Live Sessions Week 10:
Essential Skills 19 to 22: Environmental Monitoring

Environmental monitoring

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Role of environmental monitor

The job:

Observe

Record

Report

Year 1 Post-Construction Environmental Monitoring Report – Part A (Environmental As-Built Report)

Year 1 (2019) for the Westcoast Energy Inc. High Pine Project
Part A: Environmental As-Built Report

March 6, 2020

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Observation

Is this observation important?

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Observation

Curiosity

- What is the strange single egg?
- What species of bird is using nest?
- How do I protect this nest?
- Are there other nests in the area to be protected?
- How should I document?
- Who should I alert to the nest?
- Do I need to report this to anyone?
- Etc.
- Etc.

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Curiosity

- What was fuel type?
- What happened to cause the spill?
- Was there spillage anywhere else?
- When did spill occur?
- How much was spilled?
- Is the spill now contained and no longer entering the water?
- How widespread is impact downstream?
- Are there sensitive species in the water?
- Is this a critical time of year (spawning? Overwintering?)?

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Curiosity scenario

You are standing on a construction site looking in one direction when behind you where machines are working you hear the breaking and crashing to the earth of a large tree. Turning around you see the tree lying on the ground and an excavator just shutting down. Examining the site you find three dead nestling birds crushed under fallen branches of the tree.

What are you curious about here?

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Some standard observations by environmental monitors

- Weather and changes to it (particularly bringing rain)
- Fuel leakage from equipment or spills at refueling sites
- Water levels in stream
- Structures working as intended (e.g., fish screens on pumps, water pumps if diverting water, silt fences, etc.)
- Bird nests and other wildlife presence
- Careful observation of high-risk activities
  - E.g., working near water or on sensitive soils
  - Using cast in place concrete near water

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Knowledge required to effectively monitor

- The project activities and workplan
- Relevant rules and regulations
- Standard sampling methodologies
- Standard best management practices

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Record

- Why are you noting this?
- For the reader sitting in the office and having never been to this site, how can you provide enough information so that they can form a mental picture.
- Ask yourself what that reader sitting in the office might ask.
- When in doubt be sure you have included all of the journalists 6 Ws: Who, What, When, Where, Why, How.
- Include recommendations to fix the problem

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Record scenario

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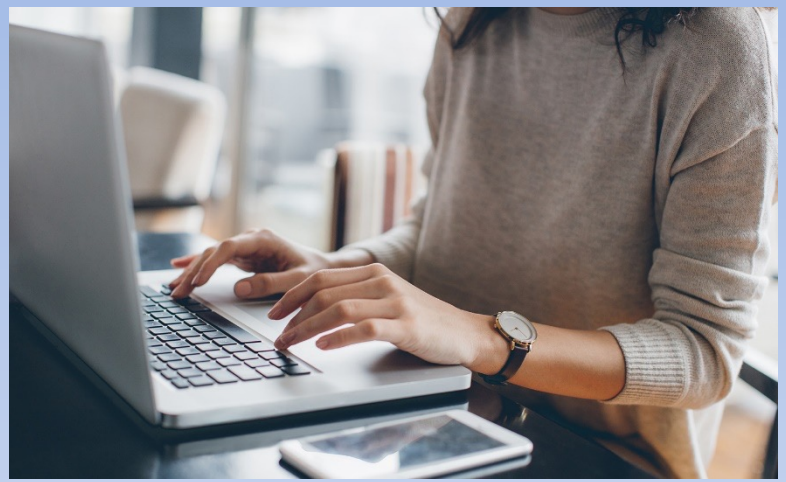
Report



Progress report

- Routine reporting
- Not urgent or time-sensitive
- Typically daily or weekly

Incident report

- Not routine reporting
- Urgent or time-sensitive
- In response to significant incidents

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Incident reporting

1. Take lots of photographs
2. Note activities and time associated with them
3. Record who is doing what
4. Try to estimate severity of incident
5. Fully document the incident and its effects

Example: fish kill

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Incident reporting

Example: *"The hoe operator put out his spill equipment and contained the spill. A clean up crew then had the spill cleaned up within 6 hours. A small amount of the hydraulic fluid (estimate less than one gallon) entered the stream before the spill was contained. The environmental monitor walked downstream once an hour to evaluate how far downstream the spill had drifted. No dead fish or organisms were found on any of these assessments. The furthest downstream the spill could be detected was 200 m."*

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Getting along with others

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Minimizing conflict and confrontation

- Be respectful.
- Recognize boundaries between your job and theirs.
- Work within the limitations imposed.
- Respect their expertise.
- Your job is not to control the activities of others; but only to document and report.
- If conflict or activities occurring you are not comfortable with, contact your supervisor.

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Some tips to get along with others on site

- Be helpful.
- Be active.
- When you can, do the work yourself instead of demanding someone else do it.
- Work collaboratively with the engineer and project manager to complete the tasks.
- Advocate your recommendations – but recognize the final decision is typically with someone else.
- Do not enforce or police others.

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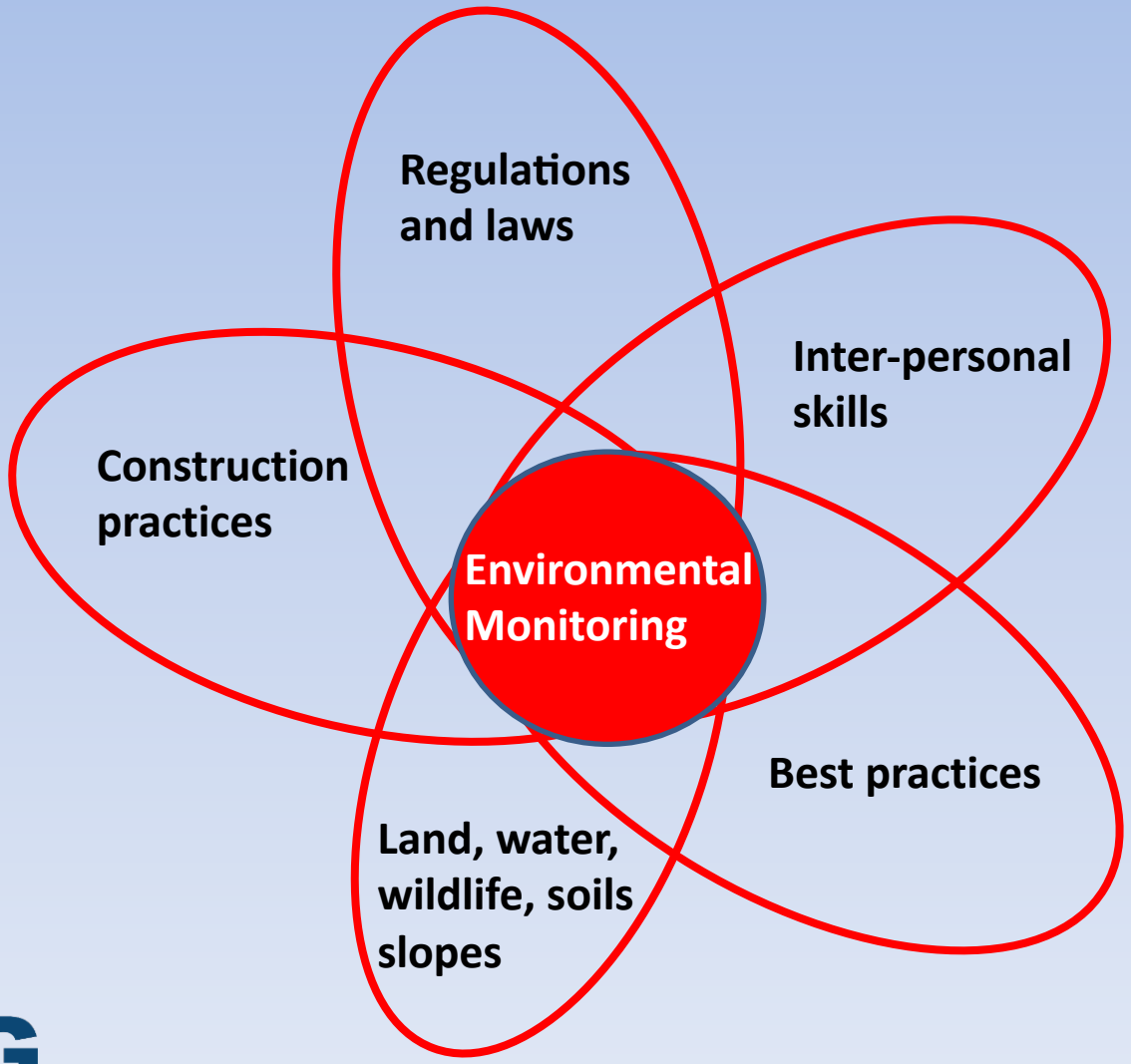
The most challenging job?



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Essential Skills 19 to 22: summary

This week we focused on:

Environmental monitoring

- Importance of Observe, Record, Report
- Getting along with others

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