National Meat Inspection Service
DOCUMENTED INFORMATION

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Coverage of Implementation ■ National ☐ Regional ☐ Division/Section/Unit

Type of Documented Information :
__/__Procedure Manual ____ Quality Policy ____ Quality Objective ____ Work Instruction ____ Log book
____ Form (electronic or paper) ____ Checklist

Office (Region/ Division/ Unit/ Section):	Date of Application:
NMIS Central Meat Laboratory and RTOC Satellite Laboratories	September 5, 2022

Purpose/Reason for Creation or Revision: (Attach separate sheet if needed)

Revision of Health and Safety Manual as reviewed by Laboratory Safety Personnel

Suggested/ New Documented Information/Proposed revision: (Attach separate sheet if needed)

Current Version (Section/ Page) Proposed Revision	Proposed Revision

Process Owner*	Reviewer ED/RTD/DC	Document /Records Custodian RTOC/ Division	Document Controller (Central Office)
☑ For Endorsement to Reviewer	☑ Approved for implementation /adoption	☑ For Endorsement to QMS Document Controller	☑ For registration
CHRISTINE MAE A MUNDOC	DANICA ANGELINE P. DIMAYA	CHRISTINE MAE A MUNDOC	MARIANNE JANE V. REPASO
Signature over printed name/date	Signature over printed name/date (5 working days)	Signature over printed name/date (2 working days)	Signature over printed name/date

5 working days – the reviewer shall review the documented information upon receipt form process owner
2 working days –the records custodian shall then endorse the final documented information to the QMS DC for registration
***Reviewer refers to the Head of the process being referred to**
***Signatories shall use blue ink to sign documented information.**

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LABORATORY HEALTH AND SAFETY MANUAL

2022

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Health, Safety and Environmental Policy

The NMIS Laboratory Division is committed to providing and maintaining a safe and healthy working environment for our employees, visitors, and all people using our premises as a workplace.

To ensure a safe and healthy work environment, we will develop and maintain a health and safety management system. Specifically, the NMIS-LD is committed to:

- ✔ Safety and Health
- ✔ No Accidents and Injuries
- ✔ Environmental Protection
- ✔ Conformance with Laws and Regulations
- ✔ Education and Training
- ✔ Continual Improvement

EMERGENCY HOTLINES

NMIS Local #	
Executive Director	102-104
Deputy Executive Director	200-202
Division Chief	500
Lobby/Guard	100
LD Receiving Area	501
LD Microbiology Section	502
LD Chemistry Section	504
LD Biotechnology Section	507
Engineering	118-120
IT	217-218
MIED	109,111,115
POSMD	112-114
ARD	121-123
ADMIN	220-221
MSDCPD	203-204
PIMD	208-210
NEAREST HOSPITALS	
East Avenue Medical Center	928-0611
Veterans Memorial Medical Center	927-6426
Philippine Children's Medical Center	588-9900
National Kidney and Transplant Institute	981-0300
Lung Center of the Philippines	924-6101
New Era General Hospital	932-7387
Philippine Heart Center	925-2401
Philippine National Police	117
Bureau of Fire Protection	
Quezon City Hall	928-8363 / 924-1922
New Era	931-9894
NDRRMC	911-5061 to 65
Philippine National Red Cross-	920-3672
(Quezon City Chapter)	4332151 to 52/ 434-3751
Bomb Squad	436-0948/ 924-3101
MMDA (Office of Public Safety)	882-0851
PLDT	171/ 173
MERALCO	631-1111

BASIC FIRST AID

In case someone falls unconscious after an injury, get the attention of the security guard on-duty at local #100.

In case of:

***Chemicals**

On Skin: Gently blot or brush away excess. And should be flooded with water for 20 minutes to ensure that there is no contamination from chemicals to other areas of the body. Seek medical attention as needed.

In Eyes: If available, use an eye-wash spray, immediately wash (irrigate) the eyes with large amounts of water, occasionally lifting the lower and upper lids for 10-15 minutes. Alternatively use a cold running tap faucet. Seek medical attention as needed.

Inhaled: Find an open area to breathe fresh air. Seek medical attention.

Swallowed: Seek medical attention.

***Cuts / Wounds**

Apply direct pressure on the cut or wound with a clean cloth, tissue, or gauze until the bleeding stops. Seek medical attention. Avoid contact with blood.

***Burns**

Douse the burn with plenty of cold water. Cool the burn with cool or lukewarm running water for 20 minutes as soon as possible after the injury. Never use ice, iced water, or any creams or greasy substances like butter. Seek medical attention.

***Electricity**

Switch off power and get the attention of the security guard on-duty and/or any engineering personnel for assistance.

***Serious injuries**

Seek medical attention. Use an emergency number to call for medical help.

***Minor injuries**

First Aid Responders may be called.

FIRST AID RESPONDERS

NAME	CONTACT NO.	ROOM
Ms. Remedios F. Micu	502	Staff Room (2nd Floor)
Ms. Mary Ann R. Escoto	502	Staff Room (2nd Floor)
Ms. Danica Angeline P. Dimaya	500	Division Chief Room

FIRST AID BOXES

First Aid Boxes are available and safely kept by Ms. Danica Angeline P. Dimaya.

COPING WITH AN EMERGENCY

All building evacuation will occur when an emergency alarm sounds or upon notification by the security guard. In the event of evacuation, please remain calm. Leave by the nearest marked exit. Do not run. Alert other people to do the same.

❖ Working Hours:

- Regular Working Hours are from 7:00 AM to 6:00 PM Monday to Friday.

❖ Precautions:

- Familiarize yourself at least two routes from your workplace to an Exit
- Know the locations of emergency phones, First Aid Kits, fire extinguishers, Eye wash/Shower stations, Fire alarms and towels
- Know how to switch off electricity, water and other equipment around your workplace

❖ Evacuation:

- Evacuation drills are notified in advance
- In the event of an evacuation, assemble away from danger and clear the building. Wait for instructions by the authority, do not attempt to enter the building until the authority cleared the area and told that it is safe.

❖ Fire:

- When a small fire occurs, deal with it using a fire extinguisher but do not endanger yourself. Make sure that you have a spare fire extinguisher in case of defective fire extinguisher. Inform the security guard in the lobby immediately.

❖ Toxic Material Spillage

- Leave the affected area immediately. Close all doors upon exit. Warn people to avoid the affected area. Inform the security guard in the lobby about the incident.

❖ Aiding an injured Person

- Call for a First Aid Responder immediately or if in case more serious injury, call the motorpool for an available vehicle, or call to the nearest hospital for an ambulance. Do not attempt to move the injured person out of the building unless there is life at stake. Please stay with the injured person until assistance arrives.

❖ Flood

- Call the maintenance or engineering personnel if the leak is obvious to stop it. Inform the security guard in the lobby about the incident. Warn other people to secure papers and other equipment. Do not move any wet electrical equipment until the electricity is off from the main switch.

❖ Equipment Failure

- In case of failure of any electricity, gas, water and other equipment during working hours, look for maintenance or engineering personnel (loc.118-120). If outside the regular working hours, call the security guard (loc. 100)

PERSONNEL RESPONSIBILITIES

1. **The Division Chief, Section Heads and the Safety Officer** have ultimate responsibility for the provision of a safe working environment within the Laboratory.
2. **All the Laboratory and Office Staff Members** have the duty to cooperate with the head of or the authority in any matters relating to health and safety.
3. **All Employees, including Security Members, Janitors, and Visitors** have a duty to take care of their own Health and Safety and that of others who may be affected by their activities.

PREVENTING FIRES AND FLOODS

For each laboratory, door signage must be clearly posted outside the lab. The sign must also indicate what types of hazards to be expected in the lab.

Fire: Fires are extremely destructive aside from obvious dangers of horrific injury and even death. Remember that a fire may consume or destroy all your work and equipment.

Solvents in the Laboratories: One should store only a working minimum of flammable solvents in the laboratory. In case of fire, the excess amounts of solvents could endanger life and property. For regulation purposes, a maximum quantity in liters of flammable liquids stored in any laboratory are permitted. As much as possible, especially overnight, solvents should be stored in the ventilated safety cabinet provided for the purpose.

Leaving a Laboratory or Workshop: When leaving the workplace in the evening or during the day if to be away for long, please ensure that:

- There are no obvious problems with reactions or equipment left running (proper label is a must).
- Unnecessary electrical equipment e.g. ovens, are turned off and no naked flame or flammable gas is left on.
- Flammable solvents are properly stored in closed storage cupboards.
- Fume hoods are closed
- Lights are turned off
- Fire doors and other doors are closed.

Floods: Floods can damage equipment, paperwork and fixtures. Floods can be dangerous by causing ceiling boards to loosen up and fall or causing electrocution by wetting live electrical equipment. The greatest care must be taken to avoid floods.

Water Cooling Connections: Rubber/plastic tubings that transport water to any set-ups must be fastened securely on to the apparatus and the water taps using suitable clamps, wire, tags and screw clips. The exit tube must pass the water properly down a drain which is able to cope with the flow and be anchored to prevent splashing or ejection if the water pressure rises.

PERSONAL BEHAVIOR IN THE LABORATORY

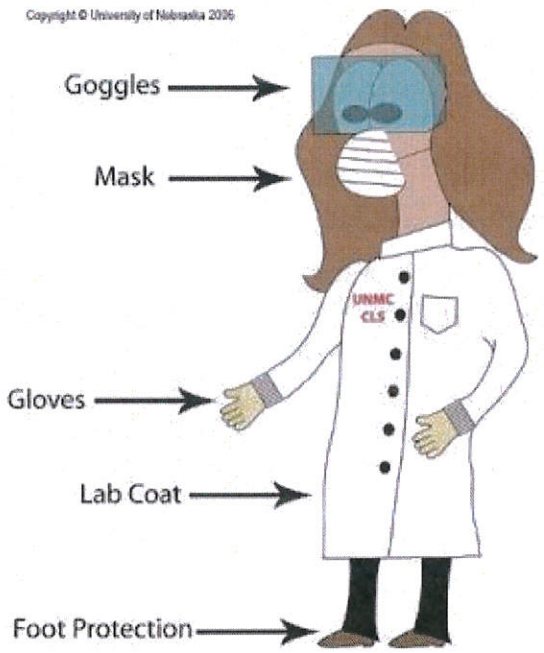
- Ask permission of the laboratory in-charge before using any of the equipment/machines/instruments in the area.
- Anyone who wants to work in the area should log in the date, time and the specific equipment / machines /instruments / glasswares / chemicals to be used in the tests/experiments.
- Always wear a laboratory coat/gown/apron while working inside the lab. Avoid wearing or bringing lab gown outside the laboratory.
- Eating and drinking are not allowed inside the laboratory.
- Smoking in any chemical laboratory and in all parts of the building is prohibited.
- Visitors, including children and pets are not allowed inside the laboratory where hazardous chemicals are stored or are in use, or hazardous activities are in progress.
- Confine long hair and loose clothing while performing experiments.
- Do not apply cosmetics when in the laboratory.
- Do not use mouth suction to pipette chemicals or to start a siphon. Use a pipette bulb or a mechanical pipetting device to provide vacuum.
- Do not distract or startle other workers.
- Wash well before leaving the laboratory.
- Keep the working area clean.
- Turn off/unplug the equipment/machines after use.
- Do not leave on-going tests/analyses unattended.
- Turn off the lights and faucets after use.
- Clean the instruments, glasswares, sink and work area after use.
- Place the instruments, glasswares, chemicals, etc. in their proper places after use.
- Report to the laboratory in-charge defective instruments, malfunction/ breakdown of equipment/machines, broken glasswares and untoward incidents.
- Observe all safety precautions in the conduct of tests/experiments and use of

laboratory equipment.

- Do not work alone.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment commonly referred to as PPE, is equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses. PPE does not reduce or eliminate the hazard, protects only the wearer, and does not protect anyone else.



https://sites.google.com/site/detlabsute/facilities/facilities/ppe

PPE includes protective gear such as proper clothing, closed footwear (depending on the analysis), eye protection, and respiratory protection. The need for PPE depends upon the type of operations and the nature and quantity of the materials in use, and must be assessed on a case by case basis. In case workers rely on PPE must understand the functioning, proper use and limitations of the PPE used.

Personal protective equipment

Protective Clothing	✔ When the possibility of chemical contamination exists, wear protective clothing that resists physical and chemical hazards over casual clothes. ✔ Lab coats are appropriate for minor chemical splashes and solid contaminations, while plastic or rubber aprons are best for protection from corrosive or irritating liquids.

Footwear	✔ Wear closed-toed shoes at all times in the laboratories where chemicals are stored or used or equipment is being operated. ✔ Use chemical-resistance overshoes or boots when handling corrosive chemicals or large quantities of solvents or water that might penetrate normal footwear. ✔ Sandals, doll shoes, flip-flops, clogs, backless shoes, cloth shoes, open-toed shoes, high heeled shoes, stiletto-heeled shoes are not allowed.
Eye Protection	✔ Wear safety glasses whenever you are performing experiments, especially those involving chemicals, pressure apparatus, or mechanical equipment. ✔ Do not wear contact lenses.
Gloves	✔ Wear protective gloves when handling hazardous materials, chemicals of unknown toxicity, corrosive materials, rough or sharp-edge objects, or very hot or very cold materials. ✔ Make sure to use the gloves appropriate for the type of work that you will be doing ✔ While wearing gloves, be careful not to handle anything aside from the materials in your procedure. Touching equipment, phones, wastebaskets, or other surfaces may cause contamination. ✔ Do not wear rubber or plastic gloves when working with a naked flame. ✔ Before removing them, wash the outside of the glove. To avoid accidental skin exposure, remove the first glove by grasping the cuff and peeling the glove off the hand so that the glove is inside out. Repeat this process with the second hand, touching the inside of the glove cuff, rather than the outside. Wash hands immediately with soap and water.
Respiratory protection	✔ Wear a face mask when handling hazardous and volatile chemicals. Check the MSDS of the chemicals used.

SAFETY TIPS IN THE LABORATORY

- Plan in advance and work unhurriedly.
- Always wear personal protective equipment such as laboratory coat/gown/apron, gloves,mask, goggles and closed toed shoes when working in the laboratory.
- Read carefully the label on the container before using the chemicals. Label the containers of the prepared reagents and store properly.
- For proper use and handling, read the Material Safety Data Sheets (MSDS) pertaining to the chemicals that will be used.
- Do not dispose of the used chemicals directly into the sink. Separate the chemicals to be reused and mix the same types of chemicals for disposal. Inform in-charge of proper disposal of chemical wastes.
- Collect and pack all the broken glassware into a secured container before disposal.
- Know the location of the fire extinguishers in the area and use them in case of fire and/or explosion.
- When concentrated acids or bases come in contact with the eyes or skin, rinse thoroughly the affected areas with water.
- Always be aware of the location of the emergency exits and safety devices when working in the laboratory.

CHEMICAL FUME HOOD

Laboratory chemical fume hood is a type of local ventilation device that is designed to limit exposure to hazardous or toxic fumes, vapours and dusts. In general, it is advisable to conduct all experiments involving chemicals in a fume hood. Fume hoods offer an extra measure of protection, especially for experiments that involve the release of undesirable or hazardous effluents.

Laboratory Chemical Fume Food

Operation	✔ Familiarize the operation of fume hood before use. ✔ Maintain the sash at or below the optimum operating height as designated by the label with an arrow. ✔ Raise large objects that must be in the hood (e.g., water bath) to allow airflow beneath and on all sides of the object. ✔ Always work back into the hood, six

	inches beyond the sash line, keeping the sash line between your body and your work.
Maintenance	✔ Keep the inner part of the hood clean and uncluttered. ✔ Keep the hood always in good condition and capable of routine use. ✔ In case detection of strong odors released from materials in the hood, check to make sure that the ventilation fan is working. ✔ In case the fume hood is malfunctioning, discontinue work and inform the lab head or supervisor. ✔ Prevent any solid objects or materials from entering the exhaust ducts to avoid clogging. ✔ Do not use the fume hood for long-term chemical storage.

CHEMICAL STORAGE

Storage of controlled, flammable and corrosives in the lab should be limited to the least possible quantity. Controlled chemicals should be stored in a cabinet with double locks. Flammable materials should be stored in properly constructed wooden or metal storage cabinets. Storage cabinets for flammable materials shall be conspicuously labelled, "Flammable - Keep Fire Away." Do not arrange chemicals in alphabetical order without consideration of their chemical compatibilities. Limit storage outside of the cabinet to materials that are in current use. Place the glass containers in the bottom shelf of storage cabinets.

SAFETY WITH CHEMICALS

It is mandatory for safety to do a health risk assessment prior to handling chemicals. Follow MSDS recommendations and heed warnings regarding the use and storage of chemicals. As a matter of safety, MINIMIZE the amount of reactants used in an experiment. SUBSTITUTE hazardous chemicals as much as possible.

Please be aware of the following:

Common Solvents	▯ Are they toxic? ▯ Are there flammability or explosion danger limits on vapor concentration in air? ▯ Use an effective fume-hood particularly in handling volatile solvents. ▯ Fine powders or substances that release dust during handling can be toxic and explosive!
Spills	▯ Use absorbent granules, sawdust or sand to mop up solvent spills. ▯ When using large amounts of acid or base or any amount of strongly smelling material, keep a neutralizing agent within reach.
Carcinogens	▯ Category 1 – known carcinogens to humans. Warning Label: Toxic ▯ Category 2 – strongly presumed carcinogen, based on long-term animal studies and other information. Risk Phrase: R45 (May cause cancer) or R49 (May cause cancer by inhalation) ▯ Category 3 – possibly carcinogenic. Warning Label: Harmful. Risk Phrase: R40 (Limited evidence of a carcinogenic effect). ▯ When working with Category 1 or 2 carcinogens, workers must be fully informed of the grave cancer risk and the procedures for proper handling and disposal. ▯ Section Head must keep a record of all user exposure to carcinogens.

	▯ Disposal: DO NOT dispose along with the waste solvents. SPECIAL ARRANGEMENTS must be made by the project leader/lab head with a chemical waste disposal company.
Cyanides (highly toxic)	▯ Cyanides MAY NOT BE USED outside regular working hours.
Other Chemicals	▯ Highly reactive substances (e.g., sodium metal, metal hydrides) – quench in a fume hood in the absence of water or solvents.
Flammable solvents	▯ *(e.g. Acetone, ethyl acetate, ethanol, hexane, etc...)* ▯ Store in Safe containers inside cabinets designed for flammables (fire resistant). ▯ NEVER heat flammables using an OPEN FLAME. ▯ When using flammables, KEEP AWAY from IGNITION SOURCES. ▯ ALWAYS use a FUME HOOD while working with flammable liquids.
Oxidizers	▯ (e.g., Peroxides, nitrates, nitrites, perchlorates, chlorates, chlorites, hypochlorites, dichlorates.) ▯ STORE AWAY from flammables, organic compounds and combustible materials ▯ STORE AWAY from processing and handling areas. ▯ STORE AWAY from other materials especially organic or reducing agents. ▯ STORE in glass or other inert containers, and use compatible secondary trays. For larger containers, provide dikes around storage areas and ramps at door openings. ▯ STORE below eye level to reduce risk of accidental dropping of containers. ▯ Some oxidizing agents (e.g. 8% or higher H2O2 in water) generate oxygen gas and water during storage ▯ need to store in vented containers.

	DO NOT STACK vented containers on top of one another. ▯ STORE away from exits. ▯ Purchases of chemicals are under regulation via PNP and NBI.
Corrosives	▯ *(e.g., Sulfuric acid, chromic acid, stannic acid, hydrofluoric acid, NH4OH)* ▯ STORE separate from bases and flammables. Many acids are also strong oxidizers ▯ Add acid to water, never the other way around. ▯ Store corrosives BELOW or AT EYE LEVEL. ▯ USE SECONDARY containers for storage to contain leaks. ▯ STORE in a WOODEN CABINET or one with corrosion-resistant coating. ▯ Store NITRIC ACID in a separate cabinet or compartment. ▯ Purchases of some chemicals are under regulation via PNP and NBI.
Other Reactives	**Water-reactives** – store and isolate away from any water source **Phosphorics** – store in a clearly marked, isolated part of the lab **Peroxide-forming** *(e.g. ethers, acetals, ketals, cyclic ethers, aldehydes, benzylic hydrogens, allylic hydrogens, vivinyl, vinylidene compounds, dienes)* – should be labelled for date received and expected shelf life. NEVER OPEN any chemical containers if peroxide formation is suspected, or if cover is stuck up. Visually inspect for crystals and unusual viscosity before opening.

SAFETY SHOWERS

Safety showers provide an effective means of treatment in the event that chemicals are spilled or splashed onto the skin or clothing.

✔ Safety showers should be in a clearly marked location. The facility should be no more than 10 seconds away from every laboratory workbench.

- ✔ Laboratory workers should be able to locate the nearest shower with their eyes closed.
- ✔ Safety showers should be able to supply a continuous stream of water to cover the entire body.
- ✔ Safety showers should be located away from electrical panels or outlets.
- ✔ If at all possible, safety showers should be installed near the appropriate drainage system.

Safety Showers

Operation and Maintenance	✔ Stand below the showerhead and pull down the ring chain or triangular rod to activate the shower. ✔ Remove contaminated clothing, including shoes and jewelry, while under an operating shower. ✔ Always maintain and test safety showers weekly and inspect every six months.

EYE WASH STATION

Eyewash stations provide an effective means of treatment when chemicals come in contact with eyes.

- ✔ The eyewash facility should be clearly marked and no more than 10 seconds away from every lab work station.
- ✔ Laboratory workers should be able to locate the nearest eye wash facility even with their eyes closed.
- ✔ An eye injury is usually accompanied by a skin injury. For this reason, eye wash stations should be located near a safety shower and/or drench hose so that the eyes and body can be washed.

Eye Wash

Operation and Maintenance	✔ Aim water or eye solutions at the base of the nose between the eyes, not

	directly into the eyeball. This increases the chance of effectively rinsing the eyes free of chemicals. Harsh streams of water may drive the particles further into the eyes. ✔ You may need to forcibly open the eyelids to attempt eye rinse. ✔ Flood your eyes and eyelids with water or eye solution for a minimum of 10 minutes. ✔ Always maintain and test eyewash weekly and inspect every six months.

SAFETY IN ELECTRICALS

On all electrical equipment you use, watch for signs of wear on the cable and insulation problems where it connects to the plug or equipment. Replace or rectify as necessary. Use the correct fuse for the equipment. Wet electrical equipment is very dangerous. Disconnect from the main switch before touching it. Beware of wet heating mantles. All portable electrical equipment (i.e. equipment that can be unplugged) must be tested regularly. New, second-hand and old equipment must be tested before being brought into use. Equipment that carries a "Not Functional" sticker must never be used.

SAFETY IN TRANSPORT AND EQUIPMENT

Observe safety when transporting samples or reagent bottles of solvents by using appropriate carriers or trolleys. Be wary of getting one's hair, clothing, wires or tubing caught in rotating equipment.

GLASSWARE SAFETY

Put broken glassware ONLY in dedicated waste bins labelled "SHARPS", which should be taped up at all sides and bottom before use. All bottles for disposal should be inspected and treated prior to disposal:

- Remove and destroy any sodium residues found in bottles, then wash the bottles with water.

- Completely empty all bottles of solvents and chemicals, wash and dry them until there is no residual odor in them.
- Put cleaned bottles without lids or stoppers into the waste bins.

OUTSIDE REGULAR WORKING HOURS

When working outside of the regular working hours, there are additional risks involved since help may not be available in the event of an accident. All section heads and supervisors should be aware of the work being undertaken by their personnel. They should also ensure that work outside the regular hours is properly regulated. Working alone is NOT allowed.

UNATTENDED EXPERIMENTS

Unattended running of experiments poses special risks in terms of fires and floods, and must be carefully controlled. Unattended running of experiments may be carried out only when absolutely necessary. Overnight heating using an oven must be informed to any of the section heads and security guards. All water lines must be securely fastened. All experiments running must have a notice on it stating "EXPERIMENT IN PROGRESS PLEASE LEAVE RUNNING" including indication of potential hazards in very understandable language. If necessary, give a FILIPINO TRANSLATION as well. In case of using fume hood or electrical equipment, it should be labelled with "DO NOT SWITCH OFF".

PREGNANT AND BREASTFEEDING WOMEN

Pregnant and breastfeeding women must inform their section head in order to avoid exposure to agents or tasks that may endanger the unborn child or infant.

REPORTING ACCIDENTS AND INCIDENTS

- ✔ Any dangerous event in the NMIS LD must be reported immediately to the Division Chief, section heads, safety officer and security guard, to avoid recurrence of said event. Dangerous incidents are unplanned events in which no one was hurt, but which had the potential to cause injury or damage to property.
- ✔ Accidents are defined as events in which someone gets hurt.
- ✔ All incidents, accidents and even near-misses must be reported to the Division Chief, Section Heads, Safety Officer and Security Guard. Please note that the aim is NOT to

apportion blame for an accident or incident, but rather to put up preventive measures for recurrence. No one should be afraid to report such events. It is mandatory in industry practice.

CHEMICAL WASTE DISPOSAL

Proper disposal of chemical waste is required under environmental regulations. Usually, such practice entails additional cost and inconvenience thus it is a good practice to design experiments such that waste generation is minimized. As much as possible, the material or substances should be recovered and recycled. Proper chemical waste disposal is required.

For details on waste disposal, please be guide with the **REVISED PROCEDURES AND STANDARDS FOR THE MANAGEMENT OF HAZARDOUS WASTES (REVISING DAO 2013-22)** (https://emb.gov.ph/wp-content/uploads/2018/06/dao-2013-22.pdf).

Waste Chemicals

As much as possible, the responsible person must make arrangements with a chemical waste disposal company for disposal of unwanted chemicals. A list of Waste Disposal Companies is readily available and can be obtained from the Environmental Management Bureau of the DENR.

All substances to be disposed should be identified and labeled by chemical name and molecular formula. For mixed waste, the character of the mixture must be accurately defined (e.g. organic amines and their salts, no compound boiling below 100 °C, some suspected carcinogens etc). Descriptions that are not acceptable are "mixture of organic liquids", "smells of nitrobenzene". IMPORTANT: known hazards associated with the water should be clearly stated on the label, including hazardous drying agents.

All the containers must be leak-proof, clearly labeled with identity or category of the contents and any known hazards. Trade names alone are not acceptable. The chemical nature must be indicated.

If packed into used boxes, *ENSURE OLD LABELS ARE ERASED OR OBLITERATED.*

Waste Solvents

Prior to disposal, make a list of the type and quantity of waste to be disposed of. Put only approved waste solvents (with limited amounts of solute at worst) in the

containers. DO NOT put reaction mixtures containing drying agents, oxidants or solutions of oxidants must never be put into the waste solvent containers. Acids and bases must be placed in separate containers, never into containers for organic solvents.

SECURITY IN THE LABORATORY

All personnel should wear their ID at all times when within the premises of the building. All visitors and guests should log in at the security guard's logbook at the lobby.

All doors and windows should be locked when no one is in the lab or office. Be alert for suspicious persons in the premises, especially outside regular working hours. Ask what he/she wants. Contact security personnel at loc. 0 if unsure about the person's intention.

Observe greater caution when working outside regular working hours. Report to the security personnel any person within the premises who does not bear an authorization pass. Suspicious movements, especially in areas immediately surrounding the building, should also be alerted to security personnel. For added security, CCTV cameras are installed in various locations.

REFERENCES

- National University of Singapore, Safety Information Center (http://www.chemistry.nus.edu.sg/PSSO/index.htm)
- Revised Procedures and Standards for the Management of Hazardous Wastes (https://denr.gov.ph/section-policies/viewrec.php?id=4691&main=1)
- Laboratory Safety Manual 2015 - Department of Chemical Engineering (www.dche.coe.upd.edu.ph/wp-content/.../05/04-UPD-ChE-Laboratory-Safety-Manual.pdf)
- Occupational Safety and Health Standards (http://www.oshc.dole.gov.ph/images/OSH-Standards-2017.pdf)