University of Wisconsin – Madison
Laboratory Chemical Hygiene Plan (CHP)

For Center for Limnology – Trout Lake Station

Certification and Annual Review and Updates

By signing and dating here, the Laboratory Chemical Hygiene Officer and Principal Investigator certify that this Laboratory-Specific Chemical Hygiene Documentation is accurate and that it effectively provides for the chemical safety of employees and students in this laboratory.

Principal Investigator (Station Director) : Tim Kratz

Signature_____Tim Kratz_____ Date____15 April 2013___

Chemical Hygiene Officer(s): Pam Montz Ken Morrison

Signature _____Pam Montz_____ _____Ken Morrison_____
Date ____15 April 2013___ ____15 April 2013_____

By signing and dating here, the Lab Chemical Hygiene Officer certifies that the required annual review (and update, if needed) of the Lab-specific CHP has been completed, and that this document continues to be accurate and to effectively provide for the chemical safety of employees in this laboratory.

Reviewed by_____ Review date_____

Reviewed by_____ Review date_____

Reviewed by_____ Review date_____

Reviewed by_____ Review date_____

Reviewed by_____ Review date_____

Reviewed by_____ Review date_____

Section 1: Personnel

1.1 Safety Personnel

NAME	POSITION	PHONE
Tim Kratz	Director/PI	715-356-9494
John Vehrs	Building maintenance	715-218-7786
Pam Montz	Chem Hygiene Officer	715-356-9494
Ken Morrison	Chem Hygiene Officer	715-356-9494
Vilas County	Police, Fire, Ambulance	911

1.2 Laboratory Staff/Students

List all individuals who work with hazardous chemicals in the labs and are therefore subject to this plan.

NAME	NAME	NAME
Pam Montz	Ken Morrison	Tim Meinke
Noah Lottig	Jeff Rubsam	

Section 2: Laboratory Room Locations

List all rooms in which use of hazardous chemicals will occur.

Building	Rooms	Rooms assigned to PI (Y/N)	Shared Facility (Y/N)
Trout Lake Lab Building	109, 115, 126, 203, 206, 208	N	Y

Section 3: Laboratory-Specific Policies

Include below all lab-specific policies instituted by the PI (e.g. eye protection must be worn in the lab at all times, no working alone, etc.). This space provides the opportunity to place in one location and document the lab's safety policies related to the use of hazardous chemicals.

All accidents resulting in injury or possible exposure to chemicals must be reported to the individual's supervisor and the Station Director.

Personal protective equipment (goggles, gloves, lab coat, apron etc.) compatible with the degree of protection for the substances handled shall be used. All work with volatile compounds or any procedure that might produce toxic vapors must be done in a fume hood.

Whenever a procedure allows a choice of chemicals, the least hazardous chemical should be used.

Eating and drinking are not allowed in chemical laboratory areas.

Flammable chemicals should be stored in the yellow flammables cabinet in Room 126.
Acids should be stored in the cabinet under the hood in Chem Lab 208 or in Room 126.

Equipment that must be left running unattended must be clearly marked with a name of the person responsible, and a phone number where that person can be reached. Adequate safety precautions must have been taken to deal with any complications from events such as power failure, loss of gas/air pressure etc.

Section 4: Laboratory SOPs - Task Table

Prepared by: Pam Montz Revision Date: April 2013

*For many procedures a simple description of the tasks, the associated hazards, and the PPE required to mitigate risks is acceptable. This table is **not appropriate** for work involving Particularly Hazardous Substances or for use of chemicals that pose a high risk due to reactivity or other properties. This table is appropriate of describing safety requirements for miscellaneous task performed in a laboratory.*

TASK	HAZARD DESCRIPTION	REQUIRED PPE AND ENGINEERING CONTROLS
Use of small amounts of various acids	Potentially severe eye, skin, and respiratory tract irritation	Work in fume hood. Wear safety glasses and disposable gloves.
Use of formalin or formaldehyde	Eye, skin, respiratory tract irritation	Dispense in fume hood. Wear safety glasses and gloves.
Use of ethanol or methanol	Eye and respiratory irritation	Use with adequate ventilation, safety glasses and gloves.
Use of MS222 as fish anaesthtic	Eye, skin, respiratory tract irritation	Prepare in fume hood. Wear safety glasses and gloves.

Section 4: Laboratory SOPs - Procedure Form

Title of Procedure: WEIGHING SODIUM AZIDE FOR USE IN LTER SEDIMENT TRAPS
Principal Investigator: NOAH LOTTIG
Prepared by: PAM MONTZ **Revision Date**: 15 APRIL 2013

Prior Approval: This procedure is considered hazardous enough that prior approval is needed from the Principal Investigator: **N**
Involves Use of Particularly Hazardous Substance (PHS): **Y**
High Acute Toxicity
Does this procedure require medical surveillance? **N**
Does this require use of a fit-tested respirator? **N**

Brief Description of Procedure *(100 words or less)*
Weigh 0.2 g. of Sodium Azide, and place in 4 ml vial.

Location: *List the locations (buildings/rooms) where this procedure may be performed. For use of a PHS indicate a more precise location within the room, if appropriate, as the designated area.*
Procedure takes place in Balance Room 210

Chemicals Involved

Chemical	Physical or Health Hazard
Sodium Azide	Serious, potentially fatal, eye/skin/respiratory irritation

Other Hazards: *Include other hazards, other than chemical, that may be present during procedure.*

Exposure Controls: *(check all that apply)*
_X__Safety glasses ___Face shield ___Chemical splash goggles
___Chem apron __X_Gloves (type): vinyl, nitrile, or latex are all appropriate
_X_ _Lab coat __Respirator (type):
_X__Other: Wear a dust mask

Engineering Control:
___Fume hood ___Biosafety cabinet ___Glove box ___Vented gas cabinet
_X__Other (list): Cover work surface with paper or plastic sheeting to contain small spills in an easily wrapped up material.

Administrative Controls: *List any specific work practices needed to perform this procedure (e.g. cannot be performed alone, must notify other staff before beginning, etc.).*

Task should be done by an experienced technician rather than part time or temporary student help.

Task Hazard Control Table: *For procedures involving numerous steps it may be convenient to indicate specific requirements for individual tasks in the table below:*

Task	Required PPE and/or Engineering Controls

Waste Disposal: *Describe any chemical waste generated and disposal method used.*

Any spills must be put in a plastic bag, labeled, and disposed of by the UW Safety Dept.

Accidental Spills: *Describe procedure for handling small chemical spills that may occur.*

Small spills will fall on the covered surface, and may be wrapped in it and bagged for disposal.

Decontamination Procedures (required for PHS use): *Describe decontamination of personnel and equipment.* Sweep up any spill, avoiding raising dust. Wipe down surface. Place wipe in bag with spill. For skin or eye contact, flush with water for 15 minutes. Remove contaminated clothing and wash before reuse.

Training: *Describe any training needed prior to performing this procedure (in lab, external, and tests).*

PI Approval: I have review this procedure and approved it for use.

Name____Noah Lottig__ Signature_____Noah Lottig__ Date___15 April 2013___

Section 4: Laboratory SOPs - Procedure Form

Title of Procedure: Measuring Primary Production by C-14 Uptake
Principal Investigator: Tim Meinke
Prepared by: Tim Meinke **Revision Date**: 6-May- 2013
Prior Approval: This procedure is considered hazardous enough that prior approval is needed from the Principal Investigator: Yes
Involves Use of Particularly Hazardous Substance (PHS): No
Carcinogen Reproductive Toxin High Acute Toxicity
Does this procedure require medical surveillance? No

Does this require use of a fit-tested respirator? No

Brief Description of Procedure *(100 words or less)*
Lake water to be analyzed is returned to the lab, C-14 is added as a tracer and samples are placed in an incubation chamber for 3 hours. C-14 uptake is then determined by liquid scintillation counting.

Location: *List the locations (buildings/rooms) where this procedure may be performed. For use of a PHS indicate a more precise location within the room, if appropriate, as the designated area.*
All parts of the procedure take place in authorized rooms at UW Trout Lake Station. Source material and the incubation are in Room 109, LSC in Room 123 and storage in Room 126.

Chemicals Involved

Chemical	Physical or Health Hazard
Carbon-14	Low energy, beta emitting radio-isotope.

Other Hazards: *Include other hazards, other than chemical, that may be present during procedure.*

Exposure Controls: *(check all that apply)*
_X__Safety glasses ___Face shield ___Chemical splash goggles
___Chem apron __X_Gloves (type): double layered vinyl
_X_ _Lab coat __Respirator (type):
____Other:

Engineering Control:
_x__Fume hood ___Biosafety cabinet ___Glove box ___Vented gas cabinet
_x__Other (list): Cover work surface with plastic sheeting to contain small spills.

Administrative Controls: *List any specific work practices needed to perform this procedure (e.g. cannot be performed alone, must notify other staff before beginning, etc.).*

Procedure may only be done by an experienced, trained and certified technician.

Task Hazard Control Table: *For procedures involving numerous steps it may be convenient to indicate specific requirements for individual tasks in the table below:*

Task	Required PPE and/or Engineering Controls

Waste Disposal: *Describe any chemical waste generated and disposal method used.*

All waste is added to labeled waste containers and disposed of through the UW Environment, Health and Safety department according to standard written procedures.

Accidental Spills: *Describe procedure for handling small chemical spills that may occur.*

Small spills that fall on the covered surface can be wrapped for disposal. Depending upon the extent of the spill, standard UW Safety procedures are followed including: 1) Notify everyone in the area, 2) Contain spill, 3) Decontaminate area, 4) Monitor area for completeness.

Decontamination Procedures (required for PHS use): *Describe decontamination of personnel and equipment.* Wearing gloves and other appropriate lab wear, use water, Count Off detergent, sponge and bucket from Spill Kit to remove all contamination. Monitor with "wipe tests" until area is contaminant free.

Training: *Describe any training needed prior to performing this procedure (in lab, external, and tests).*

Technician must complete "Safety for Radiation Workers" training and be certified by the UW Dept. of Environment, Health and Safety. Additional on site training by PI is also required.

PI Approval: I have review this procedure and approved it for use.

Name___Tim Meinke Signature____Tim Meinke_____ Date___7 May 2013__

Section 4: Laboratory SOPs - Blank Procedure Form

Title of Procedure:
Principal Investigator:
Prepared by: **Revision Date**:

Prior Approval: This procedure is considered hazardous enough that prior approval is needed from the Principal Investigator: Y N
Involves Use of Particularly Hazardous Substance (PHS): Y N
Carcinogen Reproductive Toxin High Acute Toxicity
Does this procedure require medical surveillance? Y N
Does this require use of a fit-tested respirator? Y N

Brief Description of Procedure *(100 words or less)*

Location: *List the locations (buildings/rooms) where this procedure may be performed. For use of a PHS indicate a more precise location within the room, if appropriate, as the designated area.*

Chemicals Involved

Chemical	Physical or Health Hazard

Other Hazards: *Include other hazards, other than chemical, that may be present during procedure.*

Exposure Controls: *(check all that apply)*
___Safety glasses ___Face shield ___Chemical splash goggles
___Chem apron ___Gloves (type):
___Lab coat __Respirator (type):
___Other:

Engineering Control:
___Fume hood ___Biosafety cabinet ___Glove box ___Vented gas cabinet
___Other (list):

Administrative Controls: *List any specific work practices needed to perform this procedure (e.g. cannot be performed alone, must notify other staff before beginning, etc.).*

Task Hazard Control Table: *For procedures involving numerous steps it may be convenient to indicate specific requirements for individual tasks in the table below:*

Task	Required PPE and/or Engineering Controls

Waste Disposal: *Describe any chemical waste generated and disposal method used.*

Accidental Spills: *Describe procedure for handling small chemical spills that may occur.*

Decontamination Procedures (required for PHS use): *Describe decontamination of personnel and equipment.*

Training: *Describe any training needed prior to performing this procedure (in lab, external, and tests).*

PI Approval: I have review this procedure and approved it for use.

Name_____ Signature_____ Date_____

Section 6: Laboratory Safety Training
Master List of Required Training

Training Title	Description/Purpose

Section 6: Laboratory Safety Training
Documentation of Training

Type of Training	Name and Signature	Date

Section 7: Prior Approvals

No SOP descriptions currently require PI prior approval.

Section 8: MSDSs and Inventory of Hazardous Chemicals

A number of regulations require that MSDSs be maintained and readily accessible for all hazardous chemicals. The Campus Chemical Hygiene Plan also requires that inventories be maintained for certain categories of hazardous chemicals above specified amounts (see Section 6.3 of Campus CHP). Provide a description of where the MSDSs are stored and how inventory records are maintained.

Material Safety Data Sheets
Location: Stored with all Safety documents in the Library
Format: hard copy

Chemical Inventory
Method of Maintaining Inventory: Inventories are maintained separately by researchers using the chemicals.

Section 9: Exposure Monitoring Records

No exposure monitoring is necessary at Trout Lake Station

Appendix A: Location of Safety Facilities at Trout Lake

Eye Wash / Drench Hose: Chem Lab 208 and Hood Room 126

Faucet Eye Wash: Room 115

Shower: First floor hall by lockers

Chemical Spill Kits and bicarbonate for acid spills: Chem Lab 208 and Hood Room 126

Broken Glass Collection Container: Chem Lab 208
'Sharps' container for needles: Room 117
Radioactive waste needles only: Primary Productivity Lab and Hot Room 115

Tornado Shelter Areas: Gear Room 114, Lab 121, Office 124.