

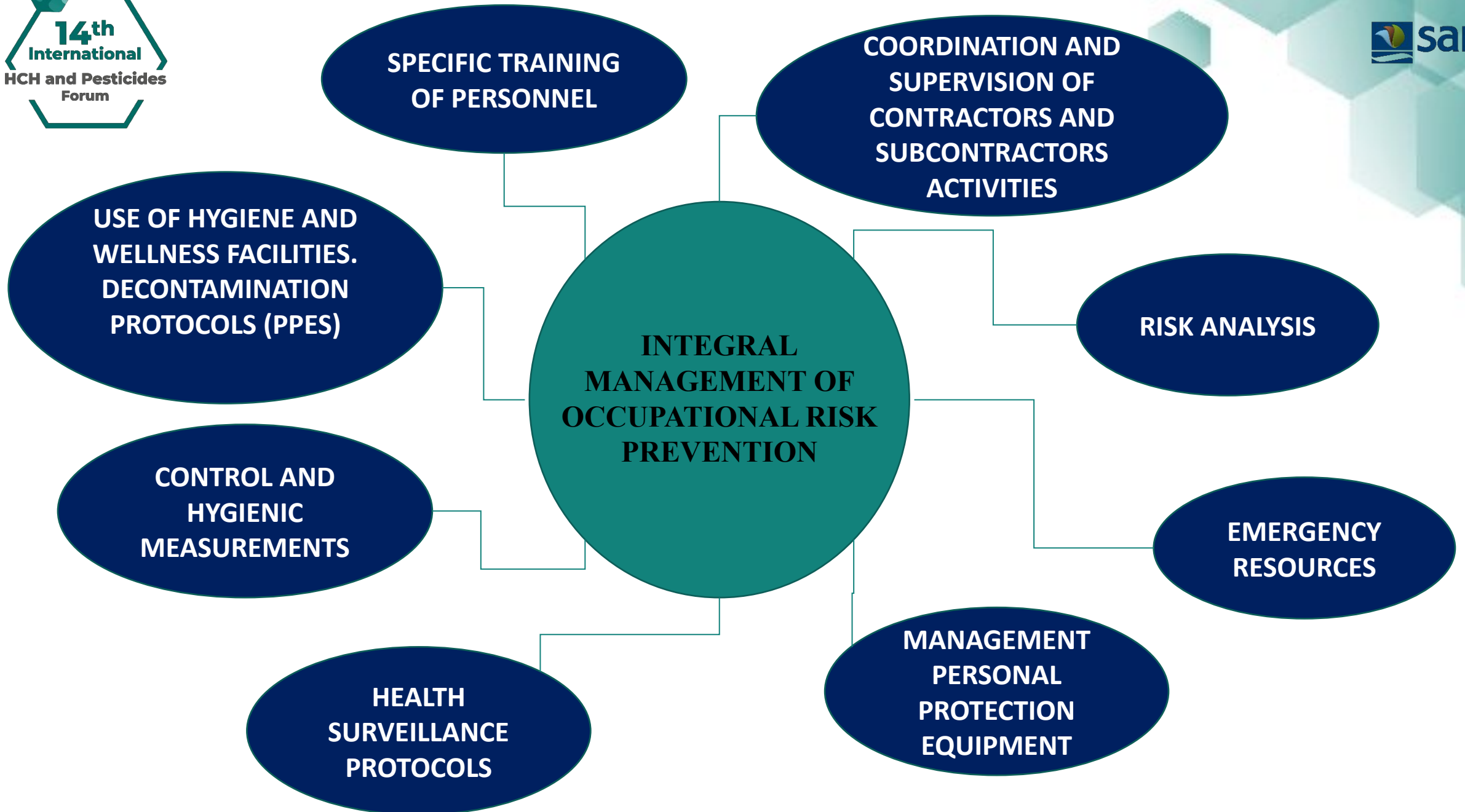


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Senior Technician for Work Risk Prevention



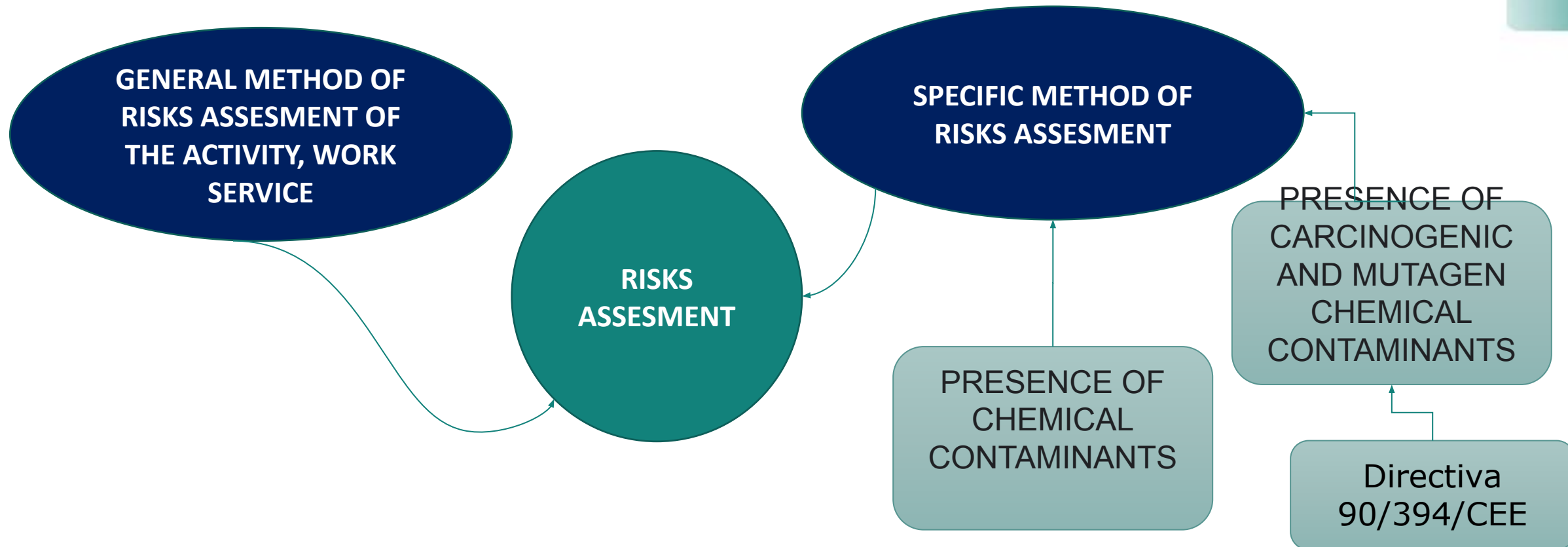
**INTEGRAL MANAGEMENT OF OCCUPATIONAL RISK PREVENTION IN THE EXPLOITATION,
EXECUTION OF WORKS AND SPECIAL ACTIONS, INVESTIGATION AND REMEDIATION OF SOILS
AND/OR SITES CONTAMINATED BY HCH.**



RISK ANALYSIS

Essential risk prevention processes that must be implemented in the Safety Plan is the

RISKS ASSESMENT



SPECIFIC METHOD OF RISKS ASSESMENT

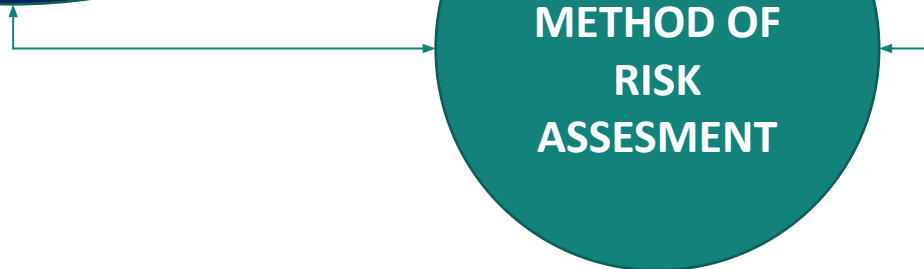
System of indications of risk levels, which includes risk assessment, prevention measures for areas established with risks due to contamination, activities and / or operations and work protocols safe to be performed in a site with HCH contamination.

SPECIFIC METHOD OF RISKS ASSESMENT

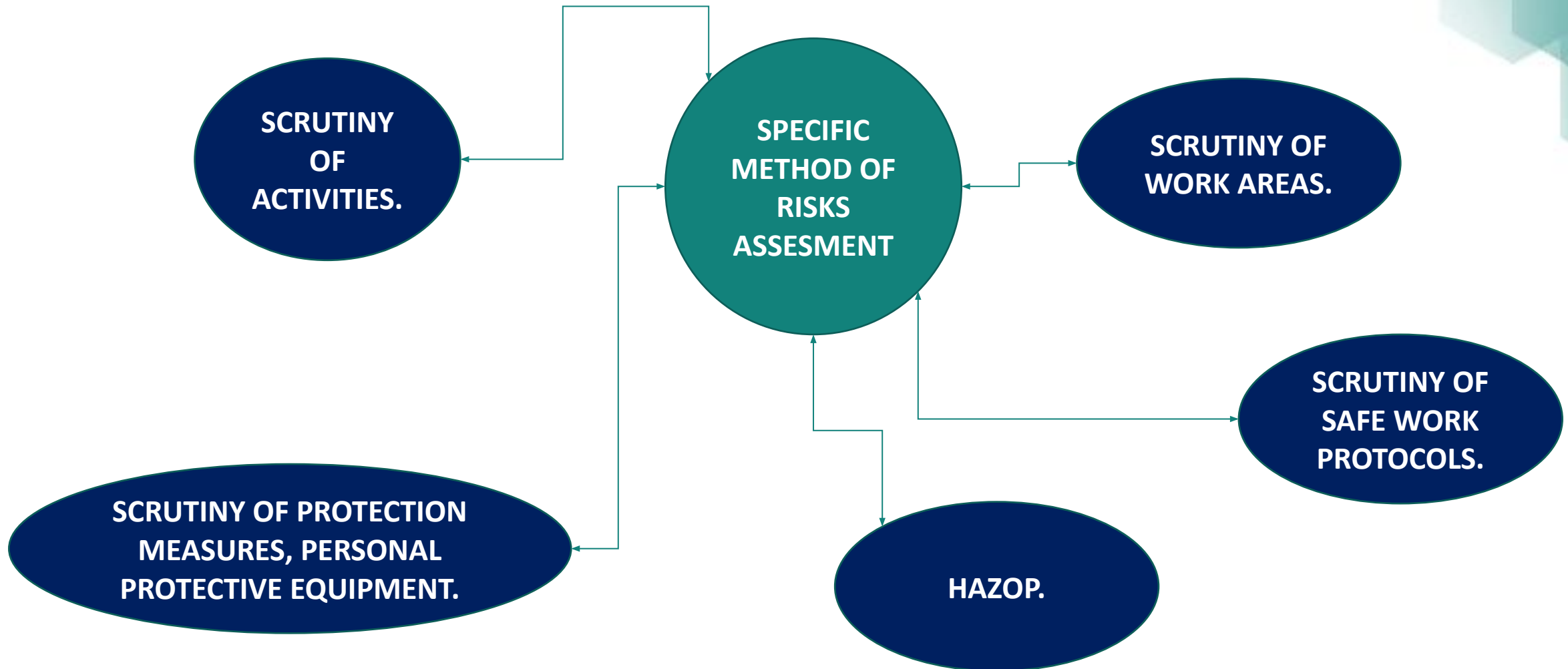
**FAVORS DYNAMISM IN
DETERMINING THE MEANS
OF PROTECTION FOR
PERSONNEL WHO
PARTICIPATE IN ACTIVITIES
AND / OR ARE IN
FACILITIES AT SITES
CONTAMINATED BY HCH**

**FAVORS THE CONTROL,
SUPERVISION AND SURVEILLANCE
OF THE USE OF PROTECTIVE
EQUIPMENT, AS WELL AS THE
CORRECT DISPOSITION OF THE
EQUIPMENT TO THE PERSONNEL
INVOLVED.**

**SPECIFIC
METHOD OF
RISK
ASSESMENT**



SPECIFIC METHOD OF RISKS ASSESMENT



SPECIFIC METHOD OF RISKS ASSESMENT

HAZard and OPeratibility study

The purpose of the procedure is to establish the methodology, determine responsibilities and organisational conditions for carrying out the analysis of risks and operational problems in processes and installations that are executed or developed in HCH contaminated sites within the scope of investigation and/or testing and remediation of contamination.

SPECIFIC METHOD OF RISKS ASSESMENT

HAZard and OPeratibiliy study

AECOM

PROYECTO

Ensayo Bioestimulación Zona de Barrera Enero 2023

FECHA

23/01/2023

REVISIÓN

1

NODO:

Filtro de carbono

Nº

1

INTENCIÓN DEL NODO

Filtrado vapores extraídos

PALABRA GUÍA

PARAMETRO

DESVIACIÓN

CAUSAS

ESCENARIO

MÁS

COVS (ppm)

PPMs definidos en el ensayo

Irregularidad en el filtrado

Temperatura excesiva en las partes exteriores metálicas del filtro

MÁS

Presión

Entrada del filtro de carbono

Obstrucción del filtro de carbono

Sobrepresión a la salida de la bomba extractora. Aumento del consumo eléctrico

SPECIFIC METHOD OF RISKS ASSESMENT

LEVEL 0	LEVEL 1	LEVEL 2
Work clothes	Chemical protective clothing type 4-5-6	Chemical protective clothing type 4-5-6.
Half-mask protection (purification process in operation)	Respiratory protection A2P3.	Powered breathing apparatus with A2P3 filters and head unit.
Protective goggles. Safety footwear	Protective goggles. Safety footwear	PVC boots with reinforced toecap and insole.
Double nitrile chemical protective glove EN 374 EN 388	Double nitrile chemical protective glove EN 374 EN 388	Double chemical protection glove made of nitrile EN 374 EN 388, outer glove with long cuff.

SPECIFIC METHOD OF RISKS ASSESMENT

ZONA DEPURADORA Y ZONA DECANTADOR SEGUIMIENTO HIDROGEOLÓGICO



Zona con riesgo de presencia de contaminantes según trabajos a realizar.



Zona con riesgo de presencia de contaminantes.

ZONA VASO NUEVO Y VIEJO



Zona con riesgo de presencia de contaminantes según trabajos a realizar.



Zona con riesgo de presencia de contaminantes.

MANAGEMENT PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION.

The type of respiratory protection used at the sites is type A2P3. These are combined filters for organic vapours with boiling points above 65 degrees Celsius and for particulate filtration. In the case of filters for organic vapours with boiling points above 65 degrees Celsius, class 2 filters are used as they can be used for higher concentrations or for a longer period of time than class 1 filters. In the case of particulate filters, class 3 filters with a filter efficiency of 99.95 percent are used.

The system being used to carry the respiratory protection is a motor-ventilated equipment with head unit. This is the 3M™ Versaflo™ TR-300 motor-ventilated unit and the 3M™ Versaflo™ M-100 series head units. The use of this equipment means greater efficiency in work due to its greater comfort, as well as greater protection as it has a TH3 protection class, better head and eye protection.

MANAGEMENT PERSONAL PROTECTION EQUIPMENT



MANAGEMENT PERSONAL PROTECTION EQUIPMENT

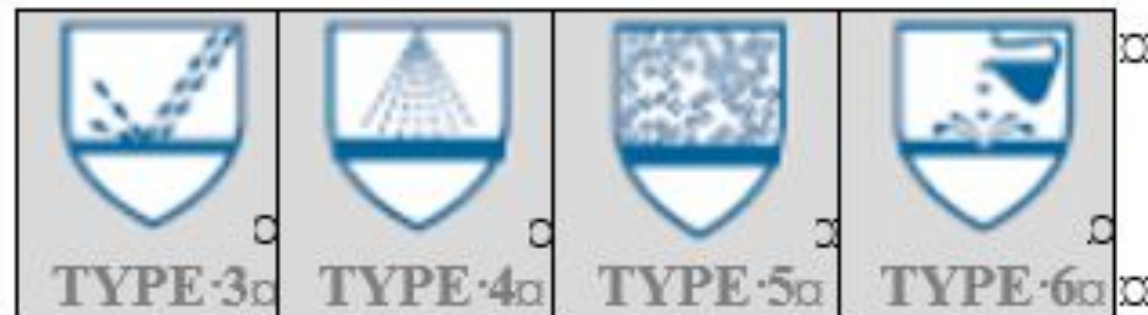
BODY PROTECTION

Type 3: Protection against liquids (splashing or low hazard subs.) (EN 14605)

Type 4: Protection against liquid sprays (EN 14605)

Type 5: Protection against dust and solid particulates (EN ISO 13982-1)

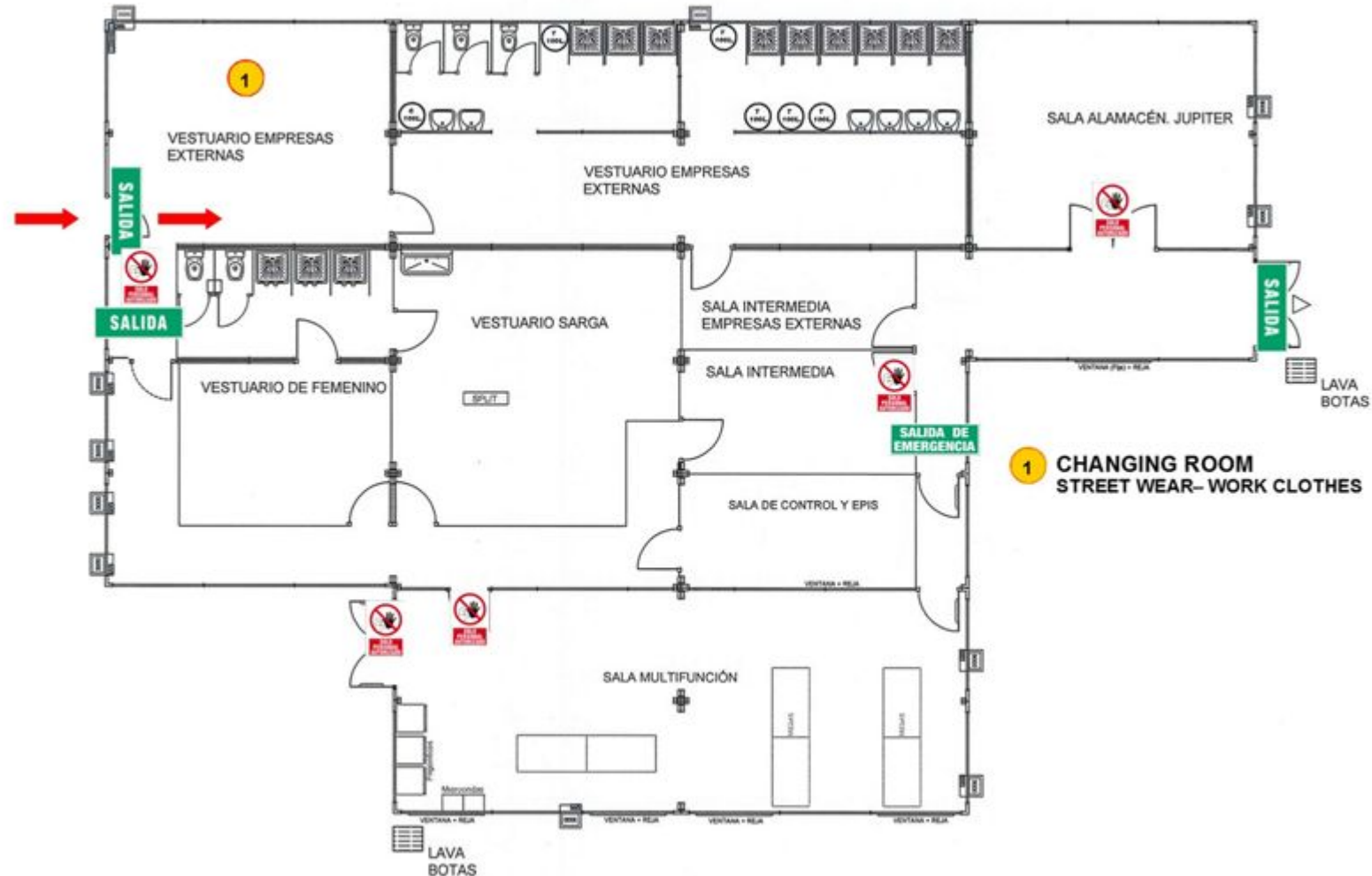
Type 6: Protection against small splashes (low level of protection) (EN 13034)



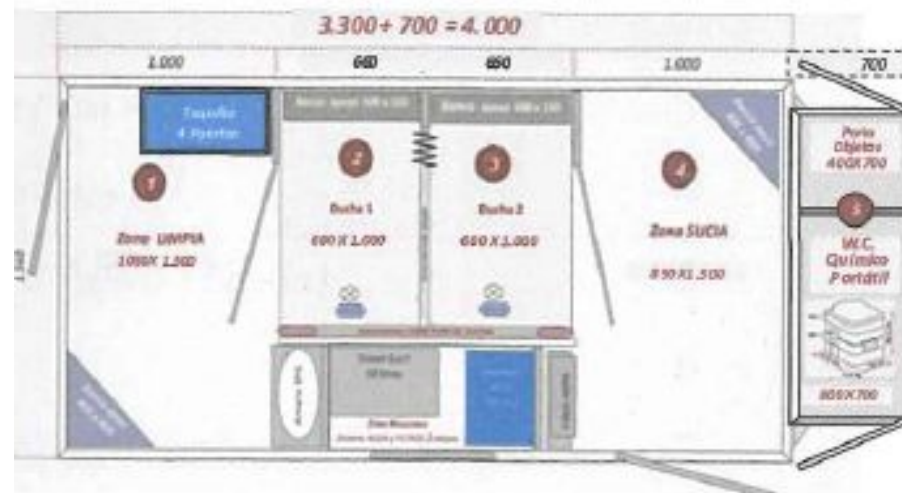
MANAGEMENT PERSONAL PROTECTION EQUIPMENT



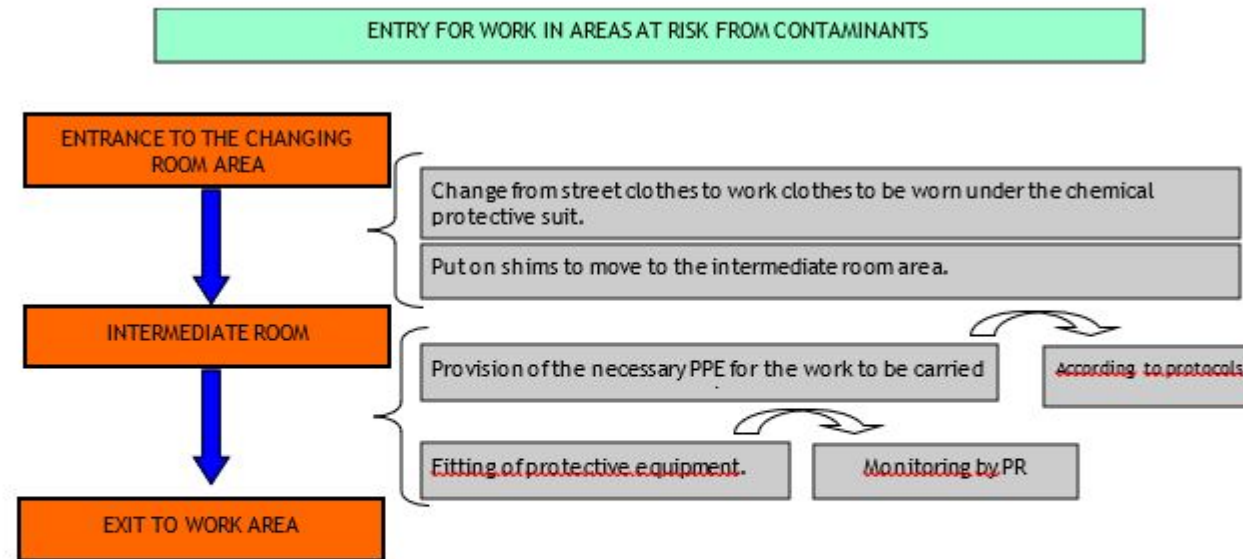
HYGIENE AND WELFARE INSTALLATIONS. BLACK AND WHITE



HYGIENE AND WELFARE INSTALLATIONS. BLACK AND WHITE

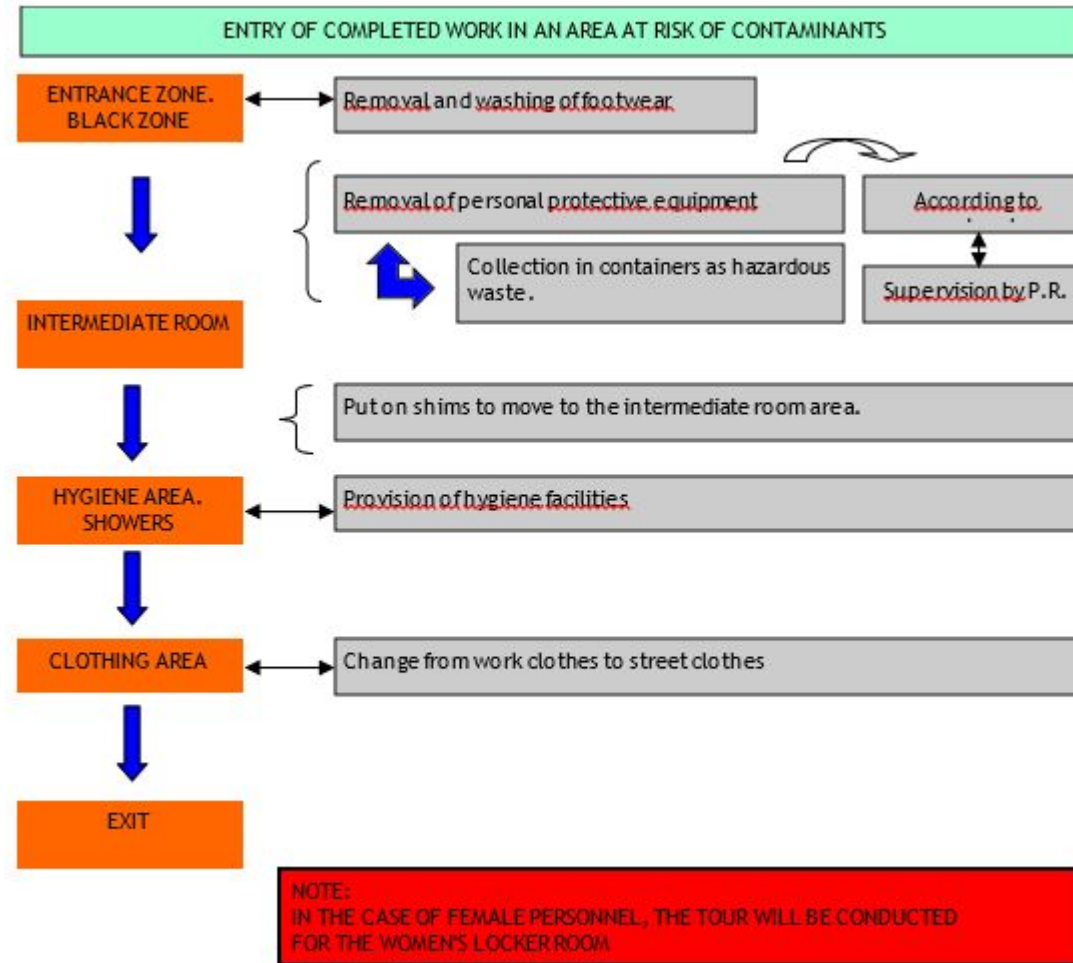


HYGIENE AND WELFARE INSTALLATIONS. BLACK AND WHITE



NOTE:
IN THE CASE OF FEMALE STAFF, THE ROUTE SHALL BE THROUGH THE FEMALE CHANGING ROOM.

HYGIENE AND WELFARE INSTALLATIONS. BLACK AND WHITE



Health surveillance of workers

The content of the tests and analyses to be carried out in the specific medical protocol, which it is considered appropriate to apply to personnel carrying out activities at the sites, is as follows:

- Specific protocol Manual handling of loads
- Specific protocol Forced postures.
- Specific protocol for occupational exposure to pesticides (determination of biological standards).
- Specific protocol for occupational exposure to benzene (determination of biological standards).

Health surveillance of workers

- Specific protocol for occupational exposure to Lindane (determination of biological standards).
- Occupational asthma (including spirometry).
- Chest X-ray (AP and L).
- General examination.
- Vision control.
- E.C.G. to people over 40 years old.
- Biological determinations: Gamma-hexachlorocyclohexane in blood, s-phenyl mercapturic acid or t.t. muconic acid, plasma cholinesterase.
- Blood tests including:
- HEMOGRAM: red blood cells, haemoglobin, haematocrit, MCV, MCH, MCHC, Leukocytes.

Health surveillance of workers

- Blood tests including:

HEMOGRAM: red blood cells, haemoglobin, haematocrit, MCV, MCH, MCHC, Leukocytes.

LEUCOCYTE FORMULA: % and number of leukocytes, monocytes, neutrophils, eosinophils, basophils.

Platelet count and coagulation tests.

Pregnancy test.

Sedimentation rate.

Biochemistry: Glucose, Urea, Uric acid, Cholesterol, HDL, VLDL, Triglycerides, Creatinine, GOT, GPT, GGT, Alkaline phosphatase.

Health surveillance of workers

SPECIFIC PROTOCOL

Workers belonging to companies with a long-term contract

- Examination before starting work
- Annual periodicity or at the end of the works

Workers of companies that carry out work lasting more than one week with direct contact

- Examination before starting work
- Annual frequency if the works are repeated throughout the year or at the end of the works

Health surveillance of workers

BASIC PROTOCOL WITH CHEMICAL AGENTS

Company workers who
perform sporadic jobs
without direct contact

- SUITABLE before starting the work

Workers of companies that
perform very short-term
jobs with direct contact
(correct use of PPE)

- SUITABLE before starting the work



THANK YOU FOR YOUR ATTENTION

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