Not applicable.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : VERY TOXIC TO AQUATIC LIFE. No ecological damage caused by this product.

Ammonia (7664-41-7)	
LC50 fish 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio)
EC50 Daphnia 1	25.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	2.43 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)
Ammonia (7664-41-7)	
LC50 fish 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio)
EC50 Daphnia 1	25.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	2.43 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

### 12.2. Persistence and degradability

Ammonia (7664-41-7)	
Persistence and degradability	The substance is biodegradable. Unlikely to persist.
Ammonia (7664-41-7)	
Persistence and degradability	The substance is biodegradable. Unlikely to persist.

# Ammonia

## Safety Data Sheet P-4562

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 Date of issue: 01/01/1981    Revision date: 10/13/2016    Supersedes: 03/23/2015

### 12.3. Bioaccumulative potential

Ammonia (7664-41-7)	
Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
Ammonia (7664-41-7)	
Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.

### 12.4. Mobility in soil

Ammonia (7664-41-7)	
Mobility in soil	No data available.
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
Ammonia (7664-41-7)	
Mobility in soil	No data available.
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.

### 12.5. Other adverse effects

- Other adverse effects : May cause pH changes in aqueous ecological systems.
- Effect on ozone layer : None
- Effect on the global warming : No known effects from this product

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

- Waste disposal recommendations : Do not attempt to dispose of residual or unused quantities. Return container to supplier.

## SECTION 14: Transport information

In accordance with DOT

- Transport document description : UN1005 Ammonia, anhydrous, 2.2
- UN-No.(DOT) : UN1005
- Proper Shipping Name (DOT) : Ammonia, anhydrous
- Class (DOT) : 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115
- Hazard labels (DOT) : 2.2 - Non-flammable gas



- DOT Symbols : D - Proper shipping name for domestic use only, or to and from Canada
- DOT Special Provisions (49 CFR 172.102) : 13 - The words Inhalation Hazard shall be entered on each shipping paper in association with the shipping description, shall be marked on each non-bulk package in association with the proper shipping name and identification number, and shall be marked on two opposing sides of each bulk package. Size of marking on bulk package must conform to 172.302(b) of this subchapter. The requirements of 172.203(m) and 172.505 of this subchapter do not apply  
 T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter

- Marine pollutant : Yes



### Additional information

Emergency Response Guide (ERG) Number	: 125 (UN1005);154 (UN2672)
Other information	: No supplementary information available.
Special transport precautions	: Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: <ul style="list-style-type: none"> <li>- Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.</li> </ul>

### Transport by sea

UN-No. (IMDG)	: 1005
Proper Shipping Name (IMDG)	: AMMONIA, ANHYDROUS
Class (IMDG)	: 2 - Gases
MFAG-No	: 125

### Air transport

UN-No. (IATA)	: 1005
Proper Shipping Name (IATA)	: Ammonia, anhydrous
Class (IATA)	: 2
Civil Aeronautics Law	: Gases under pressure/Gases toxic under pressure

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

<b>Ammonia (7664-41-7)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on the United States SARA Section 302	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Sudden release of pressure hazard Fire hazard
SARA Section 313 - Emission Reporting	1.0 % (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Ammonia	CAS No 7664-41-7	99.5 - 100%
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<b>Ammonia (7664-41-7)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on the United States SARA Section 302	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb

# Ammonia

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Ammonia (7664-41-7)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Sudden release of pressure hazard Fire hazard
SARA Section 313 - Emission Reporting	1.0 % (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)

### 15.2. International regulations

#### CANADA

Ammonia (7664-41-7)	
Listed on the Canadian DSL (Domestic Substances List)	
Ammonia (7664-41-7)	
Listed on the Canadian DSL (Domestic Substances List)	

#### EU-Regulations

Ammonia (7664-41-7)	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
Ammonia (7664-41-7)	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	

#### 15.2.2. National regulations

Ammonia (7664-41-7)	
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Japanese Poisonous and Deleterious Substances Control Law Listed on the Canadian IDL (Ingredient Disclosure List) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on CICR (Turkish Inventory and Control of Chemicals)	
Ammonia (7664-41-7)	
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Japanese Poisonous and Deleterious Substances Control Law Listed on the Canadian IDL (Ingredient Disclosure List) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on CICR (Turkish Inventory and Control of Chemicals)	

### 15.3. US State regulations

Ammonia(7664-41-7)	
U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List

# Ammonia

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Ammonia(7664-41-7)	
	U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Ammonia (7664-41-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Ammonia (7664-41-7)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

Other information : When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product

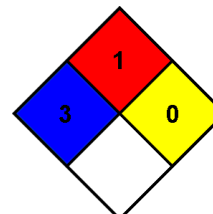
Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc, it is the user's obligation to determine the conditions of safe use of the product

Praxair SDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current SDSs for these products, contact your Praxair sales representative, local distributor, or supplier, or download from [www.praxair.com](http://www.praxair.com). If you have questions regarding Praxair SDSs, would like the document number and date of the latest SDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (Phone: 1-800-PRAXAIR/1-800-772-9247; Address: Praxair Call Center, Praxair, Inc, P.O. Box 44, Tonawanda, NY 14151-0044)

PRAXAIR and the Flowing Airstream design are trademarks or registered trademarks of Praxair Technology, Inc. in the United States and/or other countries.

- NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
- NFPA fire hazard : 1 - Must be preheated before ignition can occur.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.





# Ammonia

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### HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given  
Flammability : 1 Slight Hazard  
Physical : 2 Moderate Hazard

SDS US (GHS HazCom 2012) - Praxair

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*



# University of Washington Accident / Incident Report

Report Number: 2019-01-095

Contact EH&S at 206-543-7388

## Person Reporting Incident

Last Name: [REDACTED]	First Name: [REDACTED]
Phone: [REDACTED]	Email: [REDACTED]
Occupation/Position: UNDERGRADUATE STUDENT	Department: William E. Boeing Department of Aeronautics and Astronautics
Date Reported (yyyy/mm/dd): 2019/01/28	Time of Reporting: 04:36 PM

## Person Involved or Affected

Last Name: [REDACTED]	First Name: [REDACTED]
Phone: [REDACTED]	Email: [REDACTED]
Occupation/Position: UNDERGRADUATE STUDENT	Department: William E. Boeing Department of Aeronautics and Astronautics

## Incident Details

Date of Incident (yyyy/mm/dd): 2019/01/25	Time of Incident: 12:00 PM	When Shift Begins: N/A
Campus: Seattle	Incident Location/Parking Lot:	
Room:	Other: Water fountain in AERB	

Incident Details:

Drinking water from the water fountain in AERB caused extreme dryness of throat and mouth after ingestion. After continuous consumption throughout the day sickness with cold related symptoms including, headache, soreness of facial muscles, fatigue, runny nose, and dry coughing were observed.

Attachment: No

## Supervisor

Last Name: Unknown	First Name: Unknown
Phone:	Email: injury@u.washington.edu
Occupation/Position:	Department: Unspecified

## Classification

Level 1:  
Injury or Exposure, no first aid required,

## Type of Incident

Injury Description: Other,

Body Parts Affected: Head, Face, Eyes, Nose, Neck,

Cause of Injury or Damage: Other,

## Possible Causes

Equipment: Inadequate Maintenance,

Environment:

Policies / Procedures:

Human Factors:

## Suggested corrective action by the affected party

Sample water currently being circulated throughout AERB for infectious agents and find source of  
ON FILE: Affected/Injured Employee's date of birth, gender, date of hire, and hours of employment.

infections agent if one exists.

### Supervisor's Comments

**Root Causes:**

(Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.)

**Recommendations/Preventive Measures:**

Corrective Actions Target Date (yyyy/mm/dd):

Corrective Actions Complete Date (yyyy/mm/dd):

Other Comments:

### EHS Review

Last Name: **Haggard**

First Name: **Angelina M**

Phone Number: **+1 206 616-3442**

Email: **ahaggard@uw.edu**

Occupation/Position:

Department:

Comments: **forwarded to Denise Bender and Abebe Aberra on January 29, 2019**



## U-WIDE HEALTH AND SAFETY COMMITTEE

January 9<sup>th</sup>, 2019 Meeting Minutes | 1:00 pm - 2:30 pm |  
Foegen N130A

	<b>Elected Members (HSC Group)</b>		<b>Appointed Members (HSC Group)</b>		<b>Environmental Health &amp; Safety (EH&amp;S) Staff</b>
X	Leslie Anderson, Co-Chair (1)	X	Paul Zuchowski (3)	X	Katia Harb
	Fietta Robinson (1)		Katie Beth (3)	X	Denise Bender
X	Ryan Hawkinson (1) alternate	X	Beth Hammermeister (4)	X	Emma Corell
	Sterling Luke (2)	X	Liz Kindred, Co-Chair (5)	X	Angelina Haggard
X	Jeff Mellema (2)		Nicole Sanderson (7)	X	Manisha Konnur
	Carol Harvey (4)		David Zuckerman (10)	X	Brett Konzek
X	Ann Aumann (5)	X	Sonia Honeydew (9)		
X	Natassia Stelmaszek (6)				
	Beth Ramage (6)				
	Kelly Carter-Lynn (7)				
X	David Hirschberg (8)				
X	Hannah Wilson (8)				
	Kameron Harmon (9)				
X	David Warren (10)				
X	Lesley Colby (Faculty Senate)				
	<b>Labor Union Representation</b>		<b>Ex-Officio Members</b>		<b>Ex-Officio Members</b>
	Paula Lukaszek, WFSE Local 1488	X	Tracey Mosier, UW Facilities		Felicia Foster, Atty General's Office
X	Christine Kang, Graduate & Professional Student Senate (GPSS), UAW 4121	X	Chris Pennington, UW Facilities		Lt. Chris Jaross, UWPD
	Vacant, SEIU Local 1199	X	Steve Charvat, Emergency Management		Chief John Vinson, UWPD
			Megan Levy, Emergency Management		Vacant, Transportation Services
		X	Rick Gleason, DEOHS		Ken Nielsen, Risk Claims Services
					Vacant, Capital Planning & Development
<b>*x= Present at meeting (quorum = 11 elected and appointed members)</b>					

## Agenda

1. **Call to Order**
2. **Approval of December Meeting Minutes**
3. **Organizational Group Reports**
4. **Union Reports**
5. **Ex-Officio Reports**
6. **EH&S Updates and L&I Updates**
7. **Open Discussion**
8. **Adjourn**

*Recorded by Manisha Konnur*

1. **Call to Order:** Leslie Anderson called the meeting to order at 1:05PM
2. **Approval of December Meeting Minutes:** Approved as written.
3. **Organizational Group Reports**
  - a. **HSC 1:** Ryan Hawkinson provided updates for HSC 1. He reported the group met and discussed the accident reports from November and December. The group also had a discussion on the University leadership structure. Leslie Anderson stated they welcomed a new member to the group and said goodbye to a member.
  - b. **HSC 2:** Jeff Mellema reported for HSC 2. He stated the group met last month and didn't have enough people for a quorum.
  - c. **HSC 3:** Paul Zuchowski reported for HSC 3. The group met in December and discussed the future election for committee chair. Paul encouraged everyone in the group to run for the position.
  - d. **HSC 4:** Beth Hammermeister provided updates for HSC 4. The group met on December 19<sup>th</sup> and discussed OARS reports. The committee will vote on their charter. The group will send out Accident Prevention Plan (APP) revisions by January 22<sup>nd</sup>.
  - e. **HSC 5:** Liz Kindred stated HSC 5 meeting was cancelled last month as it was scheduled on Christmas Eve.
  - f. **HSC 6:** Natassia Stelmaszek reported for HSC 6. The meeting last month was cancelled. Natassia mentioned the group is working on structuring the committee and asked for advice on how the groups should be divided. David Warren stated College of Environment divides their groups by departments and programs. Paul Zuchowski added Student Life does it by departments. Hannah Wilson stated UW Tacoma divides their group by schools. Liz Kindred added that UW Medicine represents Airlift Northwest, UW Medical Center, Harborview Medical Center, Consolidated Laundry, and Center for Shared Services located at UW Tower.
  - g. **HSC 7:** There was no one present from HSC 7.

- h. HSC 8:** Hannah Wilson reported for HSC 8. The group met and discussed OARS reports.
  - i. HSC 9:** Sonia Honeydew reported for HSC 9. The group met and reviewed the charter. The group also reviewed the final suggestions for APP before sending them out to EH&S. They also reviewed the business continuity workgroups and updates from the building coordinator. The group discussed the lead lean project which includes a survey conducted by Sandy Jung. Sonia mentioned that they had Deb Harper as a speaker for their meeting last month. Deb spent 250 hours creating a Husky Ready Plan for a College of Engineering department.
  - j. HSC 10:** David Warren provided updates for HSC 10. The group reviewed OARS reports and managed to close all the OARS reports. The group also discussed lead.
- 4. Union Reports:** No updates.

**5. Ex-Officio Reports**

UW Facilities: Chris Pennington stated facilities services have officially changed their name to UW Facilities. There has been a reorganization recently and Tracey Mosier will be the new interim director for UW Facilities - Safety.

Tracey Mosier stated they launched the 'Husky Paws Program' recently and gave a brief description of the program. Denise Bender asked if there is a plan to develop a metric to which Tracey affirmatively replied.

DEOHS: No updates.

Emergency Management: Steve Charvat commented on the 911 outage, power outages and wind storms. He reported that they are in the process of finding a replacement for Eli King's position.

Faculty Senate: Lesley Colby reported that she will be meeting with the faculty Senate and asked if there any topics that she should bring to the meeting. Katia stated that the laboratory safety initiative – Phase II may be discussed and her support for this initiative would be appreciated. Emma Corell asked that the Accident Prevention Plan (APP) products be shared with the Faculty Senate.

**6. EH&S Updates:**

Emma Corell reported EH&S updates. She encouraged every HSC to send their suggestions for APP as soon as possible.

She reminded everyone about the next U-Wide meeting at UW Bothell and to expect an email survey about the transportation to UW Bothell for the next meeting.

Angelina Haggard stated that HSC 7 is planning a tour of the Discovery Hall at the UW Bothell and will also give an introductory tour of the campus.

Emma gave a brief update about the HSC reorganization, specifically about the possibility of HSC 2 splitting into two groups. She mentioned that EH&S will look into the impact caused by the reorganization and will give recommendations so that there is a smooth transition. EH&S will keep everyone updated on this matter and will ask for a feedback in the future.

Katia Harb mentioned the '[EH&S annual report for 2018](#)' and encouraged everyone to take a look at it.

Denise Bender gave the L&I updates. The Laurel Village Community Center and Pediatric Dentistry cases were closed with no violations. The Pioneer Square Clinic case was re-opened and closed again with no violations.

Denise introduced Brett Konzek, the new EH&S Safety and Health Specialist.

## **7. Open Discussion**

Emma Corell encouraged everyone to contact EH&S with any presentations that they might want to give for the future meetings. Denise suggested presentation topics on low speed vehicles and deliverables of lead lean project. Chris Pennington reported that UWPD is promoting the use of SafeZone, an application that, among other features, allows people to dial 911 and automatically share their location.

Emma gave a brief update on end-of-the-year report about OSHA 300 injury and illness summaries. These summaries report information on the recordable injuries that occurred the previous year. Everyone on the committee will be emailed with this report. She also encouraged everyone to post this report on their notice boards around the campus.

Katia Harb addressed the Hall Health break-in incident. She advised everyone to use encrypted thumb-drives since a lot of the thumb-drives were stolen in this particular break-in incident. Hall Health building is in the process of being re-keyed.

Katia also stated that the Sr. Director of EH&S position will be posted in March 2019.

Leslie Colby addressed the upcoming 'Alaskan Viaduct' closure.

## **8. Adjourn:** Leslie Anderson adjourned the meeting at 1:55pm.



**University-Wide (U-Wide) Health and Safety Committee Meeting Agenda**

**February 13, 2019**

**1:00 – 2:30 PM**

[William H. Foege Bldg. N-130A](#)

Agenda Item	Lead	Process	Time
Call to Order	Liz Kindred	Robert's Rules of Order	
Approval of Meeting Minutes	Liz Kindred	Robert's Rules of Order	5 min
Organizational Group Reports*	Committee Members	Discussion	20 min
Union Reports	Union Representatives	Discussion	10 min
Ex-Officio Reports	Ex-Officio Members	Discussion	15 min
EH&S and L&I Updates	EH&S Updates: <ul style="list-style-type: none"> <li>- OSHA 300A Summaries - Angie</li> <li>- Executive Sponsor meetings - Angie</li> <li>- NW Hospital EH&amp;S Considerations - Katia</li> <li>- Lab Safety Taskforce - Katia</li> <li>- L&amp;I Updates - Emma</li> <li>- Bridge - Emma</li> <li>- Inclement weather – Katia/Emma</li> </ul>	Discussion	30 min
Open Discussion	Liz Kindred	Discussion	10 min
Adjourn	Liz Kindred	Robert's Rules of Order	

\*Organizational Group Reports include topics covered at their most recent meeting

***Please send ideas for agenda items to the co-chairs Leslie Anderson and Liz Kindred at least 2 weeks prior to our meetings.***