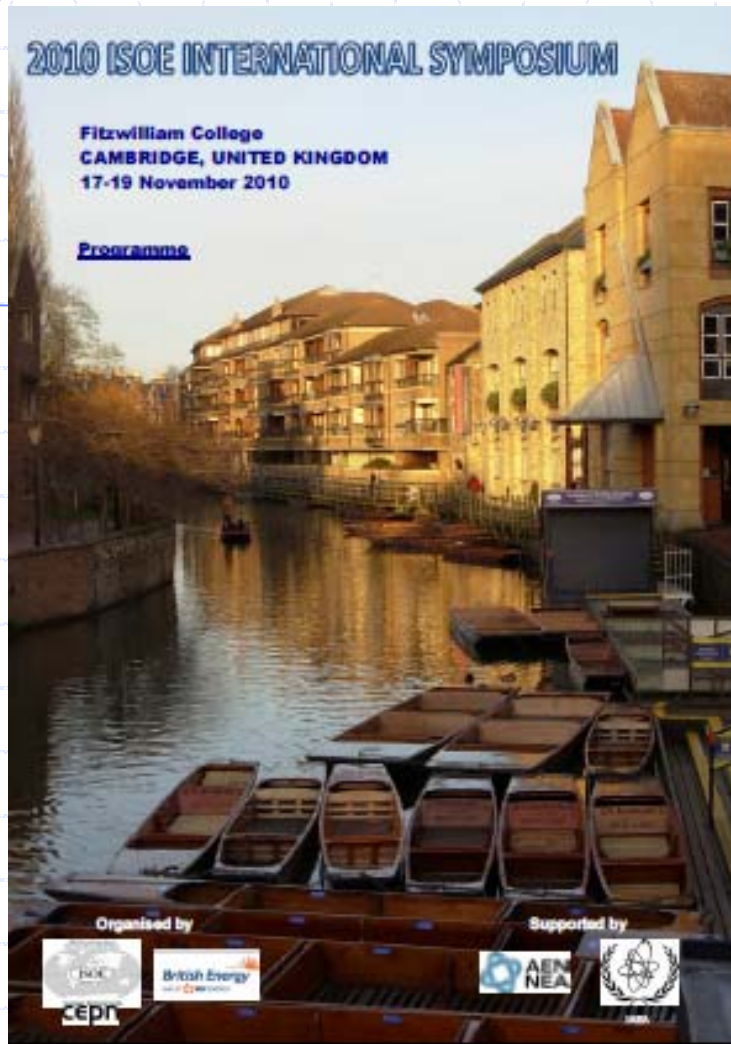


OPERATIONAL RADIATION PROTECTION SELF-ASSESSMENT PROGRAM



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CFE *Comisión Federal de Electricidad*

Self-Assessment

An assessment is normally defined as a systematic review of the value or merit of a process, technology or program, with the purpose of finding its possible weaknesses or areas that need to be improved

Self-Assessment

The scope of this particular assessment program is not focused on individual RP technicians performance or use of the operation procedures.

The assessment is focused on the results achieved through RP procedures implementation inside the Laguna Verde NPP controlled area.

Content of the LVNPP Self-Assessment program

- A Manual containing the scope of the program.
- An Access data base to store all the records. Also is used in discussions with RP field supervisors of each unit.
- An Excel spreadsheet to record and process observations.
- Semi-annual and annual written reports.

Determination of Performance Indicators

Performance indicators could be taken from international guidelines (WANO, IAEA, INPO), RP procedures, from weaknesses detected during inspections or from specific topics that the RP management selects to track or monitor.

LVNPP Performance Indicators

LVNPP RP self-assessment was based on the RP operations procedures used to establish, post and control radiological controlled areas.

Sixteen (16) different topics were selected.

Self-assessment program manual

It was prepared a written manual that includes:

- **A description of each indicator**
- **Examples of the application.**
- **Pictures.**
- **Other explanatory material that may be available.**

Extract of procedure PR-6452

- **To attach postings (to solid surfaces such as doors or walls), use glue, silicon or similar substances, that have been approved for use by the chemical group.**
- **No patches, corrections, or hand writing or stickers of any kind or not approved or allowed postings.**

Extract of procedure PR-6452

- **Posting at the entry of any room must always be located in a continuously visible position (such as on the wall next to the door), to that the sign is clearly visible even when the door is open.**

Examples of potential deficiencies to PR-6452:
No postings in the area being controlled



Examples of potential deficiencies to PR-6452:
Too many posting for the area being controlled



Examples of potential deficiencies to PR-6452:
Posting located in a position that makes it
difficult to see



Examples of potential deficiencies to PR-6452: *Access layout to contaminated areas*



Examples of potential deficiencies to PR-6452
Non-standard postings used (postings must be uniform in size, colors and style)



Determination of Importance Degree (IDg)

Importance degree (or weighting factor) is a key parameter used to differentiate or weight the values of different observations based on the significance of the deficiency observed.

Determination of Importance Degree (IDg)

For instance, radiological risk is very different between finding a high radiation area open door, compared to observing that there are too many posting.

Examples of Performance Indicators and Importance Degrees

Performance Indicator	PERFORMANCE INDICATOR DESCRIPTION	Importance Degree (IDg)
1	Area Posting	26
2	Access layout to contaminated areas	18
3	Rad Ropes	15
5	Untagged bags	13
7	High Radiation Area Control	42
10	Portable survey instruments	23
12	Hot spots control	23
16	High Activity Materials stored inside Spent Fuel Pool	30

Data Collection and Records

Microsoft Access

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Escribe una pregunta

Arial 9

CapturaGral

codigo: [] unidad: 2


Fecha: 28-ago-09 Tema de P.M. 26 Señalización de Áreas

No. de Inspección: IN-09-U2-003 Realizo: Daniel Linares Rodriguez

Edificio: Pb Cuarto: 112 Area responsable: PR (OPE)

PM corregido? Si ☐ No ☐

ANTES de corregir:



DESPUES de Corregir:

Fecha de Corrección: []

Descripción:

Señalización cayendose

Observaciones:

Registro: 14 92 de 187

Vista Formulario NUM

Autoevaluación 200... CapturaGral Documento1 - Micro... 8:58




Feedback to RP Unit Supervisor

Another important aspect of the assessment program is providing immediate feedback to the RP Unit supervisor after observations are made to ensure that he/she identifies and takes expedited corrective actions if appropriate/necessary

Example of the Inspection Report Delivered to the RP Unit Supervisor

Para entrega a Honorato

Reporte de Autoevaluación Independiente de P.R. 2009

Tema de Inspección	Edificio	Quarto	Detalle de la Inspección	Fecha	No. de Insp.	Descripción
26 Señalización de Áreas	Cb	Lab. Químico		01-dic-09	III-09-U2-006	Se requiere complementar la señalización de la cinta A-M
26 Señalización de Áreas	Pb	110		02-dic-09	III-09-U2-006	Señalización con cinta A-M redundante
26 Señalización de Áreas	Pb	129		02-dic-09	III-09-U2-006	Cinta A-M mal instalada y tal la complementar hasta la pared

méxico, 15 de septiembre de 2010

Auto-evaluación Independiente de P.R. U2 2009

Con Attn. a: Ing. Daniel Skyrka Rico (Supervisor de P.R. de la U2)

Página 1 de 11

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Example of a typical Self-assessment Spreadsheet

Microsoft Excel - AEIPR-ANUAL-01-2003_2009

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Escriba una pregunta

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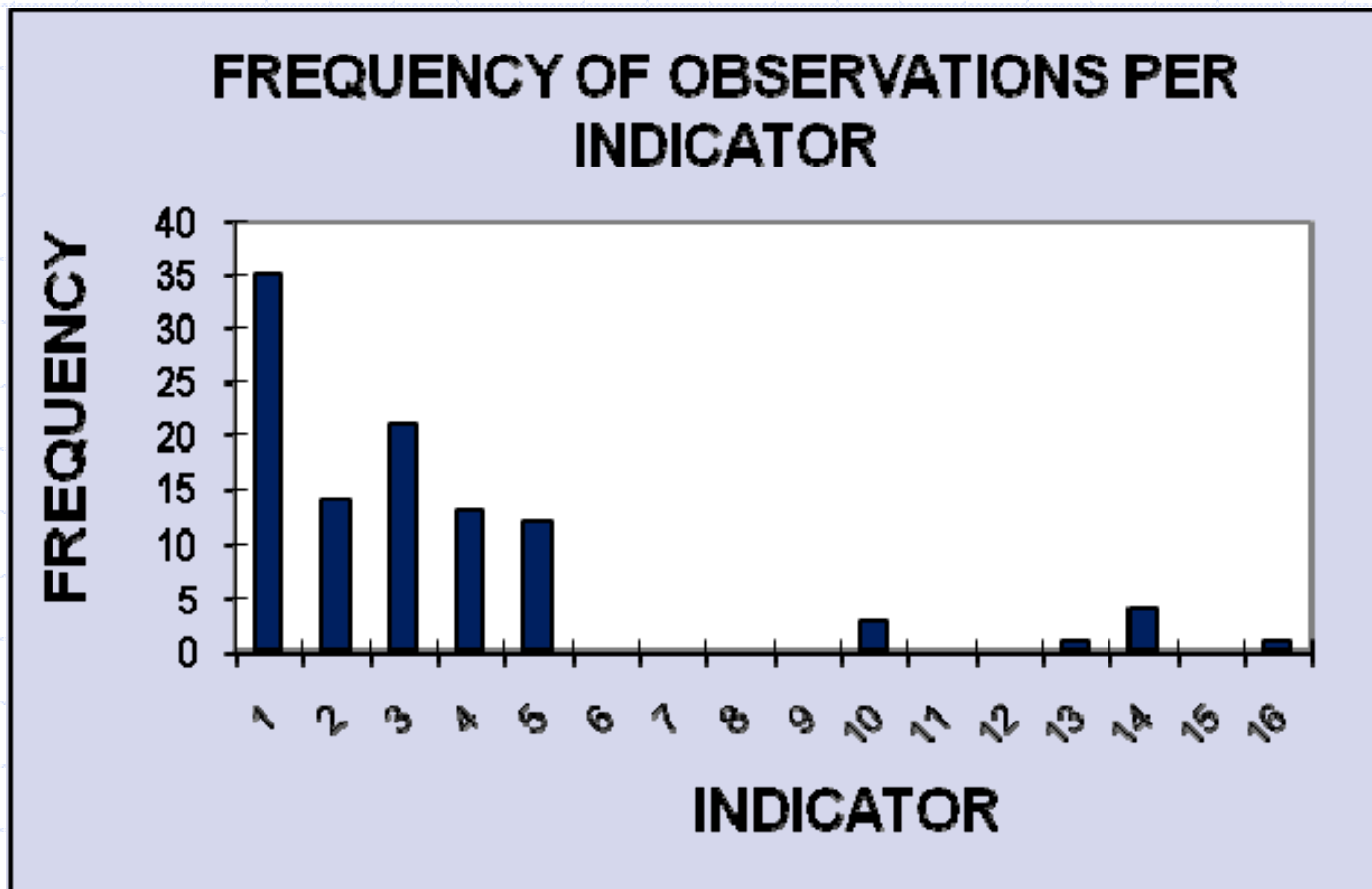
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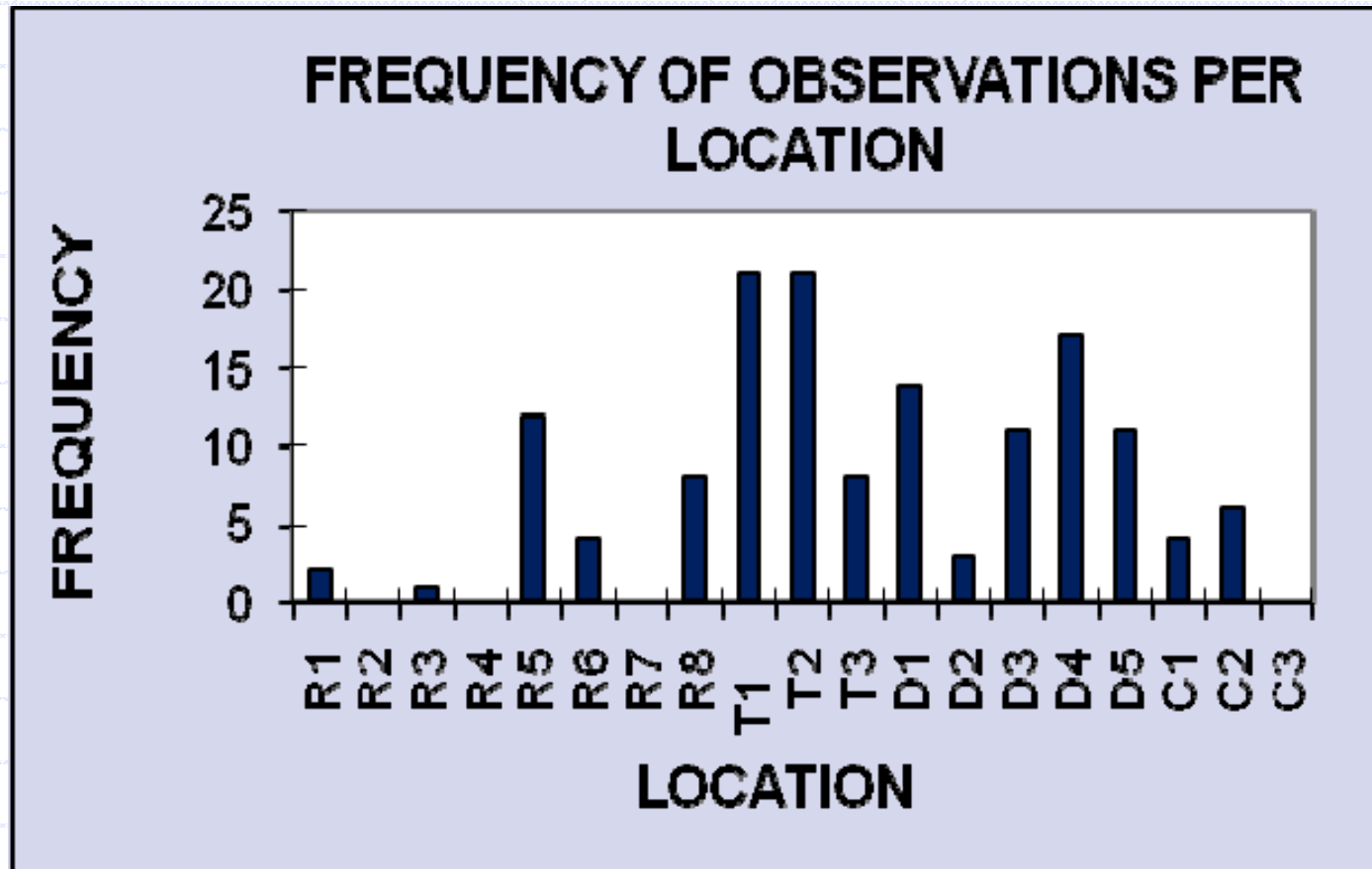
Statistics

Information from the periodic inspections is valuable because it allows the RP section to identify weaknesses, identify trends and identify areas for improvement in the RP operational program.

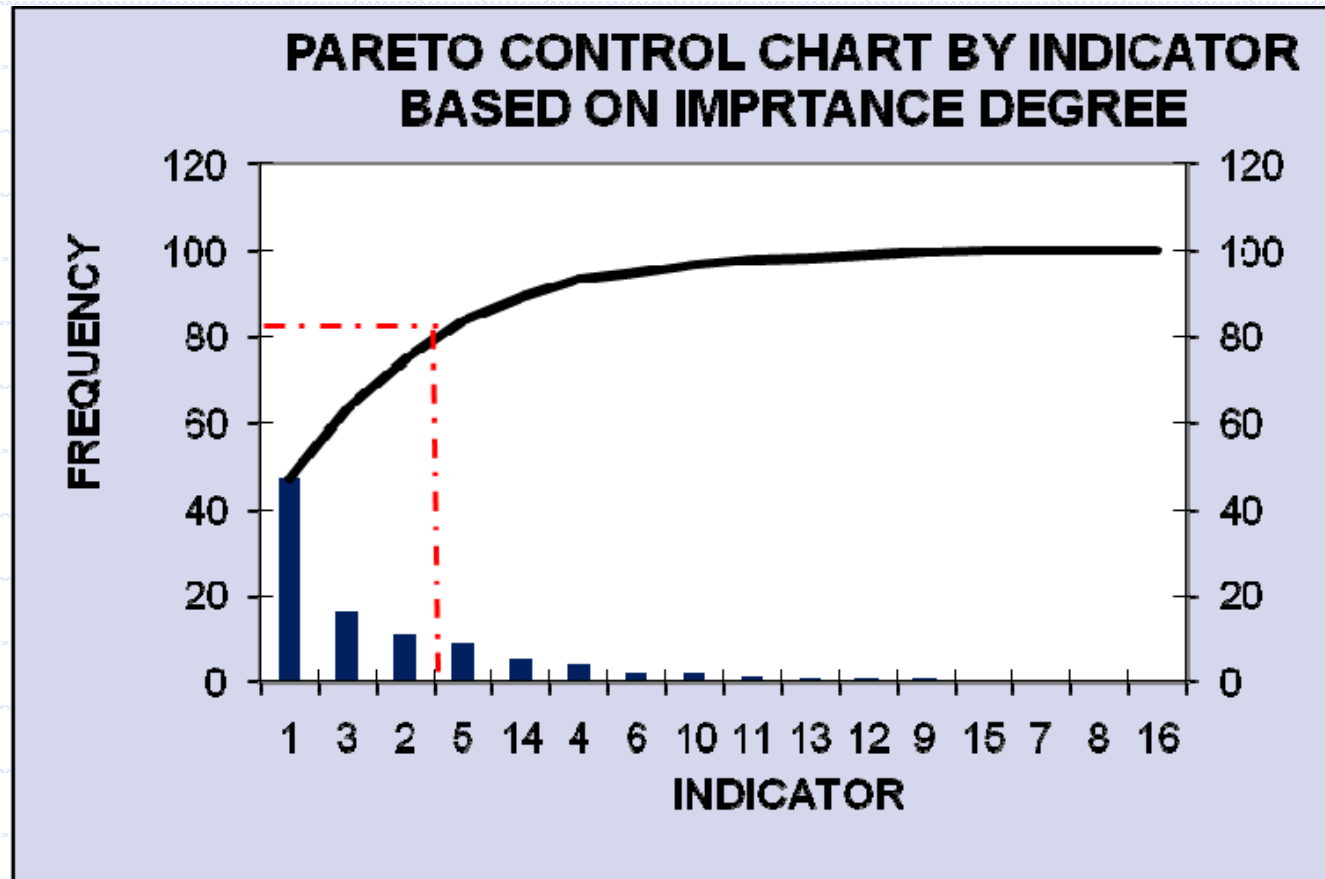
Frequency of Observations per Indicator



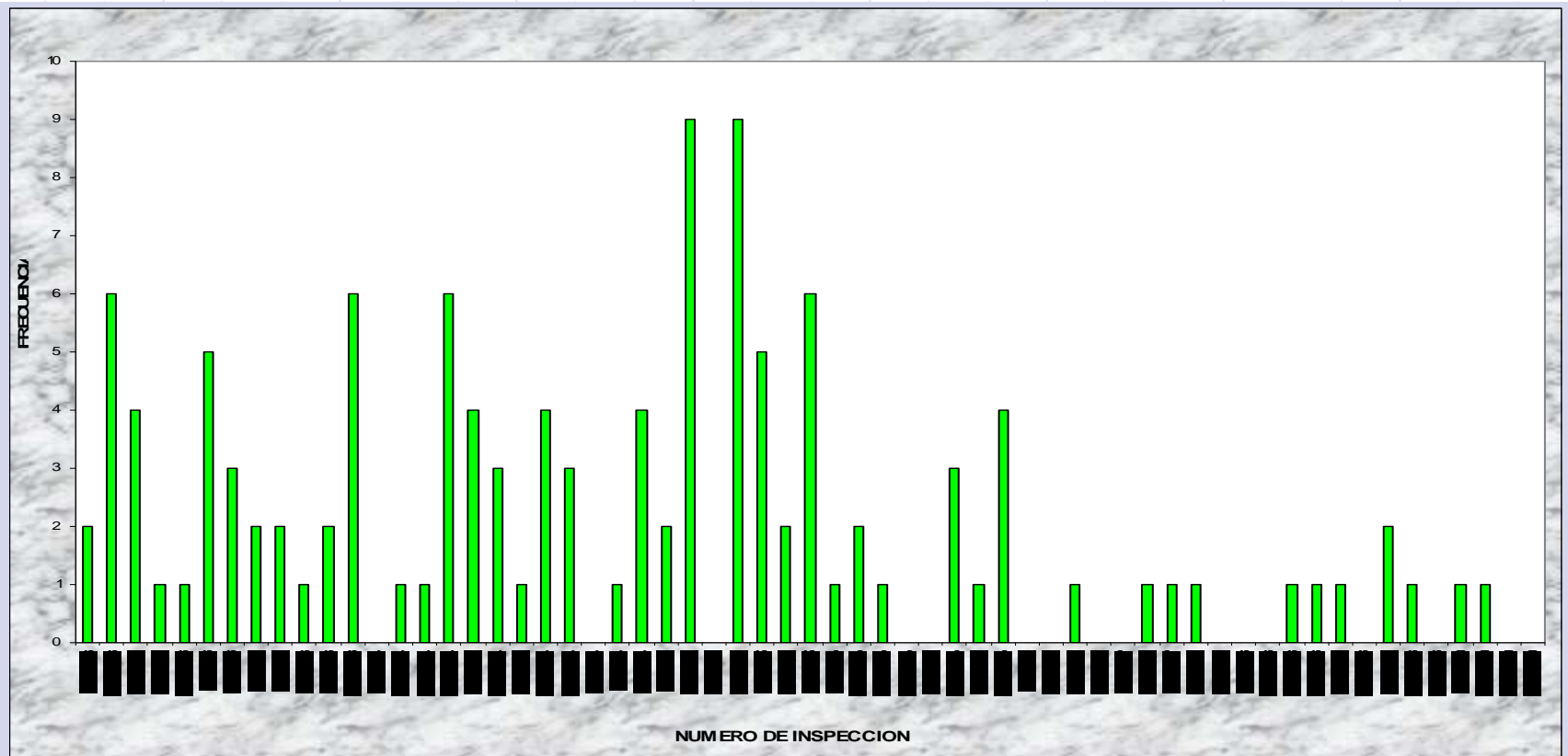
Frequency of Observations per Location



Pareto Control Chart by Indicator Based on Importance Degree



Historical trend of observations for a Specific Performance Indicator



Conclusions

- **An assessment program is intended to improve the quality of the process being evaluated.**
- **The results will be as detailed as the criteria or concepts contained in the procedures or practices under evaluation.**

Conclusions

- **In addition to the quantitative data obtained through the use of the assessment program, RP supervisors and senior RP technicians have learned a lot during feedback meetings with independent evaluators.**