

We would like to take this opportunity to welcome you to the
Department of Soil Science.



For more information about Soil Science and to put a face to the people in the Department, check out our Website:

http://www.umanitoba.ca/afs/soil_science

This **Orientation Handbook** listing is full of general guidelines and background information. It is meant to orient you to Departmental Procedures and to provide you with an up front guide as to where to direct any questions or concerns. Please feel free to contact support staff or faculty members.

Read the entire document in detail ASAP.

We hope you find your stay in the Soil Science Department a fun and rewarding, learning experience.

Edited By: Rob Ellis, May 2, 2011

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GENERAL

ELLIS BUILDING

The Ellis Building is occupied by the Department of Soil Science, Department of Food Science, Agriculture and Agri-Food Canada (AAFC) and the Provincial Soil Survey Unit. Students require permission to use facilities and equipment of the Department of Food Science, AAFC or Soil Survey. Your supervisor will coordinate permission with the appropriate director or head of these agencies.

KEYS AND BUILDING SECURITY

Each graduate student will be given a key that opens most of the labs, as well as the general office, photocopy room, etc. Summer and Visiting students will only receive keys that are deemed necessary. These keys are for your use only and are not to be used to allow entrance of any unauthorized persons. During the evenings, weekends and holidays all outside doors must be kept locked. Remember this is for your security as well as to secure the building. Be sure that the office, laboratory, and building doors are locked and that all lights and instruments in your area are turned off when you leave.

OFFICE SPACE

Office space will be assigned by the Head of the Department on a priority basis and according to the needs of the individual and the program involved.

PHOTOCOPYING

Photocopying services, supervised by the Departmental Office Assistant, will be provided by the Department, but only for work essential to a student's research. Copying of classwork and assignments is permitted at a charge of 5 cents per copy. Copying of textbooks, etc., is not permitted as it is against copyright laws to do so.

OFFICE SUPPLIES

Research notebooks, graph paper and other supplies required for your research will be provided by your advisor, however, the student is expected to pay for resource materials for their classes.

COMPUTER SERVICES

- (a) Computers for student use are available in room 368. Other computers may be available on request from the professors in charge, but we advise students to ensure that they have access to either a personal or University computer to complete their thesis. The printer located in room 368 is connected to the network. In order to use this printer you must have a Novell account. Please contact the Departmental Office Assistant to obtain an account, if you need one.
- (b) Also please report any problems you have with the computers in the Department to the Departmental Office Assistant.

RADIOS IN OFFICES, LABORATORIES AND OTHER WORK AREAS

The use of radios in offices and laboratories is permitted if the following guidelines are followed:

- (a) Radios are operated at volumes such that no noise results in hallways or adjacent laboratories or offices.
- (b) Radios should not be used in offices when other occupants are studying, writing reports, etc.

Use caution when working and wearing ear-buds from personal music devices such as iPods. **These should not be used when working with controlled Products** (ie chemicals in the Labs).

In some labs the use is not allowed at anytime and the following sign is posted at the entrance.



LOUNGES / KITCHEN AREA

A kitchen area is operated by the Graduate Students in Rm 385. This room contains a toaster, small oven and a microwave. As well, there is a fridge and freezer where personal lunches can be stored. **No human consumption food or beverages should be stored in any laboratory fridges or freezers.**

The Graduate students have a coffee fund, with the coffee pot in the Rm 386 Lounge. A second lounge is located in Rm 340.

For more details about the coffee, contact the Graduate Student Rep.

TELEPHONES

- There are 3 phones available for general local use in the Department.
 - On the 1st floor a phone is located in the hallway by Rm 277 (474-6038).
 - On the 2nd floor a phone is located in the hallway by Rm 325 (474-6048) and in the kitchen room, Rm 385 (474-6038).
- Although these phones are toll restricted, you can make toll-free calls or you can make long distance personal calls using a calling card.
- If you have long distance University business calls to make, you need to get a calling card from your supervisor. These business cards are not to be used for personal calls.
- Push 4 first to get an outside line. For campus calls, when the phone # starts with 474, all you need to dial is the last 4 digits.
- Campus Security Emergency Number: 555 or 474-9341, (non-emergency: 9312).

- Cell Phone users with MTS or Rogers can make an emergency call using “#555”.
- Phones, which have a button for connecting directly to UM Security Services, have been installed in all the Teaching Labs and Lecture Rooms. As well, four red emergency call boxes have been installed in the building’s hallways. All these emergency phones have speakers so that Security Services can use them as a public address (PA) system.



LABORATORY SPACE

Laboratory space (and Teaching Lab access) will be assigned by the Head of the Department, and/or your supervisor on a priority basis, according to needs of an individual and the program involved. Do not enter or work in areas or laboratories unless you have obtained permission from the person in charge. **Also do not remove anything from the Laboratories (including glassware, chemicals, balances, etc.) without permission.**

Movement of any balances between labs and booking time in a Teaching Lab needs to be co-coordinated by Rob Ellis.

- (a) Please obtain permission from the faculty member or technician in charge of equipment before you use it. This will allow the technical staff to provide you with assistance and training.
- (b) **CLEAN UP:** Clean up all laboratory space and equipment after use. Make sure equipment is maintained and ready for another user. Report any equipment malfunction to the person in charge of the lab.
- (c) Growth Chambers and the Growth Room: Requests for plant growth space should be submitted to Tim Stem. Procedures to be followed for maintenance of growth chambers and growth rooms will be provided after space is allocated. Be sure to fill in the “Record of Operation” form for growth chamber use.



Junior Soils Laboratory, Rm 318

INTERNAL DEPARTMENTAL CHARGES

There are a number of procedures and analyses that are performed using general use Departmental Equipment. These do not have on-going funding, so money is collected from the users to provide funds for replacement, parts and servicing. Use of equipment is recorded in log books, along with the chargeable account number.

Current Chargeable Procedures are:

1) Autoanalyzer Analysis, Rm 300

Initial training and troubleshooting is provided. Students perform the actual work and there is a charge of \$1.00 per colorimeter used.

2) Deionized Water, Rm 300

Water usage is recorded, consumable charges of \$0.50/L are passed on to the appropriate budgets.

3) Acid Digestions Rm 302

The charge is \$20 per digestion, for the Departmental Westco Block Digestor.

4) Soil Grinder, Soils Shed

This charge is applicable to all University personnel using the rolling mill grinder and the pulverizing grinder. There is no charge for Provincial Staff as they are paying for the supplies for the rolling mill.

The charge is \$0.20 / L of soil to be ground. The 1 L target can be estimated by assuming 1L of soil per rolling cage and by using the 1L collection bucket on the pulverizing grinder.

5)Tractor Use (including the Giddings Corer)

Rates are \$50/day use for a tractor by Department of Soil Science staff and students. **Please send your planned dates to use tractors to Tim Stem, so we can sort out potential conflicts.**



LAB COAT CLEANING

Soil Science lab coats will be picked up by Perth's Monday mornings and returned the following Monday.

- Take the lab coat to Rm 383, make sure your name is clearly written with permanent marker and place it in the supplied laundry bag or box.
- On the sheet provided, record your name, your Supervisors name and the number of lab coats. (your Supervisor will subsequently be charged for the cleaning)
- Pick up your coat the following week.

WHO DO I ASK ??

Following is a list of the different laboratories as well as the professors and support staff who can assist you with any questions you might have about their particular area of expertise:

Soil Science Department Head	Brian Amiro
Radioisotope Permitted Laboratories	Annemieke Farenhorst, Rob Ellis
Soil Science Shed, grinding rooms, sample drying and growth chambers, vehicle use, pesticide storage and use	Tim Stem
Gamma Spectrometer	David Lobb
Pesticide Research Laboratories	Annemieke Farenhorst
Agrometeorology Labs	Paul Bullock
Soil Chemistry Laboratories	Don Flaten
Soil Physics Laboratories	Wole Akinremi
Soil Mineralogy Laboratories	Tee Boon Goh
Colormetric Auto Analyzer	Rob Ellis
Organic Analysis, IC, GC, HPLC Analysis	Bo Pan
Soil Ecology Laboratories	Mario Tenuta
Hazardous Waste Disposal, Department Safety Officer, Quality Control Procedures	Rob Ellis

LABORATORY SAFETY**LABORATORY TECHNIQUES**

All laboratory work and notes should be recorded in a notebook or on designated worksheets. Your supervisor will provide you with a Lab book or use a personal note book.

Entries should be recorded in ink and incorrect information should be cleanly crossed out without erasing or using whiteout.

There is a current program in the Department to document Standing Operating Procedures (SOP). Many are already in place while others are being worked on. These SOPs give instructions on how reference procedures are actually physically done in our facilities.

The level of quality control procedures used will depend on the particular research program. There is always a balance that has to be defined between the amount of quality control and the associated cost / time.

For in-house analyses, the analysts will develop and document their own QC protocols. If you are sending samples to an external laboratory, you should include blind samples. These would be either blank solutions or duplicate samples that are not identified to the testing laboratory. The returned data will give you an independent assessment of their actual quality control.

Most analytical measurements are either a physical property or electrical signal (milli volt measurement) that is calibrated to give a reportable signal. If equipment is not calibrated and monitored, it could just be producing unrelated numbers. Simple examples are the expansion of mercury in a thermometer, the electrical signal of a pH electrode and the numbers displayed on an electronic balance.

Where possible, instrument calibration should be done with traceable and certified reference materials (CRMs). Quality control solutions can be prepared in-house to monitor calibration solutions.

The balances in the department are expensive and require delicate care for them to continue to be usable. Never blow on a balance to remove dust, always use the balance brush.

A check weight has been placed at most weighing stations. The balance check should be performed with the first use of the day and after every balance shut down. Follow instructions on the check weight container and avoid touching the weights.

If you have any problems with balances or if balances require relocation contact Rob Ellis.

Louis Pasteur...

“ Chance favours the trained mind.”

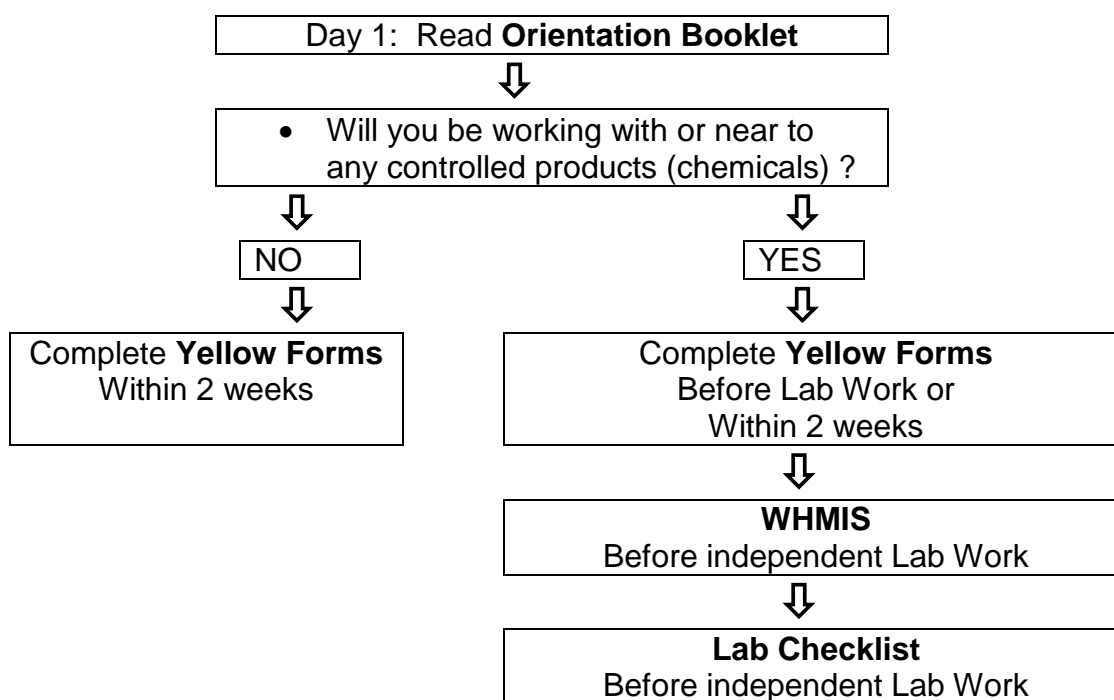
Rob Ellis...

“ Safety favours the prepared mind.”

UNIVERSITY OF MANITOBA SAFETY PROGRAMS

Staff and Students are to follow Departmental and University safety policies governing the use of chemicals and general good laboratory procedures (GLPs).

This is the TRAINING SEQUENCE we follow in the Soil Science Department:



Orientation Booklet

- You will be provided with a hardcopy of the booklet, read and pay special attention to all safety related topics. It is also available on the Soil Science Website
http://www.umanitoba.ca/afs/soil_science/index.html

Yellow Forms

- View the "Health and Safety General Orientation Presentation" that is located on-line with the U of M Safety Office.
http://www.umanitoba.ca/admin/human_resources/ehso/media/GeneralStaffOrientationWEB20100614.pdf
- When you have completed the 3 presentation quizzes on the yellow forms, you and your supervisor are to sign the acknowledgement page.

WHMIS

- Workplace Hazardous Materials Information System** and Departmental Safety Course.
- Contact Rob Ellis to schedule this course.

Laboratory Safety Checklist for New Lab Personnel.

- You and your supervisor will review and discuss the associated risks for your assigned duties and work areas, plus the personal protection equipment that is available.
- When the checklist has been completed and signed, return it to Rob Ellis

Additional specific Lab Safety Training will be provided or directed to you, by your Supervisor.

Volunteers and Minors in Laboratories

There is a University of Manitoba policy and procedure regarding the use of volunteers and the access of minors to Laboratories or other hazardous areas.

The policy addresses the requirement that volunteers need to have safe and rewarding experiences on campus. It also includes a parental consent/waiver form for minors.

For more information see:

www.umanitoba.ca/admin/governance/governing_documents/staff/810.htm

www.umanitoba.ca/admin/governance/governing_documents/staff/812.htm

For additional information on Safety Items check the UM Environmental Health and Safety Office (EHSO) website.

http://www.umanitoba.ca/admin/human_resources/ehso/

University of Manitoba - Health and Safety Policy

www.umanitoba.ca/admin/governance/governing_documents/staff/551.htm

University of Manitoba - Laboratory Safety Training Standards

www.umanitoba.ca/admin/governance/governing_documents/operatioins/800.htm

You will be provided with safety glasses and any other required safety equipment by your Supervisor, keep them clean and readily available.

GENERAL SAFETY

You will be provided with safety glasses and any other required safety equipment by your Supervisor, keep them clean and readily available.

- (a) Before entering any Lab, check the Workplace Hazard Information Placard (WHIP sign) on the entrance door. This sign will identify the entrance requirements and Personnel Protective Equipment required. The PPE icons identified by a red border are mandatory before you enter, while the yellow bordered PPE icons identify other equipment, that is available in the Lab.

Ellis Building: 302

ENTRANCE REQUIREMENTS
Authorized Personnel Only
No FOOD or DRINK

PERSONAL PROTECTIVE EQUIPMENT (PPE)

RED BORDER = REQUIRED YELLOW BORDER = COMMONLY USED
 R = REQUIRED WHEN WORKING WITH RADIOACTIVE CHEMICALS

Disposable Gloves	Lab Coat	Protective Apron	Rubber Gloves	Safety Glasses	Full Shoe

REFER TO CONTROLLED PRODUCT MSDS FOR SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

SPECIFIC HAZARDS

EMERGENCY CONTACTS		
NAME	TELEPHONE	OFFICE NUMBER
Dr. Brian Amiro	(204)474-9155	364 Ellis Building
Ellis, Rob	(204) 474-8662	303 Ellis Building

1 - After normal working hours, call security services at "555" or "#555" (Rogers Wireless or MTS cell phone) or dial 474-9341. Hard copy inventories available to EMERGENCY RESPONDERS in Room 216 Pilot Plant Ellis Building. **MSDS are located in Inside First Aid Kits in 304**

For information on lab signage, contact Environmental Health and Safety Office at 474-6633 Prepared by: R. Ellis

Workplace Hazardous Information Placard (WHIP)

- (b) **No food or drink (including water bottles) are allowed to be in any of the labs.** So enjoy your breaks in your office or a lunch room and return refreshed to the lab, when you are finished.



In-Lab Signage

- (c) **Lab footwear must have a stable sole and a closed heel and toe.** This excludes any sandals, tongs or slip-ons from being worn in the lab or when doing laboratory work anywhere else in the building, such as using the cylinder hoist.
- (d) There are some lockers available in the washrooms , 2nd floor , South Wing, for personnel that have not been assigned an office. This is where personal belongings such as jackets and backpacks should be stored, **rather than on Lab counters.**
- (e) Lab coats and other protective wear are worn to prevent debris and contamination from reaching your personal clothing. Therefore it **should not be worn** in common areas such as the Lunch lounge or conference rooms.
- (f) Gloves are used in many of the labs to protect you from contamination. Therefore gloved hands should not be used for handling items that other people will be using without gloves. This would include **door handles**, phones and keyboards.
- (g) For your own protection, laboratory coats and face shields should always be used when handling hazardous chemicals such as when dispensing strong acids and bases, and when digesting soil or plant material. Always use fume hoods to dispense chemicals with toxic or corrosive fumes.

- (h) In accordance with Workplace Hazardous Materials Information System (WHMIS) guidelines, there is a hard copy of the Material Safety Data Sheet for all control products in the laboratories. Everyone should read the appropriate sheets and be aware of the precautions before they begin working with a chemical.
- (i) Always obtain proper instruction in use of all chemicals and equipment from your supervisor or technician in charge of the laboratory.
- (j) Chemical solutions or extracts should not be transported through the building in unprotected glass containers. Use a plastic container such as a safety bucket or tub that will contain the volume of the solution, if the glass container should break. A stable cart would be appropriate as long as the sides are fluid tight.
- (k) Use the cylinder carts provided for handling of tanks of compressed gases. Always secure container to wall or laboratory bench with appropriate straps or chains.
- (l) There is a common storage area that has been designated for bulk flammable chemicals, in the Food Science Pilot Plant. Temporary storage fire cabinets are also provided in the various laboratories.
- (m) If you have any concerns or doubts about the safety of any procedures or experiments that you are performing, stop work immediately and seek advice from your supervisor or appropriate support staff.

WORKING ALONE POLICY

The following activities are discouraged from being conducted outside of normal working hours. If it is necessary to conduct these activities in evenings or weekends, a buddy system must be established with clear lines of communication. The risk will be assessed for each of these and a formal procedure will be established by the Supervisor. Documentation on the procedure must follow the University forms found at: http://umanitoba.ca/admin/goverance/governing_documents/staff/839.htm

Activities at risk:

- a) motorized equipment in shed and laboratories, including grinders, saws and threshing machines.
- b) Field activities of any type.
- c) Chemistry activities with a possibility of burns or other trauma.

CHEMICAL ORDERING PROCEDURE

All order forms that contain a chemical must be delivered to Rob Ellis before going to the General Office for purchasing. This ordering procedure has 3 purposes:

- a) Chemicals will be scrutinized to ensure that grades, specifications and quantities of chemicals are correct.
- b) Requested chemicals will be compared against our list of surplus chemicals,
- c) Chemicals will start the process of being entered into our Departments Chemical Inventory List, as well as the list of Material Safety Data Sheets.

The order forms need to be complete, including authorizing signature, budget acct #, quantity, size, product # and actual name of the chemical.

When the order is delivered to our building, it will be held in our Chemical Storage, Handling and Waste Room (Rm 383) until processing of the new chemical has been completed.

A Soil Science inventory sticker will be attached to the container and the product information will be logged into the UM Chemical Inventory Data Base. Every chemical container received and those currently on hand will get their own unique inventory number.

Do not take the chemical away until it has been logged in.

When the chemical has all been used, the container must be washed and returned to Rm 383. The container will subsequently be disposed after it has been removed from the inventory list. If you wish to get the container back, stick a note on it when it is dropped off.

CHEMICALS AND GLASSWARE

Chemicals come in a wide range of analytical grades and specifications. Determine that you are using the appropriate grade for your procedure.

The SOP for preparing a proper workplace label is posted in all the labs.

A WHMIS workplace label must be attached to all containers of control products:

- prepared and used in the University workplaces.
- decanted or transferred from the original supplier container.
- on which the original supplier label has been removed or is unreadable

Some basic chemical handling skills are as follows:

- a) Follow all appropriate safety precaution
- b) Record data in a preparation log book, include preparation date, manufacturer name, product #, lot #, chemical name, amount and final volume.
- c) Chemicals that are removed from a bottle should never be returned.
- d) Clean any residue from the balance or work area. For Radioisotope work this would include wipe tests.

Chemicals and glassware are stored in various laboratories and storage rooms.

Glassware must be washed free of all contaminants before returning to storage shelves.

Waste stream charts are posted in all the laboratories. There are special boxes labeled for broken glass, orange 3L tubs for non-biological sharps and rigid plastic containers for used pipette tips. They are located in various labs throughout the building. All these sharps containers are dropped off at Rm 383, for disposal.



Glass



Non-Biological Sharps



Pipette Tips

Notify the technician in charge of the laboratory of any breakage. As well, pass on any other information concerning equipment contamination or shortage of chemicals and/or glassware.

RADIOISOTOPE LABORATORIES

- a) All Laboratories that contain radioisotopes or any labeled material have a radiation sticker on the door. **These labs doors must be shut and locked whenever the labs are not occupied.**
- b) Laboratories in the Ellis Building that have been licensed for the handling and storage of radioisotopes included Rooms: 310, 316, 373, 374, 379, 383, and 387. The growth chamber room in the Soil Science Equipment Shed has also been licensed to facilitate plant growth studies.
- c) Licenses are issued by the Canadian Nuclear Safety Commission (CNSC) and CNSC officers periodically inspect our laboratories to ensure compliance with licensing conditions. All regulations regarding the handling and storage of radioisotopes must be adhered to. Furthermore, the Universities guidelines for documentation of radioisotope use must be met.
- d) Do not use radioisotopes unless you have been instructed in their safe use and storage. These procedures are outlined in the University of Manitoba's Radiation Safety Manual and are available from your supervisor. The University of Manitoba offers a short course on radioisotope safety and it is mandatory that you attend this course, prior to beginning your radioisotope work.
- e) All Radioisotope labeled material must be disposed through the University Safety Office. There is a schedule for potential pick-ups at the Fort Garry campus posted in the main Radioisotope Lab, Rm 316.
- f) For further information regarding the safe handling and storage of radioisotopes please contact your supervisor, Rob Ellis or Leona Page (Radiation Safety Coordinator, University of Manitoba) at 789-3613.

HAZARDOUS WASTE DISPOSAL

Laboratory waste should be disposed based on the information listed in University of Manitoba flowchart for Disposal of Laboratory Waste. This is posted in all Laboratories. For more information on waste disposal procedures refer to the University of Manitoba Safety Office website.

All hazardous waste has to be stored in containers that are appropriate for that particular waste. When the container is full, it should be taken to Rm 383 for subsequent disposal through the Safety Office.

All waste needs to be clearly identified and labeled. Discarding unknown waste through the Safety Office is very expensive because extra testing is involved. These costs are charged back directly to the Soil Science Department.

Rm 383 is also the area where orphaned or abandoned chemicals have been stored. Be aware of what chemicals are available before ordering new chemicals.

BUILDING EMERGENCIES

FIRE EMERGENCIES



Fire Wardens have been organized and trained for the Ellis Bldg.

We have put into place 3 initial check-in points, during a bldg evacuation, for all personnel in the Building.

Initial Check-in Points:

- **Soil Science Dept** – East side of North Wing, between the Bldg and the Soils Shed
- **Food Science Dept** – north side of South Wing, between exit doors and picnic tables
- **Prov. and Cdn. Soil Survey-** south side of South Wing, by Dr J. Ellis Plaque.

If you notice someone showing up at the wrong spot, please direct them to the appropriate location.

WHAT TO DO, IF YOU DISCOVER OR SUSPECT A FIRE

- a) The fire alarm should be activated by pulling the alarm pull station, before any attempt to fight the fire begins.
- b) Alarm pull stations are located by all the stairwells and exits to the building. When activated the alarm sounds locally and is monitored by Physical Plant and Security Services, who automatically called the Fire Department.
- c) The Emergency Exit Plans for the individual zones of the building are posted in the hallways. These plans detail the location of pull stations, fire extinguishers, fire hoses and multiple exit routes. Additional information is posted at all the alarm pull stations.
- d) Additionally, in the case of an actual fire or building evacuation emergency (from a safe location) contact UM Security Services, directly at 555. They will coordinate subsequent calls for emergency assistance, will respond to the scene in person and direct outside Emergency Services to your specific location on campus.

UM Security Services:

Dial "555" (if using a university phone),
"#555" (if using a cellular phone on MTS or Roger's Wireless),
474-9341 or use a Red Emergency Call Box.

These numbers will put you in touch with the University of Manitoba Security Office.

- e) The non-emergency number for UM Security Services is 474-9312.

WHAT TO DO, WHEN THE ALARM SOUNDS

- a) Cease all activities. Turn off heat producing devices. Leave overhead lights on.
- b) If safe to do so, close all doors and windows in the immediate area.
- c) Evacuate the building, using the nearest safe exit.
- d) Follow all additional directions provided to you by the Building Fire Wardens.
- e) Once outside, proceed around the building to your assigned meeting spot.
- f) Clip boards are located inside the building, near these meeting spots, which have a list of personnel. These clip boards can be picked up by anyone as they exit. Once outside, make sure your name has been checked off, before leaving the area.
- g) If there is a foul weather problem or some other reason for us to take shelter, the secondary meeting spot for all Bldg personnel will be the Soil Science Shed. There will be back up copies of the check-in sheets, located in the Shed. If there is an evacuation in our building, then all work should be stopped in the Soils Shed and areas cleared to make room for the use of this secondary location.



Soil Science Shed (Foul Weather Meeting Spot)

- h) Remain outside the building until the most senior member of the Fire Department, the University Fire Marshall or Physical Plant Staff give the "All Clear"

FIRE WARDEN RESPONSIBILITIES

Fire wardens are responsible for sweeping their assign areas, if safe to do so, and reporting to the Chief Fire Warden at the annunciator panel. Fire wardens then monitor the entrances to prevent anyone from re-entering the Bldg, before the alarm has been silenced and the “All Clear” given. The Chief Fire Warden then will communicate with the Fire Dept and the Power Engineer as to any specific fire information or where personnel may not have evacuated the Bldg.



Main Fire Warden Station

Some or all Fire Wardens may be away from the building during any Fire Alarm. Senior personnel are expected to assist the Fire Wardens and act according to the Building Fire Plan.

For more information on your responsibilities during a fire/evacuation alarm, please refer to the EHSO web page at

www.umanitoba.ca/admin/human_resources/ehso/firelife_safety/index.html

ELLIS BLDG FIRE WARDENS as of May 2011

Chief Fire Warden	Rob Ellis Rm 303	474-8662
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Chief Fire Warden (Alternate)	Pat Kenyon Rm 216A	480-1075
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Fire Wardens:

North Wing 200 Level	Michael Stringer Rm 203	474-8168
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North Wing 200 Level	Tim Stem Rm 270	474-8014
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South Wing 200 Level And Pilot Plant (rm 216)	Pat Kenyon Rm 216A	480-1075
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South Wing 200 Level	Sue Arntfield Rm 201	474-9866
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North Wing 300 Level	Lynda Closson Rm 362	474-8153
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North Wing 300 Level	Bo Pan Rm 372	474-7884
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South Wing 300 Level	Mervin Bilous Rm 312	474-6048
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South Wing 300 Level	Glenn Lelyk Rm 328	474-6107
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Spares:	Greg Adrian	474-6114	Rm 341
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FIRST AID TREATMENT

- (a) First aid kits are located in a number of labs, in the Soils Shed and in all the field vehicles. There is signage on the doors of the labs that contain first aid kits. The field vehicles also contain a blanket, a flashlight with spare batteries and a tow rope.



- (b) The kits are checked regularly, but if there is a problem with a kit or the contents contact Rob Ellis.
- (c) The following list of the Departmental Certified First Aiders is posted at each first aid station.

<u>Department of Soil Science</u>		
Certified First Aiders (Oct 28/09 – Oct 28/12)		
Paul Bullock	Rm. 313	Ph# 8666
Rob Ellis	Rm. 303	Ph# 8662
Bo Pan	Rm.372	Ph# 7884
Brad Sparling	Rm. 310	Ph# 223-6930
Tim Stem	Rm. 270 Shed	Ph# 8014 Ph# 9197
For an Intercom Page		Ph# 8153

- (d) In the event of any work-related injury or accident, after treatment, report as soon as practical to your supervisor.
- (e) All injuries should be documented on the green Workers Compensation Board cards by the employee. The original form is turned in to your Supervisor (followed by storage in your personnel file), a copy is made for the employee and a copy is faxed to EHSO (Fax # 474-7629). These green notification forms are available on the bulletin board, outside of the main office Rm 362. For loss of time or if medical assistance was required then Worker's Compensation Employee and Employer forms should be completed. These forms are available at the EHSO Web site.

www.umanitoba.ca/admin/human_resources/ehso/occ_health_comp/aiwcb.html

- (f) Employees may also choose to phone in the claim to WCB at 954-4100.

FIELD WORK

USER RESPONSIBILITIES OF FIELD EQUIPMENT

- (a) In the Soils Shed there is a sign up calendar located on the phone room door for booking field equipment. Please do not use equipment without authorization and proper instruction about its use. See Tim Stem regarding operating equipment.
- (b) Operate equipment at moderate speeds and loads.
- (c) Report any breakages or problems to Tim Stem.
- (d) Do not attempt to repair equipment unless qualified to do so such as repairs of a minor nature.
- (e) Clean equipment after use. (Field sprayers used for pesticides must be thoroughly cleaned after use with dilute aqueous ammonia and water).**
- (f) When you have been assigned a motorized vehicle, it becomes your responsibility to check oil levels, coolant levels, etc., daily.
- (g) Check brakes, brake lights, running lights, and tires on trailers and other equipment, every time it is hooked to a vehicle
- (h) Lubricate and maintain all equipment as outlined by field technicians or service manual.
- (i) Students should report the need for provision of field supplies such as seed, pesticides and fertilizers, as well as laboratory chemicals and supplies to their supervisor.

VEHICLE USE

- (a) The Department owns and operates a number of vehicles, which are allocated on a priority basis. Some vehicles have been assigned to certain faculty or staff members for use on specific projects, others are for casual bookings. Calendars for vehicle bookings are posted in the hallway by Rm 362. Do not use vehicles unless you have received permission from the faculty member to whom the vehicle has been assigned or from Tim Stem.
- (b) The vehicle keys are stored in a security safe, in the main office, Rm 362.
- (c) Always complete the log book provided with each vehicle. Odometer readings prior to and after each trip **must** be recorded, in ink. All purchases for gasoline, oil changes, etc., must be recorded and the log entries must be signed. Indicate the project budget number to which mileage should be assigned.
- (d) Tune-ups and major repairs are provided by the Department, but only after permission is given by Tim Stem. Day to day maintenance (oil changes, car washes, etc.) is the responsibility of the user of the vehicle.
- (e) Check oil and coolant levels, tires for inflation prior to use or daily.
- (f) No personal use of vehicles is permitted.
- (g) Contravention of any traffic law is the sole responsibility of the user.
- (h) Use only the credit cards provided for each vehicle. Do not transfer credit cards among vehicles.
- (i) In case of an accident follow normal Autopac guidelines:
- (j) Obtain license numbers of all vehicles involved.
 - (ii) Obtain names and address of all drivers and witnesses.
 - (iii) Record place and time of accident.
 - (iv) Accidents involving bodily injury, or \$500.00 or more damage, must be reported to the police immediately.
 - (v) The accident should also be reported to the Department Head, Autopac and the Campus Police.
- (k) All drivers must have a valid operator's permit.
- (l) If a vehicle breaks down within the city limits, you can make arrangements to have it towed to Dynamic Auto at 967 St Mary's Rd (257-0244). You can contact Crane towing at 489-3727 or Dr Hook Towing at 956-4665.
- (m) Your Supervisor is responsible for arranging rural roadside emergency service contacts for research sites. This info can be included on the Off-Campus Research Location Form.

FIELD PLOTS AND FARM COOPERATORS

- (a) Field plots are located on farmer owned land. Care must be taken to ensure the owner's continued cooperation with the Department.
- (b) Please do not drive across farm fields, particularly when cropped, without prior permission of the owner of the land and your supervisor.
- (c) Do not infest farm fields with weeds. Adequate weed control must be provided or the plot must be tilled and worked-down prior to formation of weed seeds.



FIELD SITE REGISTRATION FORM

The following form is completed / updated at the beginning of each field season. A copy of the form is stored in the Main Office Rm 362 Ellis.

The record of the legal locations and road directions on this form provides a means of directing emergency help to a remote site.

**University of Manitoba
Department of Soil Science****OFF-CAMPUS REASEACH LOCATION**

DATE: _____

SUPERVISOR: _____

COOPERATOR: _____

ADDRESS / PH#: _____

LEGAL DESCRIPTION: _____

RESEARCH SITE NAME: _____

PERSONNEL REGULARLY ATTENDING SITE _____

DIRECTIONS TO SITE LOCATIONS

(LOCAL) EMERGENCY PHONE NUMBERS:

POLICE: _____

AMBULANCE: _____

FIRE: _____

PESTICIDE HANDLING AND STORAGE (Contact Tim Stem for details)

Before working with any pesticides that require the use of a respirator, all staff and students must complete the 2 step respirator fit testing process. First you must submit a confidential medical surveillance form to be assessed by the Occupational Health Nurse at EHSO.

Once medically cleared, you will be fit tested using a quantitative method by a Technician at EHSO, using North half mask respirators.

For details on fit testing contact Rob Ellis or view the information at EHSO (http://umanitoba.ca/admin/human_resources/ehso/emanagement/rpd.htm)

- (a) Use appropriate clean apparel when handling pesticides. This may include:
- rubber gloves
 - Disposable Tyvex Suit
 - rubber boots
 - respirator in proper working condition
 - goggles
- Do not store any Personal Protective Equipment inside the Pesticide Storage Room.** This equipment will be provided to each field research team by their supervisor. After using pesticides, thoroughly wash all clothing and parts of the body that may have been exposed.
- (b) Do not remove pesticides from storage area without permission of your supervisor.
- (c) Read all labels on pesticide containers prior to use and obtain instructions for use from field technicians and/or your supervisor.
- (d) For your own safety please ensure that you do not transport pesticides inside the passenger compartment of any vehicle.
- (e) In case of pesticide spills, or other accidents with pesticides, contact Dr. Farenhorst or Tim Stem. If health of person(s) is endangered, contact nearest hospital or medical office immediately.
- (f) Pesticides and Laundry. To ensure your safety and the removal of all or nearly all the pesticide from clothing that has been contaminated by a spill, the following steps should be followed:
- Keep the clothes, used during pesticide application, separate from the family wash. Use plastic bags to ensure this separation.
 - Use a "pre-spray" laundry aid (Spray and Wash, Stain Away, etc.) before starting the wash with detergent.
 - Set the washing machine temperature to hot.
 - Use the full amount of detergent recommended on the box.
 - Wash the clothing two or three times before reusing them.
 - Dry clothing outside, not in dryer.
 - When selecting clothing to wear while applying pesticides, it is best to avoid "perma-press" type fabrics, because these are harder to launder to a pesticide-free condition.

HANDLING OF SOIL AND PLANT SAMPLES

- (a) Soil samples could be stored unprocessed and just refrigerated or frozen, dried only or dried and ground. Confirm your sampling protocol with your supervisor.
- (b) Small soil samples: Use plastic bags for field soil samples. After drying and grinding they can be stored in small paper containers that are provided by your supervisor. Grinding facilities are located in the Soil Science shed. Please do not use drying room or grinding room for storage.
- (c) Large bulk soil samples for growth studies: Use large woven plastic bags for obtaining soils for pot studies. Please do not use cloth bags. Dry soil samples in the drying room and sieve to desired size using soil sieving table located in the Soil Science shed. Return soil to large plastic bags and store in Soil Science shed (equipment storage area). **DO NOT** store or prepare soil in the growth chamber room.
- (d) Plant samples: Please use cloth bags for plant samples and dry in drying oven or drying room in Soil Science shed. After grinding place plant samples in plastic bags. **DO NOT** store or prepare plant samples in the growth chamber room.
- (e) Arrange for use of drying room, drying oven, grinding facilities, etc., with Tim Stem.
- (f) Label all soil and plant samples with date, name and location.
- (g) Please clean up after yourself. There are many people that use these facilities. If everyone cleans up after themselves, things will run smoothly.
- (h) All cloth bags and large plastic bags should be cleaned and returned to their proper storage area.

OFFICE PROCEDURES

ADMINISTRATIVE PAPERWORK

It is mandatory that all financial transactions be processed through the Administrative Office (this is an Internal Audit policy). Forms should be given to Terri or Lynda, who will check them. Please allow 1-3 days for processing.

Copies of all forms are available from Lynda or Terri, or may be accessed through the University's web site listed below (requires Adobe Acrobat). Please do not hesitate to ask us questions. Forms may be filled out in legible printing (not handwriting) or by typing them directly on-line. If you use the on-line forms, please use the 'number link' feature. If manually completing the forms, you may obtain a number from Lynda or Terri. http://umanitoba.ca/admin/financial_services/secure/index.html

PUTTING YOU ON THE PAYROLL

There are two forms that must be filled out ASAP (2 weeks prior to your start-date would allow sufficient time to go through all the signatories and meet Payroll's "cut-off date". We know this is not always possible, though, but keep in mind then that your first payment may be delayed).

(a) The first form will be a ***Personal Information Form*** that can be found at: [C:\Documents and Settings\tramm\Local Settings\Temp\Personal Information Form.doc](#) or you may get the form from Terri Ramm in Room 366 Ellis Building. Please fill out all areas that apply to you and you will also need to give a copy of your Social Insurance Number along with this form. Once completed, please give the form to Terri or Lynda for processing

(b) Form 2 is a ***Direct Deposit Authorization*** because automatic bank deposit is mandatory (i.e. your "paycheque" is deposited directly to your bank account). [C:\Documents and Settings\tramm\Local Settings\Temp\Direct Deposit.doc](#). Please fill out this form and sign it and attach either a VOID cheque or an authorized form from your bank with your banking information. After signing & dating the form please return it to Terri or Lynda (not to Payroll). If you must change your banking information, a new form must be submitted with a voided cheque or a new form from your bank.

If you change addresses or marital status, you must fill out an *Employee Record Change Form* ASAP and return it to Terri after you've signed & date it (not to Payroll). You must also complete & submit a 'Change of Address Form' through Student Records (these are not processed through the Administrative Office, and are available on Student Records' web page).

OVERTIME & HOLIDAYS (for those paid on an hourly basis)

During seeding, harvest, and when labour requirements are high you may be requested to work overtime (you are required to keep a detailed log of overtime accumulated). This overtime. must be authorized in advance by your supervisor, However summer students will not be paid for overtime so as an alternative, you may wish to consult your supervisor about taking your overtime as "holidays" (hourly employees are not entitled to paid holidays because they are paid an additional 6% to their base salary instead

OVERTIME (for those paid on a bi-weekly basis)

This section is applicable for permanent Support Staff and Technicians. A *Report for Request and Payment of Overtime Form* must be completed. Please note if you have

multiple budget numbers, you need to do a form for each number. Your bi-weekly salary is available in the AESES Collective Agreement (you may get this from your own copy, or from the Human Resources web page) or from Terri, and is paid as 2x your regular rate. Both you & your supervisor must sign & date the form, then bring it to Terri. A valuable resource to have on hand are the calendar pages at the back of your copy of the agreement — the dates shown in bold are your payday and will aid you in completing this form (this is not available in the on-line agreement). If you choose to take your overtime as holidays, you must inform Terri immediately as she is responsible for submitting the weekly payroll.

Professors are responsible for keeping track of their own holiday time. The UMFA collective agreement specifies their holiday allotment, and also outlines several restrictions about when it can be taken & the required approvals you must obtain. It is greatly appreciated if Barb or Terri are informed of when you'll be away for any amount of time (the afternoon, the day, the week, etc)

TRAVEL POLICIES & PROCEDURES

The only two things we are allowed to process in advance for you are plane tickets and conference registration fees (other arrangements you must pay for by yourself and claim upon your return — e.g. hotel deposits).

Purchasing Plane Tickets.

If you do not have a Travel VISA please ask either Terri or Lynda to book your travel for you. You will need to tell them the dates of your travel, where you are going, the budget it will be charged to and have the approval of your supervisor. It would save a lot of time if you were able to find the flights on your own and just have Terri or Lynda book the flight for you.

For those of you that have your own Travel Visa and book your own ticket, you must immediately complete a *Travel Authorization Form (TA, for short)* http://umanitoba.ca/admin/financial_services/media/travel_authorization.pdf as shown in *Appendix 7* (these must be processed on the same day you make the reservation). Please obtain a budget number & signature from your supervisor, and bring the form to Terri or Lynda for further processing. While on your trip, **BE SURE** to keep your original/electronic ticket and boarding passes for submission with your expense claim forms.

Paying Conference Registration Fees. Fill out your registration forms and submit them to Terri or Lynda for payment by cheque or Visa. If the company does not accept Visa, we will need the forms 2 weeks prior to the “cut-off date” because Purchasing Services will have to cut a cheque. Please also provide us with a copy of the conference

particulars because not all of this information is included on the registration form (Conference Title, Dates, Location, Payment Options & Address for Payment, etc.). To save time (both our's & Purchasing's), please let us know if anyone else will also be attending — we will then process one complete form for all of you. For further information, please refer the section entitled "Purchase Orders".

TRAVEL AND BUSINESS EXPENSES CLAIM FORMS (PETTY CASH)

Expense Claim Forms. You will be reimbursed by the University for all expenses incurred during work hours provided you:

- (a) have original receipts for all expenses (meals, taxis, lodgings, etc. — best just to keep everything from your trip);
- (b) include all required information to avoid delays in processing (it will be returned otherwise)

You will receive payment, usually two to three weeks after the form has been submitted, and it will be deposited directly into your bank account.

Fieldwork-Related Travel.

Fill out a *Travel and Business Expense Claim Form* (found on the bulletin board outside Room 362) or online at: http://umanitoba.ca/admin/financial_services/media/travel_claim.pdf If more than one person will be submitting a claim for the same trip, it's best to send forms together or can at least contain a reference their "T" number(s). Provide as much other information as you can to avoid processing delays (such as whom you may have shared lodgings with, if you paid for the someone else's meal or if they paid for yours, the reference # of the Travel Claim Form they claimed related to the same travel. You & your supervisor must both sign the form, and then it must be returned to Terri or Lynda.

Conference-Related Travel. Here, also the same rule applies with respect to multiple claimants. With conference-related forms, the first entries should be airfare with TA# (attach original airline coupon, boarding pass & copy of TA form) and Conference Registration with Purchase/Visa Order # (attach copy of order & registration form) with amounts in Column 4 since paid in advance. Ask Terri for copies of TA & Registration order. If you didn't fly, indicate other method of transportation (Dept vehicle? your own? passengers & their T#'s?). Include as much other information as you can (roommate & their T#?, any meals provided by conference?, conversion rate used if traveled outside Canada, etc.).

You may claim actual meal costs or the per diem (if you stayed in hotel, per diem is \$10 breakfast, \$10 lunch, \$20 dinner, \$40.00 per day for Canadian travel. You must also take into account the times of your flights (e.g. if you departed at 11:00 a.m., you cannot claim breakfast; if you arrived at 2:00 p.m., you cannot claim dinner). If the trip was to

the US, you are allowed \$15 breakfast, \$15 lunch and \$30 dinner (\$60.00) in CDN funds (a currency converter can be found on the Travel Services web page). When adding up the form, the “reimbursable expenses” should not include column 4 since these have been paid in advance for you. Both you and your supervisor must sign & date the form, and then bring all of your documentation to Terri or Lynda.

There are also the following options you may wish to consider:

- (a) Graduate students may apply for a *Conference Travel Award* through the Faculty of Graduate Studies, but be sure to check their web page for the most current information — you must obtain the application forms directly from Graduate Studies). If your application is successful, you must include a copy of your notice with your Travel Claim Form; and list it on the form as another account number (please leave the space for the account number blank, but fill in the total of the award in the box beside it — we will obtain the account number from Graduate Studies and will forward your form there for their signature).
- (b) Professors may wish to apply for a *Travel Services Request for Accountable Advance* (for their technicians, research associates, visiting scientists, graduate students), etc.. Please note this option is only to be used in urgent circumstances. Application forms are available on the Travel Services web page, but you cannot fill them out on-line (you must print the form and complete it using legible printing). Please read the link for information pertaining to these advances because there are restrictions. Both you and your supervisor must sign & date the form, make a copy for Terri, and send the original to address at the bottom of the form. Once you receive notification of it's approval & the cheque, please provide Terri with 2 copies of these (Terri will hold these for you until your return, because they must be included with your Travel Claim Form). On your Claim Form you must include the Advance # & amount in the applicable boxes; this gets subtracted from your “Reimbursable Expense” total since you've already received it. Please note that any unused funds must be returned to Travel Services.

The Travel Services web page contains an absolute abundance of helpful information and we strongly encourage everyone to visit this page. It includes information on Travel Services Policies & Procedures (please read these especially!), Accommodations, Accountable Advances, the American Express Corporate Card (see below for explanation), approved Travel Agencies, CAUBO Hotel & Car Rental Rates and Moving Services, Travel Insurance, Per Dies, Mileage Rates, Signing Authorities, Travel Claim Processing (includes a list of local distances with the University as your starting point!), a

Currency Converter (do not use the University Currency Rate — it is often not very current), Commonly Asked Questions, etc.

Professors are strongly urged to apply for an American Express Corporate Card which you may use for all of your University-related travel expenses. The card is to be treated as your own personal credit card (i.e. you must pay the bill yourself, but keep in mind you will be getting reimbursed through your Travel Claim Form).

TRAVEL AND BUSINESS EXPENSES CLAIM FORMS (PETTY CASH)

As with Travel Claim Forms, you will be reimbursed for supplies purchased for your project provided you have all of the original receipts (make sure they are clearly marked as “paid”) on a Travel & Business Expense Claim *Form* .

http://umanitoba.ca/admin/financial_services/media/travel_claim.pdf.

- (a) If the amount is \$50.00 or under, you may bring your receipt to Terri for immediate reimbursement.
- (b) If the amount is over \$50.00, you must complete a Travel and Business Expense Claim form which must be processed through the Administrative Office. If typing the form on-line, it will automatically be calculated for you. Please complete the form, assist us by making a copy of your receipts (must be readable, reduce & double-side as much as possible), sign & date the form, have your supervisor sign & date the form, and bring all of the materials to Lynda.
 - (ii) Regardless of amount, Terri or Lynda will send form & receipts to Travel Services for processing and payment will be deposited directly into your bank account. Note that this method takes several weeks. You will receive notification of the deposit (by e-mail if you hold a university account, or by regular mail if you don't).