

ENGLISH FOR WORK / ENGLISH FOR ENVIRONMENTAL PROFESSIONALS

Environmental Consulting English

Define the boundary. Trace the evidence. Explain the finding.



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Eight practical lessons. Eleven extended conversations.

Vocabulary, phrase banks, guided speaking, and explained answers.

Revised 2026 edition / Upper-intermediate to advanced

Your route through the book

01 Phase I and Phase II Site Assessments, page 4

Qualify an assessment summary and explain the significance review without guessing its outcome.

02 Sampling Plans and Data Quality, page 17

Describe a documentation deviation and distinguish review status from data acceptance.

03 Permitting and Agency Coordination, page 32

Ask a bounded agency question without presenting an assumption as a requirement.

04 Remediation Options and Risk, page 44

Compare alternatives on a stated basis without choosing a technical solution from incomplete evidence.

05 Regulatory Compliance and Audits, page 60

Report audit status using explicit evidence, ownership, and closure categories.

06 Sustainability and ESG Reporting, page 71

Define emissions-reporting boundaries and replace an unsupported headline with a precise statement.

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Acknowledge residents and explain preliminary results in plain language with precise boundaries.

08 Proposal, Scope, and Client Expectations, page 100

Clarify a change request, distinguish locations from samples, and negotiate a documented next step.

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Suggested study range: B2-C1. This is an editorial study range, not a certified proficiency assessment.

Make the limits as clear as the findings

An environmental result belongs to a location, period, method, and question. These conversations practice preserving those boundaries while explaining evidence to clients, agencies, colleagues, and the public.

Separate absence from evidence

A missing record does not establish either a clean site or a release. Explain what is missing, who will assess its significance, and what conclusion remains unsupported.

"The tank-closure record is missing; its significance still requires review."

Keep the evidence traceable

Report a documentation gap without inventing the missing event or silently repairing the original. Distinguish a quality review from a final decision about whether data can support a particular use.

"The receiving signature is blank; the data-usability review remains open."

Name the comparison basis

Implementation duration is not the whole remediation period, and selected electricity emissions are not an organization-wide footprint. State included activities and excluded costs or sources.

"These totals include the stated monitoring costs, but technical suitability is still unresolved."

Translate uncertainty respectfully

Residents may hear a narrow technical statement as a broad reassurance. Acknowledge the practical question and explain exactly which places, substances, and conditions were assessed.

"These results cover three locations on one morning; they do not characterize the entire area."

Professional boundaries

All sites, people, projects, figures, and local procedures are fictional. This book teaches professional English, not environmental, engineering, legal, health, or investment advice. Actual assessment, sampling, remediation, regulatory, and safety decisions require qualified professionals using applicable requirements. No exercise certifies a site, establishes safe exposure, or authorizes field work.

A Read the situation

LESSON 01 / PHASE I AND PHASE II SITE ASSESSMENTS

Qualify an assessment summary and explain the significance review without guessing its outcome.

A missing record is not a clean-site conclusion

A buyer is reviewing the former Bell workshop site. Consultant Maya has completed the scheduled site visit, interviews, and available historical-record review. The tank-closure record requested from the archive has not arrived. Environmental professional Eric has not yet assessed the significance of that gap. A draft executive summary says no further questions remain. No sampling is included in the current Phase I scope, and no Phase II investigation has been authorized. Maya will contact the archive and give Eric a status update on Tuesday at 14:00; receipt of the record by then is not guaranteed.

People: Maya, Project consultant; Eric, Environmental professional.

Read the record

Choose one answer per question using the facts above.

1. Which information is missing?

- A.** All interview records
- B.** The tank-closure record
- C.** Every historical source
- D.** The completed site-visit notes

2. What is authorized now?

- A.** A clean-site certificate
- B.** The current Phase I scope, without sampling
- C.** An unrestricted Phase II investigation
- D.** Excavation of every tank

3. What is promised for Tuesday at 14:00?

- A.** Completed soil sampling
- B.** A status update
- C.** Guaranteed record receipt
- D.** A final clean-site conclusion

[Answers and explanations, page 127](#)

B Vocabulary in use

CORE TERMS

Phase I environmental site assessment

An inquiry into a property's environmental conditions using specified assessment methods.
conduct a Phase I assessment

historical land use

Past uses of a property or surrounding land.
investigate historical land use

site reconnaissance

Observational examination of a site as part of an assessment.
document site reconnaissance

all appropriate inquiries (AAI)

A U.S. environmental inquiry framework relevant to specified property transactions.
evaluate AAI requirements

data gap

Missing or unavailable information relevant to an assessment.
identify a data gap

source limitation

A restriction affecting what a source can establish.
disclose a source limitation

Phase II investigation

A further investigation that may include sampling to address identified questions.
scope a Phase II investigation

records review

Examination of documents relevant to an assessment question.
complete the records review

tank-closure record

Documentation concerning the closure of a storage tank.
request the tank-closure record

environmental professional

A professional meeting the applicable qualifications for the assessment role.
refer to the environmental professional

release

An escape or discharge of a substance into the environment.
investigate a reported release

scope of inquiry

The defined questions and work included in an assessment.
confirm the scope of inquiry

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

Phase I environmental site assessment PHASE I ENVIRONMENTAL SITE ASSESSMENT

conduct a Phase I assessment

Keep the meaning precise: An inquiry into a property's environmental conditions using specified assessment methods.

tank-closure record TANK-CLOSURE RECORD

request the tank-closure record

Keep the meaning precise: Documentation concerning the closure of a storage tank.

B Precision and professional shorthand

EXTEND YOUR RANGE

recognized environmental condition (REC)

A defined assessment classification concerning specified hazardous-substance or petroleum conditions.

evaluate a potential REC

fire insurance map

A historical map that may describe buildings and past uses.

review a fire insurance map

adjoining property

A property directly next to the subject site.

review adjoining property uses

significant data gap

A gap that affects the professional's ability to identify relevant environmental conditions.

assess a significant data gap

professional opinion

A qualified interpretation based on evidence and applicable practice.

support a professional opinion

historical aerial photograph

An overhead image documenting past site appearance.

compare historical aerial photographs

regulatory database

Organized agency information about regulated sites or activities.

search a regulatory database

subject property

The property being assessed.

define the subject property

interview record

Documentation of information obtained from an interview.

retain the interview record

follow-up request

A further request for information or action.

issue a follow-up request

B Precision and professional shorthand / continued

executive summary

A concise account of major findings and qualifications.

qualify the executive summary

authorization

Permission to undertake specified work.

obtain investigation authorization

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

scope of inquiry SCOPE OF INQUIRY

confirm the scope of inquiry

Keep the meaning precise: The defined questions and work included in an assessment.

adjoining property ADJOINING PROPERTY

review adjoining property uses

Keep the meaning precise: A property directly next to the subject site.

Phrases that move the work forward

Identify the outstanding source

The tank-closure record has not arrived.

Limit the conclusion

We cannot say that no further questions remain.

Request professional review

Please assess the significance of this gap.

State the existing scope

Sampling is outside the current Phase I scope.

Give a traceable request

I will follow up with the archive.

Avoid a receipt promise

The archive has not guaranteed delivery by then.

Keep the source visible

Cite the missing record beside the qualification.

Clarify authority

A proposed investigation is not permission to start.

Name completed work

The scheduled visit, interviews, and available records review are complete.

Separate absence from proof

A missing record does not prove either a release or its absence.

Preserve a classification

We have not classified the gap as significant.

Avoid an automatic next step

No Phase II investigation has been authorized.

Distinguish a commitment

Tuesday at 14:00 is our status-update time.

Qualify the summary

The conclusion remains subject to review of the outstanding information.

Explain the purpose

Further investigation would address a defined unresolved question.

Close the handoff

I will report the archive response and any continuing limitation.

Precision in real exchanges

Purpose: Separate absence from proof

Useful wording: A missing record does not prove either a release or its absence.

Purpose: Request professional review

Useful wording: Please assess the significance of this gap.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which summary is supported?

- A.** The completed visit proves the site is clean.
- B.** Phase II work starts automatically tomorrow.
- C.** The tank-closure record remains outstanding, and its significance requires review.
- D.** Missing paperwork proves contamination.

2. Who assesses the gap's significance?

- A.** The archive as document custodian
- B.** The buyer as transaction sponsor
- C.** Eric in the environmental-professional role
- D.** Maya as archive-request coordinator

3. A colleague needs the term for this meaning: Examination of documents relevant to an assessment question. Which term fits?

- A.** professional opinion
- B.** data gap
- C.** fire insurance map
- D.** records review

D Choose the response that fits / continued

4. Rebuild the exchange from "A missing record is not a clean-site conclusion".

Maya: "The archive might send it tomorrow, although it has given no commitment. I can follow up and identify the request number in our project record." Eric: [missing response] Maya: "The buyer may skim the qualification. Could I label the gap significant now to make sure it gets noticed?" Which response belongs in the gap?

- A.** Do not preempt the professional opinion. We can make the issue prominent without deciding its significance before the relevant assessment. The distinction matters to the client.
- B.** No. The outstanding record creates a data gap. We need to describe it before I assess how it affects the conclusions. Completed work does not erase that unresolved source.
- C.** Good. Retain that follow-up request and any response. Do not imply that the source is unavailable forever simply because it has not arrived for this draft.
- D.** Correct. The update is not authorization for sampling or a promise of a final conclusion. Keep the two commitments separate when explaining the next step to the buyer.

[Answers and explanations, page 127](#)

One useful distinction

A data gap is not automatically a significant data gap, and neither label alone proves a release. The environmental professional evaluates its significance using the assessment context and applicable requirements.

E Conversation

A missing record is not a clean-site conclusion

A missing record is not a clean-site conclusion

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

data gap / scope of inquiry / subject property / executive summary / records review / release / source limitation / professional opinion / follow-up request / authorization

- 01 **Maya:** The draft says no further questions remain. We have finished the visit and interviews, but the tank-closure record is still missing. Can that sentence stay?
- 02 **Eric:** No. The outstanding record creates a ¹ _____. We need to describe it before I assess how it affects the conclusions. Completed work does not erase that unresolved source.
- 03 **Maya:** The buyer wants a short answer today. Would it be fair to say that the missing document means the property has an environmental problem?
- 04 **Eric:** That also goes too far. A missing document is not evidence of a ² _____. We must distinguish the absence of information from a finding about what happened at the property.
- 05 **Maya:** The archive might send it tomorrow, although it has given no commitment. I can follow up and identify the request number in our project record.
- 06 **Eric:** Good. Retain that ³ _____ and any response. Do not imply that the source is unavailable forever simply because it has not arrived for this draft.

Conversation / continued

- 07 **Maya:** The buyer may skim the qualification. Could I label the gap significant now to make sure it gets noticed?
- 08 **Eric:** Do not preempt the ⁴ _____. We can make the issue prominent without deciding its significance before the relevant assessment. The distinction matters to the client.
- 09 **Maya:** Another colleague suggested scheduling samples immediately. Sampling is not in our present assignment, and the client has not approved any additional investigation.
- 10 **Eric:** Then keep the ⁵ _____ explicit. A further investigation would need a defined question, appropriate professional input, and the necessary authorization. This conversation does not supply those things.

Conversation continues on the next page.

A missing record is not a clean-site conclusion

CONVERSATION / CONTINUED

- 11 **Maya:** I will avoid saying that Phase II work has started. Can the summary list the work completed while clearly leaving the record question open?
- 12 **Eric:** Yes. Revise the ⁶ _____ to name the outstanding tank-closure record and the pending significance review. Do not bury the qualification where a reader is unlikely to see it.
- 13 **Maya:** Could the buyer interpret pending review as proof that every other source is unreliable? We have useful interviews and historical records already.
- 14 **Eric:** Describe the specific ⁷ _____, not a wholesale failure. The other material remains part of the evidence, with its own context. Precision avoids both false reassurance and unnecessary alarm.
- 15 **Maya:** I will contact the archive and update you Tuesday at fourteen hundred, whether or not the record arrives. That gives us a clear next contact.
- 16 **Eric:** Correct. The update is not ⁸ _____ for sampling or a promise of a final conclusion. Keep the two commitments separate when explaining the next step to the buyer.
- 17 **Maya:** The revised wording will say the outstanding information requires your review. It will not say the site is clean or that contamination has been established.
- 18 **Eric:** That keeps the ⁹ _____ separate from a final site finding. Name the missing record and my review role, without predicting the conclusion.
- 19 **Maya:** I will circulate that revision with the archive request reference and the Tuesday update time. No additional field work will be represented as approved.
- 20 **Eric:** Agreed. Keep the ¹⁰ _____ and assessment boundaries clear throughout. The client needs a useful, limited statement grounded in this site's evidence, not a slogan about every possible environmental condition.

CHECK THE GAPS

1. data gap / 2. release / 3. follow-up request / 4. professional opinion / 5. scope of inquiry / 6. executive summary / 7. source limitation / 8. authorization / 9. records review / 10. subject property

[Why these answers fit, page 128](#)

F Check accuracy and scope

A missing record is not a clean-site conclusion

Return to the case

A buyer is reviewing the former Bell workshop site. Consultant Maya has completed the scheduled site visit, interviews, and available historical-record review. The tank-closure record requested from the archive has not arrived. Environmental professional Eric has not yet assessed the significance of that gap. A draft executive summary says no further questions remain. No sampling is included in the current Phase I scope, and no Phase II investigation has been authorized. Maya will contact the archive and give Eric a status update on Tuesday at 14:00; receipt of the record by then is not guaranteed.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. Which statement improperly broadens the scope?

- A. A follow-up investigation may need a defined scope.
- B. The summary needs a qualification.
- C. Sampling is already authorized under this Phase I assignment.
- D. The archive request remains open.

2. What should Maya report if the record is still missing on Tuesday?

- A. The outstanding status and the continuing review limitation
- B. That delivery occurred because the update was promised
- C. A guessed tank-closure date
- D. A final absence-of-release finding

[Answers and explanations, page 130](#)

Listen for the distinction

Swap roles for turns 9-20. Keep the archive update separate from sampling permission.

A qualification is useful information

A client may interpret a cautious phrase as indecision. Tie the qualification to a specific missing source and a named review step. Do not use broad reassurance to make an incomplete evidential position sound more commercially convenient.

F Say it / transfer to a new case

Repair a second assessment update

For the Park site, an old solvent-storage record is missing. Nora will assess its significance. The current assignment excludes sampling. An archive status update is due Friday at 11:00.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

sampling / solvent-storage / Nora / Friday at 11:00

- 01 **Consultant:** The outstanding source is the ¹ _____ record.
- 02 **Reviewer:** The person assessing significance is ² _____.
- 03 **Consultant:** The present assignment excludes ³ _____.
- 04 **Reviewer:** The archive status update is due ⁴ _____.

CHECK THE GAPS

1. solvent-storage / 2. Nora / 3. sampling / 4. Friday at 11:00

[Why these answers fit, page 130](#)

F Say it / transfer to a new case / continued

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "A missing record is not a clean-site conclusion". Maya: "Could the buyer interpret pending review as proof that every other source is unreliable? We have useful interviews and historical records already." Eric: [missing response] Maya: "I will contact the archive and update you Tuesday at fourteen hundred, whether or not the record arrives. That gives us a clear next contact." Which response belongs in the gap?

- A.** Yes. Revise the executive summary to name the outstanding tank-closure record and the pending significance review. Do not bury the qualification where a reader is unlikely to see it.
- B.** Describe the specific source limitation, not a wholesale failure. The other material remains part of the evidence, with its own context. Precision avoids both false reassurance and unnecessary alarm.
- C.** No. The outstanding record creates a data gap. We need to describe it before I assess how it affects the conclusions. Completed work does not erase that unresolved source.
- D.** Then keep the scope of inquiry explicit. A further investigation would need a defined question, appropriate professional input, and the necessary authorization. This conversation does not supply those things.

[Answers and explanations, page 131](#)

A Read the situation

LESSON 02 / SAMPLING PLANS AND DATA QUALITY

Describe a documentation deviation and distinguish review status from data acceptance.

Trace a missing custody signature without inventing it

Project plan P6 requires a receiving signature for the direct handoff from the field team to the laboratory custodian. For sample GW03, the sender signed, the receiving-signature box is blank, and the laboratory receipt log records arrival at 16:25. The bottle identifier matches the submission sheet. An analytical result is available, but quality reviewer Jonas has not decided its usability for the project question. Field coordinator Elena must report the discrepancy, preserve the original record, and seek a traceable clarification. These are stated project requirements, not universal rules about carrier signatures.

People: Elena, Field coordinator; Jonas, Quality reviewer.

Read the record

Choose one answer per question using the facts above.

1. What is missing?

- A. The analytical result
- B. The sender's signature
- C. The laboratory custodian's receiving signature
- D. The sample identifier on every bottle

2. What does the receipt log establish in this case?

- A. A final usability decision
- B. Recorded laboratory arrival at 16:25
- C. A complete custody record
- D. Guaranteed analytical accuracy

3. What is the correct current data status?

- A. The signature has already been reconstructed.
- B. Usability remains under review.
- C. The result is automatically invalid.
- D. The result is approved for every purpose.

[Answers and explanations, page 132](#)

B Vocabulary in use

CORE TERMS

sampling plan

A document defining the intended collection and analysis of samples.

follow the sampling plan

quality assurance project plan (QAPP)

A plan describing quality requirements and activities for a project.

review the QAPP

custodian

A person responsible for possession or care of a sample.

identify the receiving custodian

receipt log

A record of received items and associated information.

check the receipt log

deviation

A departure from a stated procedure or requirement.

document a deviation

holding time

The specified period allowed before a sample-related preparation or analysis step.

review the holding time

data quality objective (DQO)

A statement of the data needed to support a specified decision.

define a data quality objective

chain of custody (COC)

The documented possession and transfer history of a sample or evidence.

maintain chain of custody

sample identifier

The unique label linking a sample to its records.

verify the sample identifier

transfer signature

A signature documenting a specified custody handoff.

obtain the required transfer signature

traceable amendment

A recorded correction that preserves the original and identifies the change.

make a traceable amendment

preservation

Measures specified to maintain a sample's relevant condition.

document sample preservation

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

sampling plan **SAMPLING PLAN**

follow the sampling plan

Keep the meaning precise: A document defining the intended collection and analysis of samples.

sample identifier **SAMPLE IDENTIFIER**

verify the sample identifier

Keep the meaning precise: The unique label linking a sample to its records.

B Precision and professional shorthand

EXTEND YOUR RANGE

field blank

A control sample used to evaluate potential contamination associated with field handling.

assess a field blank

equipment blank

A control used to evaluate contamination associated with sampling equipment.

examine an equipment blank

laboratory control sample

A known control used to assess laboratory analytical performance.

review a laboratory control sample

reporting limit

A project or laboratory threshold for routine quantitative reporting; lower values may be reported as qualified estimates.

state the reporting limit

qualifier

A notation communicating a limitation or condition attached to a result.

interpret a data qualifier

trip blank

A control accompanying samples to assess specified transport-related contamination.

review a trip blank

field duplicate

An additional field sample used to assess aspects of sampling and analytical variability.

compare a field duplicate

method blank

A control assessing contamination from laboratory preparation or analytical processes.

evaluate a method blank

detection limit

A method-related level associated with detecting an analyte under stated conditions.

identify the detection limit

data validation

A systematic evaluation of data against specified requirements.

conduct data validation

B Precision and professional shorthand / continued

data usability

Suitability of data for a defined question or decision.

assess data usability

corrective record

Documentation of a correction or follow-up action.

retain the corrective record

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

preservation **PRESERVATION**

document sample preservation

Keep the meaning precise: Measures specified to maintain a sample's relevant condition.

laboratory control sample **LABORATORY CONTROL SAMPLE**

review a laboratory control sample

Keep the meaning precise: A known control used to assess laboratory analytical performance.

Phrases that move the work forward

Locate the gap

The receiving-signature box for GW03 is blank.

Preserve the evidence

Keep the original record unchanged.

Check identity

The bottle identifier matches the submission sheet.

Separate result and acceptance

An analytical result is available; usability is still under review.

Avoid fabrication

Do not sign as though the original entry had been completed.

Limit the conclusion

The gap alone does not prove that the sample was contaminated.

State the intended use

Assess suitability for the stated project question.

Document a correction

Identify the amendment's author, date, and evidential basis.

Identify the requirement

Project plan P6 requires that signature for this handoff.

State corroborating information

The receipt log records arrival at 16:25.

Avoid an accusation

We have not established why the signature is missing.

Request a clarification

Please provide a traceable account of the handoff.

Name the reviewer

Jonas will evaluate the documentation and data context.

Avoid automatic acceptance

Matching labels do not resolve every quality question.

Keep qualifications attached

Carry relevant qualifiers into the report.

Close the issue accurately

The deviation remains open pending the quality review.

Precision in real exchanges

Purpose: State corroborating information

Useful wording: The receipt log records arrival at 16:25.

Purpose: Check identity

Useful wording: The bottle identifier matches the submission sheet.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which action preserves traceability?

- A.** Retain the original and request a dated, attributed clarification.
- B.** Replace the original with an undated clean copy.
- C.** Ask someone to imitate the missing signature.
- D.** Delete the receipt log to make the records consistent.

2. Which statement is supported?

- A.** A matching bottle proves the method had no error.
- B.** Every unsigned transfer universally invalidates every result.
- C.** The log records receipt at 16:25, but the receiving signature remains missing.
- D.** The log proves every custody requirement was met.

3. A colleague needs the term for this meaning: The documented possession and transfer history of a sample or evidence. Which term fits?

- A.** deviation
- B.** chain of custody (COC)
- C.** equipment blank
- D.** qualifier

D Choose the response that fits / continued

4. Rebuild the exchange from "Trace a missing custody signature without inventing it". Elena: "The custodian is available now. Could we just ask for a signature in the empty box, or would that hide when it was added?" Jonas: [missing response] Elena: "Should I tell the client that the result is invalid until we receive that account? The report deadline is approaching." Which response belongs in the gap?

- A.** Yes. The data quality objective helps define what the data must support. Review suitability for that question rather than treating usable as an unrestricted label for every possible application.
- B.** Say data usability remains under review. We have not reached a rejection or acceptance decision. A documentation gap needs evaluation in context, not a conclusion chosen to sound decisive.
- C.** We need a traceable amendment, not a reconstruction presented as an original entry. Preserve the record and request an attributed account of the handoff through the applicable quality process.
- D.** The matching sample identifier supports identity checks. Analytical quality involves other evidence. We should not use one matching field to certify every aspect of collection, handling, preparation, and analysis.

[Answers and explanations, page 132](#)

One useful distinction

A receipt log and matching identifier provide relevant evidence, but they do not supply a missing signature. Conversely, the missing signature does not itself prove tampering, contamination, or that every result is unusable.

E Conversation

Trace a missing custody signature without inventing it

Trace a missing custody signature without inventing it

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

data quality objective / deviation / traceable amendment / sample identifier /
chain of custody / data usability / qualifier / Data validation / receipt log /
corrective record

- 01 **Elena:** GW03 has an analytical result, but its receiving-signature box is blank. The sender signed. How should I describe this?
- 02 **Jonas:** Call it a documented ¹ _____ from project plan P6. That plan requires the laboratory custodian's signature for this direct handoff. Keep the description limited to the observed gap.
- 03 **Elena:** The laboratory log records arrival at sixteen twenty-five. The bottle identifier also matches the submission sheet sent with the sample.
- 04 **Jonas:** Include the ² _____ as supporting evidence. Those records matter, but neither the arrival entry nor matching label fills the empty signature box or ends the review.
- 05 **Elena:** The custodian is available now. Could we just ask for a signature in the empty box, or would that hide when it was added?
- 06 **Jonas:** We need a ³ _____, not a reconstruction presented as an original entry. Preserve the record and request an attributed account of the handoff through the applicable quality process.

E Conversation / continued

- 07 **Elena:** Should I tell the client that the result is invalid until we receive that account? The report deadline is approaching.
- 08 **Jonas:** Say ⁴ _____ remains under review. We have not reached a rejection or acceptance decision. A documentation gap needs evaluation in context, not a conclusion chosen to sound decisive.
- 09 **Elena:** The client may ask whether the missing signature proves that someone changed the bottle or contaminated its contents.
- 10 **Jonas:** It does not establish either allegation. Describe the ⁵ _____ gap accurately and refer the question to the review. Avoid turning missing documentation into an accusation about a person's conduct.

Conversation continues on the next page.

Trace a missing custody signature without inventing it

CONVERSATION / CONTINUED

- 11 **Elena:** I can confirm that the labels match. I cannot use that identity check to vouch for the analytical value itself, can I?
- 12 **Jonas:** The matching ⁶ _____ supports identity checks. Analytical quality involves other evidence. We should not use one matching field to certify every aspect of collection, handling, preparation, and analysis.
- 13 **Elena:** I will attach the original form, receipt log, submission sheet, and any later clarification. Is the intended project decision also relevant?
- 14 **Jonas:** Yes. The ⁷ _____ helps define what the data must support. Review suitability for that question rather than treating usable as an unrestricted label for every possible application.
- 15 **Elena:** The report writer wants to remove qualification symbols because they make the table harder to read. What should I tell her?
- 16 **Jonas:** Keep each relevant ⁸ _____ attached and explain it clearly. Readability is important, but a cleaner table must not silently strip away limitations that affect interpretation of the results.
- 17 **Elena:** I will leave the issue open, send the evidence package, and ask for your review status before the report is finalized.
- 18 **Jonas:** Good. ⁹ _____ and the usability decision need their own status. The presence of a number in a laboratory report does not show that these review steps are complete.

Trace a missing custody signature without inventing it / continued

- 19 **Elena:** My update will identify the blank receiving signature, the corroborating records, and the pending decision. It will not blame the custodian.
- 20 **Jonas:** That works. Retain the eventual ¹⁰ _____ alongside the original evidence. Once a decision is made, state its basis and any limits, rather than merely replacing pending with an unexplained approved label.

CHECK THE GAPS

1. deviation / **2.** receipt log / **3.** traceable amendment / **4.** data usability / **5.** chain of custody / **6.** sample identifier / **7.** data quality objective / **8.** qualifier / **9.** Data validation / **10.** corrective record

[Why these answers fit, page 133](#)

F Check accuracy and scope

Trace a missing custody signature without inventing it

Return to the case

Project plan P6 requires a receiving signature for the direct handoff from the field team to the laboratory custodian. For sample GW03, the sender signed, the receiving-signature box is blank, and the laboratory receipt log records arrival at 16:25. The bottle identifier matches the submission sheet. An analytical result is available, but quality reviewer Jonas has not decided its usability for the project question. Field coordinator Elena must report the discrepancy, preserve the original record, and seek a traceable clarification. These are stated project requirements, not universal rules about carrier signatures.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. What question should guide usability review?

- A. Did the laboratory issue an invoice for the analysis?
- B. Does the receipt log show arrival before the report deadline?
- C. Does the client prefer a table without qualifications?
- D. Can these data support the defined project question, given the quality evidence?

2. Which claim is an unsupported accusation?

- A. The identifier matches the submission sheet.
- B. The receipt log records 16:25.
- C. Someone tampered with GW03.
- D. A signature is missing.

[Answers and explanations, page 135](#)

Listen for the distinction

Swap roles for turns 11-20. Stress identity, analytical quality, and intended use separately.

Investigate the gap without accusing a colleague

A missing signature can trigger blame before the event has been established. Describe the exact field and supporting records. Request a documented clarification rather than asking someone to fill a blank as though the original record had always been complete.

F Say it / transfer to a new case

Report another custody discrepancy

For sample SW08, the project-required receiving signature is blank. The receipt log states 10:40. Mina owns the usability review, which is still pending.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

SW08 / Mina / pending / 10:40

- 01 **Coordinator:** The affected sample is ¹ _____.
- 02 **Reviewer:** The receipt log records ² _____.
- 03 **Coordinator:** The review owner is ³ _____.
- 04 **Reviewer:** The usability decision remains ⁴ _____.

CHECK THE GAPS

1. SW08 / 2. 10:40 / 3. Mina / 4. pending

[Why these answers fit, page 135](#)

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "Trace a missing custody signature without inventing it".

Elena: "I will attach the original form, receipt log, submission sheet, and any later clarification. Is the intended project decision also relevant?"

Jonas: [missing response]

Elena: "The report writer wants to remove qualification symbols because they make the table harder to read. What should I tell her?" Which response belongs in the gap?

- A.** We need a traceable amendment, not a reconstruction presented as an original entry. Preserve the record and request an attributed account of the handoff through the applicable quality process.
- B.** The matching sample identifier supports identity checks. Analytical quality involves other evidence. We should not use one matching field to certify every aspect of collection, handling, preparation, and analysis.
- C.** Say data usability remains under review. We have not reached a rejection or acceptance decision. A documentation gap needs evaluation in context, not a conclusion chosen to sound decisive.
- D.** Yes. The data quality objective helps define what the data must support. Review suitability for that question rather than treating usable as an unrestricted label for every possible application.

[Answers and explanations, page 136](#)

Review 1 / Meaning and context

Use language from the lessons you have completed. Choose one answer per question.

Case file

Revisit "Phase I and Phase II Site Assessments" and "Sampling Plans and Data Quality". Choose precise terminology, then reconstruct the missing responses using both neighboring turns. The final two questions also revisit earlier conversations.

1. A colleague needs the term for this meaning: Past uses of a property or surrounding land. Which term fits?

- A. environmental professional
- B. historical aerial photograph
- C. historical land use
- D. interview record

2. A colleague needs the term for this meaning: A signature documenting a specified custody handoff. Which term fits?

- A. transfer signature
- B. field blank
- C. reporting limit
- D. sampling plan

3. Rebuild the exchange from "A missing record is not a clean-site conclusion". Maya: "Another colleague suggested scheduling samples immediately. Sampling is not in our present assignment, and the client has not approved any additional investigation." Eric: [missing response] Maya: "I will avoid saying that Phase II work has started. Can the summary list the work completed while clearly leaving the record question open?" Which response belongs in the gap?

- A. No. The outstanding record creates a data gap. We need to describe it before I assess how it affects the conclusions. Completed work does not erase that unresolved source.
- B. Describe the specific source limitation, not a wholesale failure. The other material remains part of the evidence, with its own context. Precision avoids both false reassurance and unnecessary alarm.
- C. Then keep the scope of inquiry explicit. A further investigation would need a defined question, appropriate professional input, and the necessary authorization. This conversation does not supply those things.
- D. Yes. Revise the executive summary to name the outstanding tank-closure record and the pending significance review. Do not bury the qualification where a reader is unlikely to see it.

Review 1 / Meaning and context / continued

4. Rebuild the exchange from "Trace a missing custody signature without inventing it". Elena: "I will leave the issue open, send the evidence package, and ask for your review status before the report is finalized." Jonas: [missing response] Elena: "My update will identify the blank receiving signature, the corroborating records, and the pending decision. It will not blame the custodian." Which response belongs in the gap?

- A.** The matching sample identifier supports identity checks. Analytical quality involves other evidence. We should not use one matching field to certify every aspect of collection, handling, preparation, and analysis.
- B.** Say data usability remains under review. We have not reached a rejection or acceptance decision. A documentation gap needs evaluation in context, not a conclusion chosen to sound decisive.
- C.** We need a traceable amendment, not a reconstruction presented as an original entry. Preserve the record and request an attributed account of the handoff through the applicable quality process.
- D.** Good. Data validation and the usability decision need their own status. The presence of a number in a laboratory report does not show that these review steps are complete.

[Answers and explanations, page 167](#)

A Read the situation

LESSON 03 / PERMITTING AND AGENCY COORDINATION

Ask a bounded agency question without presenting an assumption as a requirement.

Clarify the requested modeling scenario

Agency comment C7 asks the Delta project team to add wet-weather modeling. The submission already includes a dry-weather baseline. Comment C7 does not state the storm duration, intensity, or return period to use. Consultant Arun thinks the agency may mean a 100-year event, but that interpretation is unconfirmed. Agency coordinator Becca will seek written clarification using the existing comment reference and a concise list of missing parameters. A response package is scheduled internally for Friday; the agency has not promised a clarification date. No revised scenario or permit approval has been issued.

People: Arun, Modeling consultant; Becca, Agency coordinator.

Read the record

Choose one answer per question using the facts above.

1. What does C7 explicitly request?

- A.** Additional wet-weather modeling
- B.** A confirmed 100-year event
- C.** Immediate permit approval
- D.** Deletion of every existing model

2. What is Arun's 100-year interpretation?

- A.** An unconfirmed assumption
- B.** A written agency instruction
- C.** An approved permit condition
- D.** A completed simulation

3. What does Friday represent?

- A.** Automatic approval of the dry-weather model
- B.** An internal response-package target
- C.** An agency-guaranteed reply date
- D.** The permit issue date

[Answers and explanations, page 137](#)

B Vocabulary in use

CORE TERMS

permit application

A request for authorization under an applicable permitting process.

submit a permit application

comment-response matrix

A table linking each comment to a response and supporting material.

update the comment-response matrix

baseline condition

The reference condition against which alternatives are evaluated.

define the baseline condition

dry-weather flow

Flow under the specified conditions without the modeled rainfall contribution.

estimate dry-weather flow

rainfall intensity

The rate of rainfall over a specified interval.

state rainfall intensity

annual exceedance probability

The estimated chance an event magnitude is exceeded in a given year.

explain annual exceedance probability

agency comment

A reviewing authority's documented question or requested change.

respond to an agency comment

modeling scenario

A defined set of conditions evaluated in a model.

specify a modeling scenario

wet-weather event

A rainfall-related condition relevant to the assessment.

characterize a wet-weather event

storm duration

The period over which a storm event is represented.

confirm the storm duration

return period

A statistical expression of event frequency under specified assumptions.

specify the return period

boundary condition

A specified condition imposed at the edge or interface of a model.

document a boundary condition

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

permit application PERMIT APPLICATION

submit a permit application

Keep the meaning precise: A request for authorization under an applicable permitting process.

wet-weather event WET-WEATHER EVENT

characterize a wet-weather event

Keep the meaning precise: A rainfall-related condition relevant to the assessment.

B Precision and professional shorthand

EXTEND YOUR RANGE

model domain

The spatial or conceptual extent represented in a model.

define the model domain

calibration

Adjustment of model parameters against relevant observations.

document model calibration

submission package

The documents and data formally provided for review.

revise the submission package

written clarification

A documented explanation resolving an ambiguity.

obtain written clarification

permit condition

A requirement attached to an issued authorization.

interpret a permit condition

response deadline

The required or agreed time for a response, as applicable.

verify the response deadline

input parameter

A value supplied to a model.

confirm an input parameter

sensitivity analysis

Evaluation of how outputs change when inputs or assumptions change.

conduct sensitivity analysis

review cycle

A round of submission, assessment, and response.

plan the review cycle

assumption register

A record of assumptions and their confirmation status.

maintain an assumption register

technical memorandum

A focused document explaining a technical issue or analysis.

prepare a technical memorandum

version identifier

A label distinguishing one document or model issue from another.

retain the version identifier

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

boundary condition **BOUNDARY CONDITION**

document a boundary condition

Keep the meaning precise: A specified condition imposed at the edge or interface of a model.

submission package **SUBMISSION PACKAGE**

revise the submission package

Keep the meaning precise: The documents and data formally provided for review.

Phrases that move the work forward

Cite the comment

We are responding to comment C7.

Name the existing case

The submission includes a dry-weather baseline.

Label the interpretation

The 100-year event is our unconfirmed interpretation.

Avoid assumed agreement

We have not received written clarification.

Separate target and promise

Friday is our internal package target.

Clarify the model boundary

Confirm whether the existing model domain remains applicable.

Report the dependency

The revised scenario depends on clarification of these inputs.

Avoid approval language

No permit approval has been issued.

State what is clear

The comment requests wet-weather modeling.

Identify missing inputs

The duration, intensity, and return period are unspecified.

Ask a bounded question

Please confirm the event parameters intended for C7.

Keep the record organized

Link the reply to the comment-response matrix.

Protect accuracy

Do not call a proposed scenario an agency requirement.

Preserve versions

Identify which model issue the response addresses.

Request a usable response

A written parameter set will let us scope the revision.

Close the coordination

I will report the clarification status against C7.

Precision in real exchanges

Purpose: Identify missing inputs

Useful wording: The duration, intensity, and return period are unspecified.

Purpose: Label the interpretation

Useful wording: The 100-year event is our unconfirmed interpretation.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which agency question is most useful?

- A.** Can you approve everything now?
- B.** Why was your comment so vague?
- C.** We used a 100-year storm because you required it.
- D.** For C7, please confirm the storm duration, intensity, and return period.

2. Which statement overstates the agency's instruction?

- A.** C7 requests wet-weather modeling.
- B.** The duration is unspecified.
- C.** We need written clarification.
- D.** C7 requires a 100-year event.

3. A colleague needs the term for this meaning: A defined set of conditions evaluated in a model. Which term fits?

- A.** rainfall intensity
- B.** calibration
- C.** modeling scenario
- D.** permit condition

D Choose the response that fits / continued

4. Rebuild the exchange from "Clarify the requested modeling scenario". Arun: "I drafted 'Please clarify C7.' Is that too vague? I want to get a usable answer without sending another long technical memo." Becca: [missing response] Arun: "I will not call the hundred-year event an agency instruction. Should I explain that return period is different from storm duration?" Which response belongs in the gap?

- A.** Yes, where needed. The return period describes statistical frequency under stated assumptions, not how long a storm lasts or a fixed interval between occurrences. Keep those terms separate.
- B.** It would not establish a permit condition or permit approval by itself. A clarification can define the requested analysis without deciding whether the eventual submission satisfies the permitting process.
- C.** Use a concise written clarification request tied to C7. List only the unresolved parameters and state which baseline is already included. That makes the question easier to answer.
- D.** Ask whether the existing model domain remains applicable to the requested scenario. Keep it a clarification question, not an assertion that the agency has ordered additional geographic coverage.

[Answers and explanations, page 137](#)

One useful distinction

A 100-year return period does not mean an event occurs exactly once every century. It expresses frequency statistically under stated assumptions. Here, no return period has been specified by the agency.

E Conversation

Clarify the requested modeling scenario

Clarify the requested modeling scenario

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

assumption register / permit condition / submission package / return period /
modeling scenario / version identifier / model domain / response deadline /
comment-response matrix / written clarification

- 01 **Arun:** C7 asks for wet-weather modeling. I think they mean a hundred-year event, but the comment does not actually say that.
- 02 **Becca:** Then put that interpretation in the ¹ _____. Mark it unconfirmed. We should ask what the reviewer intends before describing a particular storm as a requirement.
- 03 **Arun:** The submitted model covers a dry-weather baseline. It does not include the additional rainfall case, so the request itself is understandable.
- 04 **Becca:** Agreed. Distinguish the requested ² _____ from its missing inputs. We can acknowledge the wet-weather request while asking for the duration, intensity, and return period.
- 05 **Arun:** I drafted 'Please clarify C7.' Is that too vague? I want to get a usable answer without sending another long technical memo.
- 06 **Becca:** Use a concise ³ _____ request tied to C7. List only the unresolved parameters and state which baseline is already included. That makes the question easier to answer.

E Conversation / continued

- 07 **Arun:** I will not call the hundred-year event an agency instruction. Should I explain that return period is different from storm duration?
- 08 **Becca:** Yes, where needed. The ⁴ _____ describes statistical frequency under stated assumptions, not how long a storm lasts or a fixed interval between occurrences. Keep those terms separate.
- 09 **Arun:** Our manager wants the response package on Friday. The agency has not told us when it will provide the missing parameters.
- 10 **Becca:** Report Friday as an internal ⁵ _____ for our package, not a promised agency reply. If clarification remains outstanding, identify the dependency and the actual status rather than pretending it arrived.

Conversation continues on the next page.

Clarify the requested modeling scenario

CONVERSATION / CONTINUED

- 11 **Arun:** The project manager called this the last approval step. I can only confirm that we are clarifying the analysis, not securing the permit.
- 12 **Becca:** It would not establish a ⁶ _____ or permit approval by itself. A clarification can define the requested analysis without deciding whether the eventual submission satisfies the permitting process.
- 13 **Arun:** I will track the request and response under C7. We need readers to find the same question across the correspondence and revised package.
- 14 **Becca:** Use the ⁷ _____ for that connection. Leave the item open until its actual response status supports a change. Do not close it merely because we sent an email.
- 15 **Arun:** There may also be a question about whether the current model boundary remains appropriate. Can we include that without introducing an entirely new assignment?
- 16 **Becca:** Ask whether the existing ⁸ _____ remains applicable to the requested scenario. Keep it a clarification question, not an assertion that the agency has ordered additional geographic coverage.
- 17 **Arun:** When the reply arrives, the modeler will need to know which existing issue it refers to. We have two internal versions.
- 18 **Becca:** Include the ⁹ _____ in the technical record. Otherwise, a correct parameter can still be applied to the wrong model issue, creating another avoidable review problem.

Clarify the requested modeling scenario / continued

- 19 **Arun:** The message will identify C7, the existing baseline, the missing parameters, and our internal target. It will ask for confirmation without promising an outcome.
- 20 **Becca:** Good. Keep the ¹⁰ _____ consistent with that exchange. When we know the intended scenario, we can plan the revision and describe what remains to be reviewed.

CHECK THE GAPS

1. assumption register / **2.** modeling scenario / **3.** written clarification / **4.** return period / **5.** response deadline / **6.** permit condition / **7.** comment-response matrix / **8.** model domain / **9.** version identifier / **10.** submission package

[Why these answers fit, page 138](#)

F Check accuracy and scope

Clarify the requested modeling scenario

Return to the case

Agency comment C7 asks the Delta project team to add wet-weather modeling. The submission already includes a dry-weather baseline. Comment C7 does not state the storm duration, intensity, or return period to use. Consultant Arun thinks the agency may mean a 100-year event, but that interpretation is unconfirmed. Agency coordinator Becca will seek written clarification using the existing comment reference and a concise list of missing parameters. A response package is scheduled internally for Friday; the agency has not promised a clarification date. No revised scenario or permit approval has been issued.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. What should the response matrix show before clarification arrives?

- A. A claim that no additional modeling was requested
- B. The open parameter question and clarification-request status
- C. A fabricated approval date
- D. A closed comment with no response

2. What does a 100-year return period not mean?

- A. A concept distinct from storm duration
- B. Exactly one occurrence every hundred years
- C. A statistical frequency expression under stated assumptions
- D. A parameter requiring appropriate interpretation

[Answers and explanations, page 140](#)

Listen for the distinction

Swap roles for turns 9-20 and keep Friday distinct from any agency commitment.

A precise question can save an entire revision

Teams sometimes avoid clarification because they fear appearing inexperienced. State what is understood, isolate the missing parameters, and ask for confirmation. A bounded question demonstrates control of the submission without pretending that an ambiguous comment is complete.

F Say it / transfer to a new case

Clarify a second agency comment

Comment C12 requests noise modeling but leaves the operating hours and receptor locations unspecified. Dev owns the clarification request. Monday is the internal package target.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

Monday / Dev / C12 / hours

- 01 **Consultant:** The unresolved comment reference is ¹ _____.
- 02 **Coordinator:** One missing input is the operating ² _____.
- 03 **Consultant:** The clarification owner is ³ _____.
- 04 **Coordinator:** The internal package target is ⁴ _____.

CHECK THE GAPS

1. C12 / 2. hours / 3. Dev / 4. Monday

[Why these answers fit, page 140](#)

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "Clarify the requested modeling scenario". Arun: "I will track the request and response under C7. We need readers to find the same question across the correspondence and revised package." Becca: [missing response] Arun: "There may also be a question about whether the current model boundary remains appropriate. Can we include that without introducing an entirely new assignment?" Which response belongs in the gap?

- A.** Use the comment-response matrix for that connection. Leave the item open until its actual response status supports a change. Do not close it merely because we sent an email.
- B.** Yes, where needed. The return period describes statistical frequency under stated assumptions, not how long a storm lasts or a fixed interval between occurrences. Keep those terms separate.
- C.** Use a concise written clarification request tied to C7. List only the unresolved parameters and state which baseline is already included. That makes the question easier to answer.
- D.** It would not establish a permit condition or permit approval by itself. A clarification can define the requested analysis without deciding whether the eventual submission satisfies the permitting process.

[Answers and explanations, page 141](#)

A Read the situation

LESSON 04 / REMEDIATION OPTIONS AND RISK

Compare alternatives on a stated basis without choosing a technical solution from incomplete evidence.

Faster implementation is not necessarily a shorter project

Client representative Omar asks consultant Tess which of two preliminary remediation options is best. Option A estimates four weeks of implementation at \$120,000, followed by 12 months of monitoring at \$5,000 per month. Option B estimates two weeks of implementation at \$90,000, followed by 24 months of monitoring at the same monthly amount. All amounts are undiscounted planning estimates with no escalation or other costs included. Technical suitability, regulatory acceptability, and actual completion criteria remain unassessed. Neither option is authorized. Tess must compare the stated time and cost components without recommending a remedy from these figures alone.

People: Omar, Client representative; Tess, Environmental consultant.

Read the record

Choose one answer per question using the facts above.

1. Which option has the lower implementation estimate?

- A. Both at \$90,000
- B. Neither has a cost estimate
- C. B at \$90,000
- D. A at \$120,000

2. What is A's stated monitoring cost?

- A. \$120,000
- B. \$180,000
- C. \$60,000
- D. \$5,000

3. What remains unresolved?

- A. Every implementation estimate
- B. The monthly monitoring amount
- C. Whether the options have different monitoring periods
- D. Technical suitability and regulatory acceptability

[Answers and explanations, page 142](#)

B Vocabulary in use

CORE TERMS

remediation

Work intended to address environmental contamination under defined objectives.

evaluate remediation options

conceptual site model

A representation of sources, pathways, receptors, and relevant site conditions.

refine the conceptual site model

exposure pathway

A route linking a contaminant source to a potential receptor.

evaluate an exposure pathway

contaminant of concern

A substance selected for further evaluation in the site context.

identify a contaminant of concern

treatability study

An investigation of how a treatment may perform for particular material or conditions.

scope a treatability study

ex situ treatment

Treatment of affected material after removal from its original location.

compare ex situ treatment

remedial objective

A defined outcome that a remediation approach aims to achieve.

establish a remedial objective

source area

The location from which contamination originates or is concentrated.

characterize the source area

receptor

A person or ecological entity potentially exposed to a contaminant.

identify a potential receptor

feasibility

Practical suitability of an approach under the relevant conditions.

assess technical feasibility

in situ treatment

Treatment performed in place rather than after removing the affected material.

evaluate in situ treatment

containment

Measures intended to limit contaminant movement or exposure.

assess a containment approach

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

remediation REMEDIATION

evaluate remediation options

Keep the meaning precise: Work intended to address environmental contamination under defined objectives.

receptor RECEPTOR

identify a potential receptor

Keep the meaning precise: A person or ecological entity potentially exposed to a contaminant.

B Precision and professional shorthand

EXTEND YOUR RANGE

monitored natural attenuation

A monitored strategy relying on natural processes under appropriate evaluated conditions.

evaluate monitored natural attenuation

engineering control

A physical measure intended to reduce exposure or contaminant movement.

maintain an engineering control

monitoring period

Time during which specified conditions or performance are checked.

define the monitoring period

residual risk

Risk remaining after specified controls or actions.

evaluate residual risk

undiscounted estimate

An estimate that does not adjust future amounts to present value.

present an undiscounted estimate

institutional control

A non-engineered restriction or mechanism intended to limit exposure or use.

document an institutional control

implementation period

Time allocated to carrying out the specified installation or active work.

estimate the implementation period

performance criterion

A measure used to evaluate whether an approach meets its objective.

specify a performance criterion

life-cycle cost

Cost across the defined stages and period of an option.

compare life-cycle costs

contingency allowance

An amount reserved for specified uncertainty in a cost estimate.

define the contingency allowance

B Precision and professional shorthand / continued

regulatory acceptability

Whether an approach meets the relevant authority's applicable expectations or requirements.

assess regulatory acceptability

completion criterion

A defined condition required to establish completion.

confirm the completion criterion

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

containment CONTAINMENT

assess a containment approach

Keep the meaning precise: Measures intended to limit contaminant movement or exposure.

monitoring period MONITORING PERIOD

define the monitoring period

Keep the meaning precise: Time during which specified conditions or performance are checked.

C Phrases that move the work forward

Define the question

Best depends on the criteria we are comparing.

Add the monitoring component

A includes 12 months of monitoring at \$5,000 per month.

Contrast the second total

B totals \$210,000 on the same stated basis.

Preserve exclusions

No escalation or other costs are included.

Avoid a completion promise

Two weeks does not establish project completion.

Keep approval separate

Neither option has been authorized.

Avoid a false winner

The lower stated total is not a complete recommendation.

Limit the claim

This comparison addresses only the supplied components.

Compare the initial component

B has the lower implementation estimate.

State the limited total

A totals \$180,000 on this stated basis.

Name the calculation

These are undiscounted planning estimates.

Separate duration measures

Implementation time is not the full monitoring period.

Name the unresolved evidence

Technical suitability remains unassessed.

Request the decision criteria

We need the relevant performance and acceptance criteria.

Explain the trade-off

B starts with a lower implementation cost but more monitoring months.

Close the discussion

Record the cost comparison and the questions requiring technical review.

Precision in real exchanges

Purpose: State the limited total

Useful wording: A totals \$180,000 on this stated basis.

Purpose: Contrast the second total

Useful wording: B totals \$210,000 on the same stated basis.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. What is B's stated combined total?

- A.** \$180,000
- B.** \$210,000
- C.** \$90,000
- D.** \$120,000

2. Which comparison is accurate?

- A.** B has shorter implementation but longer monitoring.
- B.** B completes every obligation in two weeks.
- C.** A has no monitoring cost.
- D.** Both have identical monitoring periods.

3. A colleague needs the term for this meaning: The location from which contamination originates or is concentrated. Which term fits?

- A.** source area
- B.** treatability study
- C.** engineering control
- D.** undiscounted estimate

D Choose the response that fits / continued

4. Rebuild the exchange from "Faster implementation is not necessarily a shorter project". Omar: "So A is one hundred eighty thousand overall, and B is two hundred ten thousand, assuming only these stated components." Tess: [missing response] Omar: "That changes the cost ranking. Management will ask why we cannot recommend A now. What is still missing from that decision?" Which response belongs in the gap?

- A.** No. We do not have the completion criterion needed to make that claim. Installation duration and overall completion are different. The longer monitoring requirement also matters when describing what follows implementation.
- B.** Correct. Each is an undiscounted estimate. We have not adjusted future amounts to present value or added escalation and other costs. Do not present either number as a fixed complete price.
- C.** They do not establish regulatory acceptability. We should name that as unresolved rather than imply acceptance. Technical suitability, authority requirements, cost, and timing are related questions, but they are not interchangeable answers.
- D.** That is balanced. Keep the remedial objective central when the qualified team develops its recommendation. Neither preliminary option is authorized simply because we have clarified the arithmetic or expressed a preference.

[Answers and explanations, page 142](#)

One useful distinction

A totals \$180,000 and B totals \$210,000 on the stated implementation-plus-monitoring basis. These are undiscounted estimates, not complete life-cycle costs or proof that A is technically preferable.

E Conversation

Faster implementation is not necessarily a shorter project

Faster implementation is not necessarily a shorter project

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

Feasibility / life-cycle cost / regulatory acceptability / undiscounted estimate / remedial objective / performance criterion / monitoring period / contingency allowance / completion criterion / implementation period

- 01 **Omar:** B looks best: ninety thousand dollars and two weeks. Why would we choose the option costing more and taking longer?
- 02 **Tess:** Those are the ¹ _____ and its associated cost. B also has twenty-four months of monitoring. We need to compare the same components before drawing a broader conclusion.
- 03 **Omar:** A has twelve monitoring months, and both use five thousand dollars per month. What does that make the monitoring totals?
- 04 **Tess:** A's ² _____ adds sixty thousand dollars; B's adds one hundred twenty thousand. Those amounts belong beside the implementation figures, not outside the comparison merely because they occur later.
- 05 **Omar:** So A is one hundred eighty thousand overall, and B is two hundred ten thousand, assuming only these stated components.
- 06 **Tess:** Correct. Each is an ³ _____. We have not adjusted future amounts to present value or added escalation and other costs. Do not present either number as a fixed complete price.

E Conversation / continued

- 07 **Omar:** That changes the cost ranking. Management will ask why we cannot recommend A now. What is still missing from that decision?
- 08 **Tess:** Not yet. ⁴ _____ remains unassessed. A lower total on this basis does not prove that A will work at the site or satisfy the relevant performance and acceptance requirements.
- 09 **Omar:** Does B's shorter implementation mean the whole project finishes earlier?
- 10 **Tess:** No. We do not have the ⁵ _____ needed to make that claim. Installation duration and overall completion are different. The longer monitoring requirement also matters when describing what follows implementation.

Conversation continues on the next page.

Faster implementation is not necessarily a shorter project

CONVERSATION / CONTINUED

- 11 **Omar:** I see. We need to distinguish the physical work from the subsequent checks, and avoid making the short schedule sound like final closure.
- 12 **Tess:** Exactly. A ⁶ _____ tells us what an approach must achieve. Until those requirements and the technical evidence are assessed, neither schedule is a guarantee of a successful remedy.
- 13 **Omar:** The client team also wants to know whether the regulator will accept either proposal. Do these preliminary estimates tell us that?
- 14 **Tess:** They do not establish ⁷ _____. We should name that as unresolved rather than imply acceptance. Technical suitability, authority requirements, cost, and timing are related questions, but they are not interchangeable answers.
- 15 **Omar:** I need a useful heading for the comparison table. It should show the cost difference without sounding like a final recommendation.
- 16 **Tess:** Call it the stated implementation-plus-monitoring comparison. Avoid claiming a complete ⁸ _____ assessment. Put the amounts, periods, exclusions, and unresolved criteria together where the reader can see the limits immediately.
- 17 **Omar:** Could unforeseen work change either total? We have not included a reserve or any amount for uncertain additional work in these figures.
- 18 **Tess:** Yes. No ⁹ _____ is included here. That does not mean uncertainty is absent. It means this comparison has not assigned an additional amount to it.

Faster implementation is not necessarily a shorter project / continued

- 19 **Omar:** I will report A's lower stated total and B's shorter implementation, then list technical suitability, acceptance, and completion criteria as unresolved.
- 20 **Tess:** That is balanced. Keep the ¹⁰ _____ central when the qualified team develops its recommendation. Neither preliminary option is authorized simply because we have clarified the arithmetic or expressed a preference.

CHECK THE GAPS

1. implementation period / 2. monitoring period / 3. undiscounted estimate / 4. Feasibility / 5. completion criterion / 6. performance criterion / 7. regulatory acceptability / 8. life-cycle cost / 9. contingency allowance / 10. remedial objective

[Why these answers fit, page 143](#)

F Check accuracy and scope

Faster implementation is not necessarily a shorter project

Return to the case

Client representative Omar asks consultant Tess which of two preliminary remediation options is best. Option A estimates four weeks of implementation at \$120,000, followed by 12 months of monitoring at \$5,000 per month. Option B estimates two weeks of implementation at \$90,000, followed by 24 months of monitoring at the same monthly amount. All amounts are undiscounted planning estimates with no escalation or other costs included. Technical suitability, regulatory acceptability, and actual completion criteria remain unassessed. Neither option is authorized. Tess must compare the stated time and cost components without recommending a remedy from these figures alone.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. Which recommendation exceeds the evidence?

- A. A's limited total is \$30,000 lower.
- B. Both options need further technical assessment.
- C. The estimates exclude other costs.
- D. Select A because its lower stated total proves technical suitability.

2. What should appear beside the totals?

- A. Included components, undiscounted basis, exclusions, and unresolved criteria
- B. A guarantee that costs cannot change
- C. An assertion of regulator approval
- D. A claim that monitoring is unnecessary

[Answers and explanations, page 145](#)

Listen for the distinction

Swap roles for turns 11-20; contrast implementation, monitoring, and completion.

Replace best with a defined comparison

A client may ask for one clear winner when the evidence supports several limited comparisons. Answer the specific cost and time questions directly, then identify the unresolved technical and acceptance criteria that prevent a complete recommendation.

F Say it / transfer to a new case

Compare a smaller proposal

Option C estimates \$40,000 implementation plus six monitoring months at \$2,000 monthly. Option D estimates \$35,000 plus twelve months at \$2,000. Other costs are excluded; suitability remains unassessed.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

59,000 / 52,000 / unassessed / 12,000

- 01 **Consultant:** C's monitoring component is ¹ _____ dollars.
- 02 **Client:** C's stated combined estimate is ² _____ dollars.
- 03 **Consultant:** D's stated combined estimate is ³ _____ dollars.
- 04 **Client:** Technical suitability remains ⁴ _____.

CHECK THE GAPS

1. 12,000 / 2. 52,000 / 3. 59,000 / 4. unassessed

[Why these answers fit, page 145](#)

F Say it / transfer to a new case / continued

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "Faster implementation is not necessarily a shorter project". Omar: "The client team also wants to know whether the regulator will accept either proposal. Do these preliminary estimates tell us that?" Tess: [missing response] Omar: "I need a useful heading for the comparison table. It should show the cost difference without sounding like a final recommendation." Which response belongs in the gap?

- A.** Correct. Each is an undiscounted estimate. We have not adjusted future amounts to present value or added escalation and other costs. Do not present either number as a fixed complete price.
- B.** They do not establish regulatory acceptability. We should name that as unresolved rather than imply acceptance. Technical suitability, authority requirements, cost, and timing are related questions, but they are not interchangeable answers.
- C.** No. We do not have the completion criterion needed to make that claim. Installation duration and overall completion are different. The longer monitoring requirement also matters when describing what follows implementation.
- D.** That is balanced. Keep the remedial objective central when the qualified team develops its recommendation. Neither preliminary option is authorized simply because we have clarified the arithmetic or expressed a preference.

[Answers and explanations, page 146](#)

Review 2 / Meaning and context

Use language from the lessons you have completed. Choose one answer per question.

Case file

Revisit "Permitting and Agency Coordination" and "Remediation Options and Risk". Choose precise terminology, then reconstruct the missing responses using both neighboring turns. The final two questions also revisit earlier conversations.

1. A colleague needs the term for this meaning: A table linking each comment to a response and supporting material. Which term fits?

- A. assumption register
- B. comment-response matrix
- C. storm duration
- D. input parameter

2. A colleague needs the term for this meaning: Practical suitability of an approach under the relevant conditions. Which term fits?

- A. monitored natural attenuation
- B. residual risk
- C. remediation
- D. feasibility

3. Rebuild the exchange from "Trace a missing custody signature without inventing it". Elena: "The client may ask whether the missing signature proves that someone changed the bottle or contaminated its contents." Jonas: [missing response] Elena: "I can confirm that the labels match. I cannot use that identity check to vouch for the analytical value itself, can I?" Which response belongs in the gap?

- A. That works. Retain the eventual corrective record alongside the original evidence. Once a decision is made, state its basis and any limits, rather than merely replacing pending with an unexplained approved label.
- B. It does not establish either allegation. Describe the chain of custody gap accurately and refer the question to the review. Avoid turning missing documentation into an accusation about a person's conduct.
- C. We need a traceable amendment, not a reconstruction presented as an original entry. Preserve the record and request an attributed account of the handoff through the applicable quality process.
- D. Say data usability remains under review. We have not reached a rejection or acceptance decision. A documentation gap needs evaluation in context, not a conclusion chosen to sound decisive.

Review 2 / Meaning and context / continued

4. Rebuild the exchange from "Faster implementation is not necessarily a shorter project". Omar: "Could unforeseen work change either total? We have not included a reserve or any amount for uncertain additional work in these figures." Tess: [missing response] Omar: "I will report A's lower stated total and B's shorter implementation, then list technical suitability, acceptance, and completion criteria as unresolved." Which response belongs in the gap?

- A.** Yes. No contingency allowance is included here. That does not mean uncertainty is absent. It means this comparison has not assigned an additional amount to it.
- B.** A's monitoring period adds sixty thousand dollars; B's adds one hundred twenty thousand. Those amounts belong beside the implementation figures, not outside the comparison merely because they occur later.
- C.** Those are the implementation period and its associated cost. B also has twenty-four months of monitoring. We need to compare the same components before drawing a broader conclusion.
- D.** Not yet. Feasibility remains unassessed. A lower total on this basis does not prove that A will work at the site or satisfy the relevant performance and acceptance requirements.

[Answers and explanations, page 170](#)

A Read the situation

LESSON 05 / REGULATORY COMPLIANCE AND AUDITS

Report audit status using explicit evidence, ownership, and closure categories.

A documented action is not automatically a closed finding

A fictional facility review has six findings, F1-F6. Four have documented corrective-action plans and assigned owners. Of those four, F1 and F2 also have verified effectiveness evidence and are closed under the local review process. F3 and F4 remain open because their effectiveness checks are pending. F5 and F6 have neither a documented action plan nor an assigned owner. Coordinator Ruby and review lead Ian must correct a dashboard that calls all four planned findings closed. Ian will secure ownership for F5 and F6; the next status review is Thursday at 15:00, not a promise that all findings will be resolved.

People: Ruby, Compliance coordinator; Ian, Review lead.

Read the record

Choose one answer per question using the facts above.

1. How many findings are verified closed?

- A.** Six
- B.** None
- C.** Two
- D.** Four

2. How many findings remain open?

- A.** Three
- B.** Four
- C.** Two
- D.** Six

3. What is missing for F5 and F6?

- A.** Only the review date after verified closure
- B.** Only supporting evidence for completed actions
- C.** Both a documented action plan and an assigned owner
- D.** Only the effectiveness check after an assigned plan

[Answers and explanations, page 147](#)

B Vocabulary in use

CORE TERMS

compliance obligation

An applicable requirement that an organization must meet.

identify a compliance obligation

audit criterion

A requirement or benchmark used to evaluate evidence.

identify the audit criterion

finding

A documented result of comparing evidence with review criteria.

record a finding

observation

A noted condition whose classification depends on the review process.

record an observation

correction

Action addressing a detected problem or instance.

document the immediate correction

root cause

An underlying cause relevant to preventing recurrence.

investigate the root cause

audit scope

The defined coverage and boundaries of an audit or review.

agree the audit scope

objective evidence

Verifiable information supporting a finding or conclusion.

examine objective evidence

nonconformity

A failure to meet a specified requirement.

document a nonconformity

corrective-action plan

A documented proposal to address an identified problem and its cause.

approve a corrective-action plan

corrective action

Action aimed at removing a cause to prevent recurrence.

verify corrective action

action owner

The person accountable for a specified follow-up action.

assign an action owner

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

compliance obligation COMPLIANCE OBLIGATION

identify a compliance obligation

Keep the meaning precise: An applicable requirement that an organization must meet.

nonconformity NONCONFORMITY

document a nonconformity

Keep the meaning precise: A failure to meet a specified requirement.

B Precision and professional shorthand

EXTEND YOUR RANGE

target date

A planned completion or review date.

agree a target date

closure evidence

Information supporting closure under the applicable process.

retain closure evidence

overdue action

An action not completed by its applicable due date.

escalate an overdue action

audit trail

Records allowing actions and decisions to be traced.

preserve the audit trail

closure rate

The proportion of defined findings meeting the stated closure condition.

calculate the closure rate

escalation route

The defined path for raising an unresolved matter.

use the escalation route

effectiveness check

Evaluation of whether an action achieved its intended result.

complete an effectiveness check

open finding

A finding not yet meeting the stated closure requirements.

track an open finding

recurring finding

A finding involving a problem identified again.

investigate a recurring finding

evidence register

An organized record linking evidence to review items.

update the evidence register

management review

A structured leadership review of relevant performance and issues.

prepare for management review

verification status

The recorded stage of checking a claim or action.

report verification status

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

action owner **ACTION OWNER**

assign an action owner

Keep the meaning precise: The person accountable for a specified follow-up action.

overdue action **OVERDUE ACTION**

escalate an overdue action

Keep the meaning precise: An action not completed by its applicable due date.

Phrases that move the work forward

Correct the headline

Four findings have plans, but only two are closed.

Name the closed items

F1 and F2 have verified effectiveness evidence.

Identify the ownership gap

F5 and F6 have no assigned owner.

Calculate consistently

The verified closure rate is two out of six.

Preserve the remaining work

Four findings remain open.

Avoid a false deadline

Thursday at 15:00 is the status review.

Distinguish action types

An immediate correction does not automatically address recurrence.

Prevent silent relabeling

Do not change the closure definition to improve the dashboard.

State the denominator

The review contains six findings in total.

Describe the pending checks

F3 and F4 remain open pending effectiveness checks.

Separate milestones

A documented plan is not verified closure.

Limit the percentage

That is approximately 33.3% of this review's findings.

Assign the next coordination

Ian will secure ownership for F5 and F6.

Ask for evidence

Link each closure to its supporting record.

Use the agreed criterion

Apply the local effectiveness-based closure process.

Close the handoff

Bring the owner updates and pending evidence to Thursday's review.

Precision in real exchanges

Purpose: Describe the pending checks

Useful wording: F3 and F4 remain open pending effectiveness checks.

Purpose: Identify the ownership gap

Useful wording: F5 and F6 have no assigned owner.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which dashboard headline is accurate?

- A.** Four closed because four plans exist.
- B.** All six compliant because a review occurred.
- C.** No progress because four findings remain open.
- D.** Two closed, two awaiting effectiveness checks, two without plans or owners.

2. What is the verified closure rate?

- A.** Approximately 33.3%
- B.** Approximately 66.7%
- C.** 100%
- D.** 50%

3. A colleague needs the term for this meaning: Verifiable information supporting a finding or conclusion. Which term fits?

- A.** closure rate
- B.** objective evidence
- C.** correction
- D.** closure evidence

D Choose the response that fits / continued

4. Rebuild the exchange from "A documented action is not automatically a closed finding". Ruby: "F5 and F6 need a different label: no owner and no plan. Who is going to get those assignments agreed?" Ian: [missing response] Ruby: "You are coordinating the assignment, not necessarily taking responsibility for both corrective actions. I will show that distinction in the status note." Which response belongs in the gap?

- A.** Good. Preserve the audit trail for this correction too. We want the next reader to understand why the number changed, rather than assume the underlying findings suddenly became worse.
- B.** Tie it to the audit scope. It describes these six findings under this review, not the proportion of all facility obligations being met. The denominator needs a plain-language explanation.
- C.** I will secure an action owner for each. Until that is confirmed, do not put my name in the owner field as though the action responsibility has already been settled.
- D.** Exactly. Use the escalation route if the ownership decision remains unresolved. An empty field needs visible follow-up, but an invented owner would only make the report appear more complete.

[Answers and explanations, page 147](#)

One useful distinction

Two of six findings are closed, approximately 33.3%. Four of six have plans, approximately 66.7%. These percentages measure different states. Neither percentage alone establishes facility-wide compliance.

E Conversation

A documented action is not automatically a closed finding

A documented action is not automatically a closed finding

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

corrective-action plan / closure rate / target date / action owner / escalation route /
open finding / audit scope / evidence register / audit trail / effectiveness check

- 01 **Ruby:** The dashboard shows four of six findings closed. I traced the count to the four corrective-action plans, but that seems wrong.
- 02 **Ian:** It is. A ¹ _____ records what is intended. Only F1 and F2 have the verified effectiveness evidence required for closure under our local process. Correct the headline.
- 03 **Ruby:** F3 and F4 have owners and plans, but their effectiveness checks are pending. They should not disappear from the open list.
- 04 **Ian:** Keep each as an ² _____. We can acknowledge the planning progress while retaining the unresolved verification. Progress and closure are different categories, and both deserve an accurate place on the dashboard.
- 05 **Ruby:** F5 and F6 need a different label: no owner and no plan. Who is going to get those assignments agreed?
- 06 **Ian:** I will secure an ³ _____ for each. Until that is confirmed, do not put my name in the owner field as though the action responsibility has already been settled.

E Conversation / continued

- 07 **Ruby:** You are coordinating the assignment, not necessarily taking responsibility for both corrective actions. I will show that distinction in the status note.
- 08 **Ian:** Exactly. Use the ⁴ _____ if the ownership decision remains unresolved. An empty field needs visible follow-up, but an invented owner would only make the report appear more complete.
- 09 **Ruby:** For the summary percentage, two divided by six gives approximately thirty-three point three percent. Four plans would be approximately sixty-six point seven percent.
- 10 **Ian:** Label the first ⁵ _____. Label the other as plan coverage if we include it. Do not use the larger percentage with the closure label, even if the calculation itself is correct.

Conversation continues on the next page.

A documented action is not automatically a closed finding

CONVERSATION / CONTINUED

- 11 **Ruby:** The slide says '33.3% compliant.' That is worse than the wrong count: it makes six findings sound like the whole facility.
- 12 **Ian:** Tie it to the ⁶ _____. It describes these six findings under this review, not the proportion of all facility obligations being met. The denominator needs a plain-language explanation.
- 13 **Ruby:** I will link F1 and F2 to the verification records. A dashboard reader should be able to locate the basis for closure.
- 14 **Ian:** Put those references in the ⁷ _____. A closed label without the supporting record is harder to check and easier to misinterpret when the next reviewer takes over.
- 15 **Ruby:** For F3 and F4, I will show the checks as pending. I will not claim that the actions failed simply because verification is incomplete.
- 16 **Ian:** Correct. An ⁸ _____ still pending is not evidence of failure or success. Preserve that distinction when discussing progress with the teams responsible for the actions.
- 17 **Ruby:** Thursday at fifteen hundred is the next status review. Should the slide call that the deadline for closing all remaining findings?
- 18 **Ian:** No. That ⁹ _____ concerns our review meeting. Bring the ownership updates and verification status. Do not turn a coordination appointment into a resolution promise that the action teams have not made.
- 19 **Ruby:** The corrected dashboard will show two closed, two awaiting effectiveness checks, and two lacking plans and owners. It will keep the six-finding denominator.
- 20 **Ian:** Good. Preserve the ¹⁰ _____ for this correction too. We want the next reader to understand why the number changed, rather than assume the underlying findings suddenly became worse.

CHECK THE GAPS

1. corrective-action plan / 2. open finding / 3. action owner / 4. escalation route / 5. closure rate / 6. audit scope / 7. evidence register / 8. effectiveness check / 9. target date / 10. audit trail

[Why these answers fit, page 148](#)

F Check accuracy and scope

A documented action is not automatically a closed finding

Return to the case

A fictional facility review has six findings, F1-F6. Four have documented corrective-action plans and assigned owners. Of those four, F1 and F2 also have verified effectiveness evidence and are closed under the local review process. F3 and F4 remain open because their effectiveness checks are pending. F5 and F6 have neither a documented action plan nor an assigned owner. Coordinator Ruby and review lead Ian must correct a dashboard that calls all four planned findings closed. Ian will secure ownership for F5 and F6; the next status review is Thursday at 15:00, not a promise that all findings will be resolved.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. What must not be inferred from Thursday's review time?

- A. All findings will be resolved by then.
- B. Ian will report ownership progress.
- C. Pending evidence will be discussed.
- D. The team will update the status.

2. Which record best supports closure in this case?

- A. An approved corrective-action plan alone
- B. Confirmation that the action owner attended training
- C. A signed purchase order for replacement equipment
- D. Verified effectiveness evidence linked to the finding

[Answers and explanations, page 150](#)

Listen for the distinction

Swap roles for turns 11-20. Say the six-finding denominator with the closure rate.

Report progress without changing the definition

Teams want visible progress, and a completed plan can feel like a completed problem. Recognize the planning milestone while keeping closure tied to the stated evidence. Consistent categories make the report useful rather than pessimistic.

F Say it / transfer to a new case

Fix another closure report

A separate review has eight findings: three verified closed, two with plans awaiting effectiveness checks, and three with neither plans nor owners. The next status review is Monday.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

three / 37.5% / five / Monday

- 01 **Coordinator:** The number verified closed is ¹ _____.
- 02 **Reviewer:** The number still open is ² _____.
- 03 **Coordinator:** The verified closure rate is ³ _____.
- 04 **Reviewer:** The next status review is ⁴ _____.

CHECK THE GAPS

1. three / 2. five / 3. 37.5% / 4. Monday

[Why these answers fit, page 150](#)

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "A documented action is not automatically a closed finding". Ruby: "I will link F1 and F2 to the verification records. A dashboard reader should be able to locate the basis for closure." Ian: [missing response] Ruby: "For F3 and F4, I will show the checks as pending. I will not claim that the actions failed simply because verification is incomplete." Which response belongs in the gap?

- A.** It is. A corrective-action plan records what is intended. Only F1 and F2 have the verified effectiveness evidence required for closure under our local process. Correct the headline.
- B.** Put those references in the evidence register. A closed label without the supporting record is harder to check and easier to misinterpret when the next reviewer takes over.
- C.** Tie it to the audit scope. It describes these six findings under this review, not the proportion of all facility obligations being met. The denominator needs a plain-language explanation.
- D.** Exactly. Use the escalation route if the ownership decision remains unresolved. An empty field needs visible follow-up, but an invented owner would only make the report appear more complete.

[Answers and explanations, page 151](#)

A Read the situation

LESSON 06 / SUSTAINABILITY AND ESG REPORTING

Define emissions-reporting boundaries and replace an unsupported headline with a precise statement.

A partial electricity estimate cannot support a company-wide claim

Sustainability analyst Ana has estimated 40 metric tonnes of carbon dioxide equivalent from purchased electricity used at two offices during 2025. The calculation excludes the factory, company vehicles, purchased heat, and value-chain emissions. It has not undergone independent assurance. Communications manager Leo has drafted the headline "Our company is carbon neutral." No company-wide inventory or substantiation for that claim is available. Ana and Leo must replace the headline, name the included offices, period, and electricity source, and list the exclusions. They must not imply that omitted sources have zero emissions or that an estimate has been independently verified.

People: Ana, Sustainability analyst; Leo, Communications manager.

Read the record

Choose one answer per question using the facts above.

1. What does the 40-tonne estimate cover?

- A. Purchased electricity at two offices during 2025
- B. The entire company and value chain
- C. All factory emissions
- D. Only emissions from company vehicles

2. Which headline is unsupported?

- A. Our company is carbon neutral.
- B. We estimated electricity-related emissions for two offices.
- C. The calculation excludes the factory.
- D. Independent assurance has not been completed.

3. What must not be inferred from excluded sources?

- A. The inventory is incomplete for a company-wide claim.
- B. More work is needed to assess the broader footprint.
- C. Their emissions are zero.
- D. They are outside this calculation.

[Answers and explanations, page 152](#)

B Vocabulary in use

CORE TERMS

greenhouse gas (GHG)

A gas that contributes to the atmosphere's heat-trapping effect.

quantify greenhouse gas emissions

emissions inventory

An accounting of emissions within defined boundaries and a period.

compile an emissions inventory

operational boundary

The categories of emissions included in an inventory.

describe the operational boundary

Scope 2

Indirect emissions from generation of purchased or acquired energy consumed by the organization.

calculate Scope 2 emissions

purchased electricity

Electricity obtained from an external supplier for consumption.

quantify purchased electricity use

value chain

Activities upstream and downstream associated with an organization's products or operations.

map the value chain

carbon dioxide equivalent (CO₂e)

A common unit expressing different gases using a specified warming-potential basis.

report tonnes of CO₂e

organizational boundary

The operations included under the chosen organizational accounting approach.

define the organizational boundary

Scope 1

Direct emissions from sources owned or controlled within the inventory boundary.

report Scope 1 emissions

Scope 3

Other indirect value-chain emissions within the applicable accounting framework.

assess Scope 3 categories

purchased heat

Heat acquired from an external source for use.

account for purchased heat

activity data

Measured or estimated activity used in calculating emissions.

collect activity data

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

greenhouse gas (GHG) GREENHOUSE GAS (GHG)

quantify greenhouse gas emissions

Keep the meaning precise: A gas that contributes to the atmosphere's heat-trapping effect.

Scope 1 SCOPE 1

report Scope 1 emissions

Keep the meaning precise: Direct emissions from sources owned or controlled within the inventory boundary.

B Precision and professional shorthand

EXTEND YOUR RANGE

emission factor

A coefficient relating an activity to an emissions quantity.

document the emission factor

reporting year

The period assigned to an emissions or sustainability report.

specify the reporting year

location-based method

A Scope 2 method reflecting average emissions associated with the relevant grids.

describe the location-based method

assurance

An independent evaluation of reported information under an agreed engagement.

obtain independent assurance

carbon-neutrality claim

An assertion about balancing or neutralizing emissions under a specified substantiated basis.

substantiate a carbon-neutrality claim

global warming potential (GWP)

A measure comparing a gas's warming effect over a specified time horizon.

state the GWP basis

base year

A reference year used for a defined comparison or target.

establish a base year

market-based method

A Scope 2 method using applicable contractual instruments under relevant criteria.

document the market-based method

reporting boundary

The defined extent of what a report includes.

disclose the reporting boundary

avoided emissions

Estimated emissions not occurring relative to a specified counterfactual.

distinguish avoided emissions

B Precision and professional shorthand / continued

carbon credit

A unit representing a specified quantified emissions reduction or removal under a program.

examine carbon credit documentation

retirement

The recorded use of a credit that removes it from further use under its registry rules.

verify credit retirement

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

activity data ACTIVITY DATA

collect activity data

Keep the meaning precise: Measured or estimated activity used in calculating emissions.

location-based method LOCATION-BASED METHOD

describe the location-based method

Keep the meaning precise: A Scope 2 method reflecting average emissions associated with the relevant grids.

Phrases that move the work forward

Name the measured activity

The estimate covers purchased electricity at two offices.

Give the correct unit

The estimate is 40 metric tonnes of CO₂e.

Correct the headline

The evidence does not support a carbon-neutrality claim.

Avoid a zero assumption

Excluded does not mean zero emissions.

Explain Scope 2 carefully

Purchased energy categories extend beyond electricity.

Separate the quantities

Electricity use and CO₂e are different measures.

Protect the claim

Keep the boundary beside the reported figure.

Ask for substantiation

What evidence supports the proposed public claim?

State the reporting period

The reporting year is 2025.

Limit the boundary

This is not a company-wide emissions inventory.

Preserve exclusions

The factory, vehicles, purchased heat, and value chain are excluded.

State assurance status

Independent assurance has not been completed.

Keep methods visible

Document the calculation method and emission factors.

Avoid unsupported comparisons

We have not established a comparable base year.

Avoid substitution

A credit purchase is not a complete emissions inventory.

Close accurately

Publish the limited estimate with its period, boundary, and qualifications.

Precision in real exchanges

Purpose: Limit the boundary

Useful wording: This is not a company-wide emissions inventory.

Purpose: Correct the headline

Useful wording: The evidence does not support a carbon-neutrality claim.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which replacement headline is supported?

- A.** Factory and fleet emissions confirmed as zero.
- B.** Estimated 2025 purchased-electricity emissions for two offices: 40 tonnes CO₂e.
- C.** Company-wide emissions eliminated.
- D.** All Scope 2 sources independently verified.

2. Which statement about Scope 2 is accurate?

- A.** It can include purchased heat, steam, and cooling as well as electricity.
- B.** It always means only office electricity.
- C.** It means every value-chain emission.
- D.** It excludes all acquired energy.

3. A colleague needs the term for this meaning: The operations included under the chosen organizational accounting approach. Which term fits?

- A.** purchased electricity
- B.** organizational boundary
- C.** carbon-neutrality claim
- D.** reporting year

D Choose the response that fits / continued

4. Rebuild the exchange from "A partial electricity estimate cannot support a company-wide claim". Leo: "I will name the two offices and year. The unit is tonnes of carbon dioxide equivalent, not kilowatt-hours of electricity consumed." Ana: [missing response] Leo: "Can I say we have completed Scope 2 reporting? I thought Scope 2 was simply purchased electricity, which is what this file calculates." Which response belongs in the gap?

- A.** Correct. CO2e is the emissions unit. Electricity consumption is activity data used in the calculation, alongside the applicable factors and method. Keep those quantities distinct in the table and headline.
- B.** No. Assurance has not been completed. Say estimated and give the calculation boundary. Accurate confidence comes from describing what we have, not borrowing a status the evidence does not support.
- C.** A carbon credit purchase would not repair the missing boundary or establish the whole claim. Its quality, use, and relevant claim requirements would need their own evidence and review.
- D.** It is a limited emissions inventory calculation for purchased electricity at two offices in 2025. It excludes the factory, vehicles, purchased heat, and value chain. That headline is unsupported.

[Answers and explanations, page 152](#)

One useful distinction

Scope 2 is not limited to electricity: it can include purchased or acquired steam, heat, and cooling. This case includes only electricity at two offices, not the entire company or all Scope 2 sources.

E Conversation

A partial electricity estimate cannot support a company-wide claim

A partial electricity estimate cannot support a company-wide claim

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

CO2e / emission factor / Scope 2 / Assurance / base year / carbon credit / Scope 1 / reporting boundary / Scope 3 / emissions inventory

- 01 **Leo:** The headline says our company is carbon neutral. I assumed the forty-tonne estimate covered the whole footprint.
- 02 **Ana:** It is a limited ¹ _____ calculation for purchased electricity at two offices in 2025. It excludes the factory, vehicles, purchased heat, and value chain. That headline is unsupported.
- 03 **Leo:** Understood. The calculation may be usable, but I have put a company-wide claim above a two-office number.
- 04 **Ana:** Exactly. Keep the ² _____ beside the number. We can communicate the estimate clearly without claiming that every operation or every relevant emissions source has been included.
- 05 **Leo:** I will name the two offices and year. The unit is tonnes of carbon dioxide equivalent, not kilowatt-hours of electricity consumed.
- 06 **Ana:** Correct. ³ _____ is the emissions unit. Electricity consumption is activity data used in the calculation, alongside the applicable factors and method. Keep those quantities distinct in the table and headline.

E Conversation / continued

- 07 **Leo:** Can I say we have completed Scope 2 reporting? I thought Scope 2 was simply purchased electricity, which is what this file calculates.
- 08 **Ana:** ⁴ _____ can include purchased steam, heat, and cooling as well as electricity. This file covers only two offices and excludes purchased heat. Do not describe it as complete company-wide Scope 2 reporting.
- 09 **Leo:** The excluded factory and company vehicles must remain visible. Otherwise a reader could assume they were checked and contributed no emissions.
- 10 **Ana:** Yes. Relevant direct sources may fall within ⁵ _____, depending on the organizational boundary. Excluding a source from this calculation says nothing by itself about whether that source emits zero, forty, or any other amount.

Conversation continues on the next page.

A partial electricity estimate cannot support a company-wide claim

CONVERSATION / CONTINUED

- 11 **Leo:** What about suppliers and customer use? Those are not included either, so our statement should not imply that we measured them.
- 12 **Ana:** Keep the relevant ⁶ _____ boundary explicit. The applicable categories require their own assessment. A two-office electricity figure cannot stand in for upstream and downstream emissions simply because it is the number currently available.
- 13 **Leo:** Our team checked the arithmetic. Would verified imply independent review rather than our internal check?
- 14 **Ana:** No. ⁷ _____ has not been completed. Say estimated and give the calculation boundary. Accurate confidence comes from describing what we have, not borrowing a status the evidence does not support.
- 15 **Leo:** Someone suggested purchasing forty credits and retaining the carbon-neutral headline. We have no company-wide inventory or substantiation package for that claim.
- 16 **Ana:** A ⁸ _____ purchase would not repair the missing boundary or establish the whole claim. Its quality, use, and relevant claim requirements would need their own evidence and review.
- 17 **Leo:** Could we compare this estimate with last year instead? I do not have a matching calculation for the same two offices and methodology.
- 18 **Ana:** Then do not invent a ⁹ _____ comparison. A reduction claim needs a comparable basis and supporting data. We can report the current limited estimate without claiming a trend that has not been established.

A partial electricity estimate cannot support a company-wide claim / continued

- 19 **Leo:** The revised headline will state estimated 2025 purchased-electricity emissions for two offices: forty metric tonnes of CO₂e. The exclusions will appear immediately below.
- 20 **Ana:** Good. Keep the ¹⁰ _____ and method documentation traceable in the supporting material. That gives readers a precise statement and reviewers a basis to examine, without implying company-wide neutrality or independent assurance.

CHECK THE GAPS

1. emissions inventory / **2.** reporting boundary / **3.** CO₂e / **4.** Scope 2 / **5.** Scope 1 / **6.** Scope 3 / **7.** Assurance / **8.** carbon credit / **9.** base year / **10.** emission factor

[Why these answers fit, page 154](#)

F Check accuracy and scope

A partial electricity estimate cannot support a company-wide claim

Return to the case

Sustainability analyst Ana has estimated 40 metric tonnes of carbon dioxide equivalent from purchased electricity used at two offices during 2025. The calculation excludes the factory, company vehicles, purchased heat, and value-chain emissions. It has not undergone independent assurance. Communications manager Leo has drafted the headline "Our company is carbon neutral." No company-wide inventory or substantiation for that claim is available. Ana and Leo must replace the headline, name the included offices, period, and electricity source, and list the exclusions. They must not imply that omitted sources have zero emissions or that an estimate has been independently verified.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. What does lack of independent assurance mean here?

- A. All emissions are therefore zero.
- B. The company is automatically carbon neutral.
- C. The estimate must not be described as independently assured.
- D. The number is automatically proven false.

2. Which question addresses the headline's main defect?

- A. Does the evidence cover and substantiate the company-wide claim?
- B. Can the office electricity invoices reconcile to the estimate?
- C. Are metric tonnes used consistently in the office calculation?
- D. Were both office managers consulted about their meter data?

[Answers and explanations, page 155](#)

Listen for the distinction

Swap roles for turns 11-20, distinguishing internal calculation from independent assurance.

A narrower claim can be more credible

Communications teams value simple messages, while technical teams need boundaries and qualifications. Collaborate on a clear positive description of what was actually measured. Do not treat a shorter headline as permission to remove the scope that makes the statement true.

F Say it / transfer to a new case

Narrow another emissions headline

A calculation estimates 12 tonnes CO2e from purchased electricity at one warehouse in 2024. Fuel use and transport are excluded. Independent assurance has not been completed.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

12 / 2024 / not / warehouse

- 01 **Analyst:** The estimated emissions are ¹ _____ tonnes CO2e.
- 02 **Editor:** The included location is one ² _____.
- 03 **Analyst:** The reporting year is ³ _____.
- 04 **Editor:** Independent assurance has ⁴ _____ been completed.

CHECK THE GAPS

1. 12 / 2. warehouse / 3. 2024 / 4. not

[Why these answers fit, page 155](#)

F Say it / transfer to a new case / continued

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "A partial electricity estimate cannot support a company-wide claim". Leo: "Our team checked the arithmetic. Would verified imply independent review rather than our internal check?" Ana: [missing response] Leo: "Someone suggested purchasing forty credits and retaining the carbon-neutral headline. We have no company-wide inventory or substantiation package for that claim." Which response belongs in the gap?

- A.** No. Assurance has not been completed. Say estimated and give the calculation boundary. Accurate confidence comes from describing what we have, not borrowing a status the evidence does not support.
- B.** Correct. CO2e is the emissions unit. Electricity consumption is activity data used in the calculation, alongside the applicable factors and method. Keep those quantities distinct in the table and headline.
- C.** It is a limited emissions inventory calculation for purchased electricity at two offices in 2025. It excludes the factory, vehicles, purchased heat, and value chain. That headline is unsupported.
- D.** A carbon credit purchase would not repair the missing boundary or establish the whole claim. Its quality, use, and relevant claim requirements would need their own evidence and review.

[Answers and explanations, page 156](#)

Review 3 / Meaning and context

Use language from the lessons you have completed. Choose one answer per question.

Case file

Revisit "Regulatory Compliance and Audits" and "Sustainability and ESG Reporting". Choose precise terminology, then reconstruct the missing responses using both neighboring turns. The final two questions also revisit earlier conversations.

1. A colleague needs the term for this meaning: A requirement or benchmark used to evaluate evidence. Which term fits?

- A. corrective-action plan
- B. evidence register
- C. audit criterion
- D. effectiveness check

2. A colleague needs the term for this meaning: Other indirect value-chain emissions within the applicable accounting framework. Which term fits?

- A. greenhouse gas (GHG)
- B. emission factor
- C. assurance
- D. Scope 3

3. Rebuild the exchange from "Faster implementation is not necessarily a shorter project". Omar: "Does B's shorter implementation mean the whole project finishes earlier?" Tess: [missing response] Omar: "I see. We need to distinguish the physical work from the subsequent checks, and avoid making the short schedule sound like final closure." Which response belongs in the gap?

- A. Correct. Each is an undiscounted estimate. We have not adjusted future amounts to present value or added escalation and other costs. Do not present either number as a fixed complete price.
- B. They do not establish regulatory acceptability. We should name that as unresolved rather than imply acceptance. Technical suitability, authority requirements, cost, and timing are related questions, but they are not interchangeable answers.
- C. That is balanced. Keep the remedial objective central when the qualified team develops its recommendation. Neither preliminary option is authorized simply because we have clarified the arithmetic or expressed a preference.
- D. No. We do not have the completion criterion needed to make that claim. Installation duration and overall completion are different. The longer monitoring requirement also matters when describing what follows implementation.

Review 3 / Meaning and context / continued

4. Rebuild the exchange from "A partial electricity estimate cannot support a company-wide claim". Leo: "Could we compare this estimate with last year instead? I do not have a matching calculation for the same two offices and methodology." Ana: [missing response] Leo: "The revised headline will state estimated 2025 purchased-electricity emissions for two offices: forty metric tonnes of CO₂e. The exclusions will appear immediately below." Which response belongs in the gap?

- A.** Then do not invent a base year comparison. A reduction claim needs a comparable basis and supporting data. We can report the current limited estimate without claiming a trend that has not been established.
- B.** Keep the relevant Scope 3 boundary explicit. The applicable categories require their own assessment. A two-office electricity figure cannot stand in for upstream and downstream emissions simply because it is the number currently available.
- C.** Scope 2 can include purchased steam, heat, and cooling as well as electricity. This file covers only two offices and excludes purchased heat. Do not describe it as complete company-wide Scope 2 reporting.
- D.** Yes. Relevant direct sources may fall within Scope 1, depending on the organizational boundary. Excluding a source from this calculation says nothing by itself about whether that source emits zero, forty, or any other amount.

[Answers and explanations, page 173](#)

A Read the situation

LESSON 07 / COMMUNITY AND STAKEHOLDER MEETINGS

Acknowledge residents and explain preliminary results in plain language with precise boundaries.

Answer a safety question without extending the evidence

Consultant Suki and community representative Daniel are preparing a public meeting about a fictional environmental study. Preliminary laboratory results cover water samples from locations S1, S2, and S3 collected on one June morning and tested for the listed analytes. For analyte X, each result is below the laboratory reporting limit. Other locations, other dates, and unlisted substances are outside these results. The study has not established area-wide safety or a drinking-water determination. Suki will explain these limits, record questions, and direct requests for current health or water-use advice to the responsible public authority without inventing advice.

People: Daniel, Community representative; Suki, Environmental consultant.

Read the record

Choose one answer per question using the facts above.

1. What does the sampling cover?

- A. Every substance in the area
- B. All drinking-water decisions
- C. Three locations on one June morning
- D. Every location in every season

2. What does below the reporting limit establish?

- A. Every substance is absent.
- B. X is proven to be exactly zero everywhere.
- C. The laboratory did not report a quantitative value at or above that limit for X.
- D. The entire area is safe.

3. Where should requests for current health or water-use advice go?

- A. The responsible public authority
- B. The consultant using the three-point chart alone
- C. The laboratory applying a reporting limit as a health standard
- D. The meeting chair interpreting the audience's consensus

[Answers and explanations, page 157](#)

B Vocabulary in use

CORE TERMS

stakeholder

A person or group affected by or interested in a project.

engage a stakeholder

public meeting

A gathering for sharing information and receiving public questions.

prepare a public meeting

sampling event

A defined occasion or period of sample collection.

describe the sampling event

preliminary result

A result not yet at the final review or reporting stage.

qualify a preliminary result

quantitation

Determination of an amount or concentration under the method's conditions.

describe the quantitation limit

cleanup level

An applicable concentration or criterion used in a defined cleanup context.

identify the applicable cleanup level

community liaison

A contact connecting a project team with affected community members.

appoint a community liaison

sampling location

The place where a sample was collected.

identify the sampling location

analyte

A substance or property targeted by an analysis.

list the target analytes

non-detect

A result indicating an analyte was not detected at the stated analytical threshold.

explain a non-detect

screening level

A comparison value used to identify matters needing further evaluation.

interpret a screening level

exposure assessment

Evaluation of how, how much, and under what conditions exposure may occur.

conduct an exposure assessment

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

stakeholder **STAKEHOLDER**

engage a stakeholder

Keep the meaning precise: A person or group affected by or interested in a project.

analyte **ANALYTE**

list the target analytes

Keep the meaning precise: A substance or property targeted by an analysis.

B Precision and professional shorthand

EXTEND YOUR RANGE

spatial coverage

The geographic extent represented by the data.
explain spatial coverage

representativeness

The extent to which data reflect the conditions relevant to a question.
evaluate representativeness

risk communication

Exchange of information about risks, evidence, and relevant uncertainties.
improve risk communication

question log

A record of questions and their follow-up status.
maintain a question log

public advisory

An official notice giving relevant information or guidance to the public.
check the current public advisory

follow-up contact

A named person or channel for subsequent communication.
provide a follow-up contact

temporal coverage

The period or times represented by the data.
explain temporal coverage

uncertainty

A limitation in knowledge or confidence about a result or inference.
communicate uncertainty

plain-language summary

An account using accessible words while preserving the meaning.
prepare a plain-language summary

responsible authority

The body with the relevant responsibility for the matter.
contact the responsible authority

meeting record

Documentation of discussion, questions, and commitments.
circulate the meeting record

area-wide claim

A statement applied to an entire geographic area.
qualify an area-wide claim

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

exposure assessment EXPOSURE ASSESSMENT

conduct an exposure assessment

Keep the meaning precise: Evaluation of how, how much, and under what conditions exposure may occur.

risk communication RISK COMMUNICATION

improve risk communication

Keep the meaning precise: Exchange of information about risks, evidence, and relevant uncertainties.

Phrases that move the work forward

Acknowledge the concern

I understand that you need information for everyday decisions.

Name the tested substance

This statement concerns analyte X.

Avoid an absence claim

Below the limit does not mean proven zero.

Limit the geography

We cannot extend them to every location in the area.

Keep untested substances separate

The report does not characterize substances that were not analyzed.

Answer respectfully

That is a reasonable question, but these results do not answer it fully.

Avoid inventing guidance

I will not create a drinking-water instruction from this chart.

Provide continuity

The meeting record will identify the follow-up contact.

State the sampling coverage

These results cover S1, S2, and S3 on one June morning.

Explain the result

X was below the laboratory reporting limit in these samples.

Preserve the stage

These results are preliminary.

Limit the time

One sampling event does not represent every season.

Avoid a health guarantee

This study has not established an area-wide safety determination.

Refer the advice question

Please consult the responsible public authority for current water-use advice.

Record the question

We will include that request in the question log.

Close with the evidence

We will distinguish the measured findings from the questions still open.

Precision in real exchanges

Purpose: Explain the result

Useful wording: X was below the laboratory reporting limit in these samples.

Purpose: Avoid an absence claim

Useful wording: Below the limit does not mean proven zero.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. Which public statement is accurate?

- A.** X was below the reporting limit in these three preliminary samples.
- B.** X is absent from the entire area.
- C.** Every water source is safe to drink.
- D.** No further question is possible anywhere.

2. Which phrase improperly expands time coverage?

- A.** Other dates are outside these results.
- B.** The area is safe in every season.
- C.** The samples were collected on one June morning.
- D.** This is one sampling event.

3. A colleague needs the term for this meaning: The place where a sample was collected. Which term fits?

- A.** sampling location
- B.** representativeness
- C.** public advisory
- D.** quantitation

D Choose the response that fits / continued

4. Rebuild the exchange from "Answer a safety question without extending the evidence". Daniel: "Those limits may sound evasive. Can you explain the result briefly without calling the whole area clean?" Suki: [missing response] Daniel: "We should name the June collection date. Otherwise the chart could appear to describe the whole year." Which response belongs in the gap?

- A.** I understand that concern. Start with the actual spatial coverage: locations S1, S2, and S3. We should not imply that these three points represent every location or every possible exposure in the area.
- B.** Good. Keep risk communication both precise and respectful. We can acknowledge the practical concern, explain the evidence, and provide a route for further advice without claiming that this limited dataset establishes area-wide safety.
- C.** Use a plain-language summary, but avoid clean as a blanket label. Say what was tested, where, and when. Then explain that the result does not establish conditions at untested locations or for unlisted substances.
- D.** Explain the analyte and the limit together. The laboratory did not report a quantitative value at or above its reporting limit for X in these samples. That is not proof of zero.

[Answers and explanations, page 157](#)

One useful distinction

Below the reporting limit does not mean zero. It also does not describe untested substances, places, or dates. Distinguish the laboratory statement from a conclusion about health or allowable water use.

E Conversation

Answer a safety question without extending the evidence

Answer a safety question without extending the evidence

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

follow-up contact / screening level / temporal coverage / responsible authority /
risk communication / plain-language summary / question log / preliminary result /
spatial coverage / analyte

- 01 **Daniel:** Residents will ask whether the results prove the whole area is safe. They need to know what this means for their families.
- 02 **Suki:** I understand that concern. Start with the actual ¹ _____: locations S1, S2, and S3. We should not imply that these three points represent every location or every possible exposure in the area.
- 03 **Daniel:** The chart shows X below the reporting limit at all three locations. Some readers will interpret that as no X anywhere.
- 04 **Suki:** Explain the ² _____ and the limit together. The laboratory did not report a quantitative value at or above its reporting limit for X in these samples. That is not proof of zero.
- 05 **Daniel:** Those limits may sound evasive. Can you explain the result briefly without calling the whole area clean?
- 06 **Suki:** Use a ³ _____, but avoid clean as a blanket label. Say what was tested, where, and when. Then explain that the result does not establish conditions at untested locations or for unlisted substances.

E Conversation / continued

- 07 **Daniel:** We should name the June collection date. Otherwise the chart could appear to describe the whole year.
- 08 **Suki:** Exactly. The ⁴ _____ is limited. One sampling event does not show seasonal variation or every later condition. A clear date helps readers understand what the study actually observed.
- 09 **Daniel:** If someone asks whether they can drink water from a particular source, can we answer from these results alone?
- 10 **Suki:** No. We need to identify the ⁵ _____ for current health or water-use advice. These preliminary study results have not established a drinking-water determination. We must not improvise one during the meeting.

Conversation continues on the next page.

Answer a safety question without extending the evidence

CONVERSATION / CONTINUED

- 11 **Daniel:** Please give us a named contact, not just 'ask the authorities.' Families will want to know where their unanswered question is going.
- 12 **Suki:** Provide the appropriate ⁶ _____ and record the question. Explain why the study does not answer it, and distinguish that limitation from unwillingness to listen or help them locate the relevant guidance.
- 13 **Daniel:** Someone may bring a screening-level table from another report. Should we tell them any number below that table is automatically safe?
- 14 **Suki:** No. A ⁷ _____ has a defined purpose and assumptions. It is not automatically a cleanup standard or a universal dividing line between safe and unsafe for every place, substance, and exposure.
- 15 **Daniel:** The meeting materials should also make clear that the results are preliminary. Does that mean we should avoid discussing them at all?
- 16 **Suki:** We can discuss each ⁸ _____ accurately. State the stage and limitations, and avoid final claims it cannot support. Withholding every explanation would leave readers to supply their own, possibly broader interpretation.
- 17 **Daniel:** I will organize the questions by topic and identify which ones the study can answer and which need a separate response.
- 18 **Suki:** Maintain a ⁹ _____ with the follow-up status. Do not mark a question answered merely because someone spoke about a related issue. The record should show the actual response or remaining need.

Answer a safety question without extending the evidence / continued

- 19 **Daniel:** Our closing message will give the three locations, one June morning, listed analytes, below-limit result for X, and the limits on wider conclusions.
- 20 **Suki:** Good. Keep ¹⁰ _____ both precise and respectful. We can acknowledge the practical concern, explain the evidence, and provide a route for further advice without claiming that this limited dataset establishes area-wide safety.

CHECK THE GAPS

1. spatial coverage / 2. analyte / 3. plain-language summary / 4. temporal coverage / 5. responsible authority / 6. follow-up contact / 7. screening level / 8. preliminary result / 9. question log / 10. risk communication

[Why these answers fit, page 158](#)

F Check accuracy and scope

Answer a safety question without extending the evidence

Return to the case

Consultant Suki and community representative Daniel are preparing a public meeting about a fictional environmental study. Preliminary laboratory results cover water samples from locations S1, S2, and S3 collected on one June morning and tested for the listed analytes. For analyte X, each result is below the laboratory reporting limit. Other locations, other dates, and unlisted substances are outside these results. The study has not established area-wide safety or a drinking-water determination. Suki will explain these limits, record questions, and direct requests for current health or water-use advice to the responsible public authority without inventing advice.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. How should Suki respond to a drinking-water question?

- A. Acknowledge the concern and refer current advice to the responsible authority.
- B. Invent a rule from the below-limit result.
- C. Guarantee safety because three samples exist.
- D. Refuse to record the question because it is inconvenient.

2. Which comparison is correct?

- A. A below-limit result replaces an exposure assessment.
- B. Screening levels and cleanup levels serve different purposes.
- C. Every screening value is automatically a cleanup standard.
- D. A screening exceedance proves a specific health outcome.

[Answers and explanations, page 160](#)

Listen for the distinction

Swap roles for turns 11-20; distinguish a screening value from a health determination.

Answer the human question as well as the technical one

Residents are asking about daily decisions, not merely laboratory vocabulary. Acknowledge that practical concern before explaining the evidence. Avoid using uncertainty as a reason to withdraw from the conversation or using reassurance as a substitute for a qualified answer.

F Say it / transfer to a new case

Limit another public summary

A preliminary soil report covers locations P1 and P2 sampled on 8 May. It reports analyte Y only. The report does not characterize other locations, dates, or substances.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

preliminary / Y / two / 8 May

- 01 **Consultant:** The report covers ¹ _____ locations.
- 02 **Resident:** The collection date was ² _____.
- 03 **Consultant:** The reported analyte is ³ _____.
- 04 **Resident:** The results are still ⁴ _____.

CHECK THE GAPS

1. two / 2. 8 May / 3. Y / 4. preliminary

[Why these answers fit, page 160](#)

F Say it / transfer to a new case / continued

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "Answer a safety question without extending the evidence". Daniel: "Someone may bring a screening-level table from another report. Should we tell them any number below that table is automatically safe?" Suki: [missing response] Daniel: "The meeting materials should also make clear that the results are preliminary. Does that mean we should avoid discussing them at all?" Which response belongs in the gap?

- A.** No. We need to identify the responsible authority for current health or water-use advice. These preliminary study results have not established a drinking-water determination. We must not improvise one during the meeting.
- B.** Provide the appropriate follow-up contact and record the question. Explain why the study does not answer it, and distinguish that limitation from unwillingness to listen or help them locate the relevant guidance.
- C.** No. A screening level has a defined purpose and assumptions. It is not automatically a cleanup standard or a universal dividing line between safe and unsafe for every place, substance, and exposure.
- D.** Explain the analyte and the limit together. The laboratory did not report a quantitative value at or above its reporting limit for X in these samples. That is not proof of zero.

[Answers and explanations, page 161](#)

A Read the situation

LESSON 08 / PROPOSAL, SCOPE, AND CLIENT EXPECTATIONS

Clarify a change request, distinguish locations from samples, and negotiate a documented next step.

Price the additional work before promising its delivery

The signed assignment covers six sampling locations during one site visit, followed by the agreed laboratory work and report. Client manager Grace requests four additional locations and a second visit. Project manager Malik has not assessed the additional methods, sample quantities, laboratory work, access requirements, cost, or schedule. Under this fictional agreement, additional field work requires a written approved change before it starts. Malik will provide a change-estimate status on Wednesday at 12:00; that is not a field-visit or report-delivery commitment. The existing six-location scope remains unchanged unless the parties approve a change.

People: Grace, Client manager; Malik, Project manager.

Read the record

Choose one answer per question using the facts above.

1. What does the existing agreement cover?

- A. Unlimited sampling whenever requested
- B. Only a proposal with no defined locations
- C. Six locations during one visit, with agreed laboratory work and report
- D. Ten locations across two approved visits

2. What is requested as additional work?

- A. Four more locations and a second visit
- B. Four fewer locations
- C. Elimination of laboratory analysis
- D. Immediate acceptance of a final report

3. What does Wednesday at 12:00 represent?

- A. A change-estimate status update
- B. A confirmed field start
- C. Guaranteed final report delivery
- D. Automatic change approval

[Answers and explanations, page 162](#)

B Vocabulary in use

CORE TERMS

scope of work

The agreed tasks, boundaries, and deliverables of an assignment.

define the scope of work

assumption

A condition used in planning that needs appropriate confirmation.

document a pricing assumption

change request

A proposed modification to agreed work.

assess a change request

additional service

Work beyond the existing agreed services.

price an additional service

cost breakdown

An allocation of a total estimate into named components.

provide a cost breakdown

demobilization

Removing resources and closing out field presence after activity.

account for demobilization

deliverable

A specified output supplied under an agreement.

confirm the deliverable

exclusion

Work or cost explicitly outside an agreed scope or estimate.

state the exclusion

change authorization

Approval permitting a defined modification under the applicable agreement.

obtain change authorization

fee estimate

A projected charge based on stated work and assumptions.

prepare a fee estimate

mobilization

Preparing and moving resources to begin field activity.

estimate mobilization costs

site access

Permission and practical arrangements for entering a location.

confirm site access

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

scope of work SCOPE OF WORK

define the scope of work

Keep the meaning precise: The agreed tasks, boundaries, and deliverables of an assignment.

change authorization CHANGE AUTHORIZATION

obtain change authorization

Keep the meaning precise: Approval permitting a defined modification under the applicable agreement.

B Precision and professional shorthand

EXTEND YOUR RANGE

sample count

The number of samples specified for collection or analysis.

verify the sample count

laboratory turnaround

The specified or estimated time for laboratory completion under stated conditions.

confirm laboratory turnaround

dependency

An input or event needed before another step can proceed.

identify a schedule dependency

schedule impact

The effect of a proposed change on planned timing.

assess the schedule impact

acceptance condition

A requirement used to determine whether a deliverable is accepted.

define the acceptance condition

commercial review

Evaluation of proposed scope, price, and contractual terms.

complete commercial review

analytical suite

The set of tests or analytes included in an analytical assignment.

define the analytical suite

reporting allowance

Planned time or resources for preparing and reviewing the report.

include a reporting allowance

lead time

The period needed before a resource, service, or activity is available.

check the lead time

not-to-exceed amount

A stated spending limit subject to the agreement's terms and scope.

confirm the not-to-exceed amount

work order

A document authorizing or specifying work under the relevant arrangement.

issue a work order

client sign-off

Documented client approval under the applicable process.

obtain client sign-off

Say it in context

Stress the highlighted expression. Keep the surrounding words connected; pause at the end of the phrase.

site access SITE ACCESS

confirm site access

Keep the meaning precise: Permission and practical arrangements for entering a location.

dependency DEPENDENCY

identify a schedule dependency

Keep the meaning precise: An input or event needed before another step can proceed.

Phrases that move the work forward

Acknowledge the request

You are requesting four additional locations and a second visit.

Separate willingness and approval

We can assess the request; it is not yet authorized.

Identify the needed detail

We need the methods, sample quantities, and analytical requirements.

Name the commercial step

We will assess the additional cost and schedule.

State the local condition

This agreement requires an approved written change before extra field work.

Limit that commitment

That is not a field-start or report-delivery date.

Preserve the current scope

The existing six-location assignment remains unchanged.

Record the basis

The estimate will state its assumptions and exclusions.

Restate the agreement

The current scope covers six locations during one visit.

Clarify quantities

Ten locations would not automatically mean ten samples.

Keep access visible

The second visit also depends on site-access arrangements.

Avoid a free-work assumption

Additional work is not included merely because it is discussed.

Give the next commitment

I will provide an estimate-status update Wednesday at 12:00.

Separate timing components

Laboratory turnaround is not the complete project schedule.

Request an explicit decision

The change proposal will need client sign-off.

Close constructively

I will bring the cost, timing, and open dependencies together for review.

Precision in real exchanges

Purpose: Clarify quantities

Useful wording: Ten locations would not automatically mean ten samples.

Purpose: Identify the needed detail

Useful wording: We need the methods, sample quantities, and analytical requirements.

D Choose the response that fits

Choose one response for each situation. Preserve the facts, the decision boundary, and the purpose of the exchange.

1. If the request is approved, how many locations would be included?

- A.** Exactly ten samples in every case
- B.** Four locations in total
- C.** Twelve automatically approved locations
- D.** Ten locations, with sample count still to be determined

2. Which reply is cooperative and accurate?

- A.** We can assess the extra work and provide estimate status Wednesday at noon.
- B.** We will start the extra visit tomorrow at no charge.
- C.** The change is already approved because you asked.
- D.** Laboratory turnaround guarantees the final report date.

3. A colleague needs the term for this meaning: Work or cost explicitly outside an agreed scope or estimate. Which term fits?

- A.** cost breakdown
- B.** acceptance condition
- C.** laboratory turnaround
- D.** exclusion

D Choose the response that fits / continued

4. Rebuild the exchange from "Price the additional work before promising its delivery". Grace: "I can send the access contact and explain why we need those four points. Which laboratory details are still missing for pricing?" Malik: [missing response] Grace: "The site contact has not confirmed entry for the second visit. I would prefer not to hold up the entire discussion while that is checked." Which response belongs in the gap?

- A.** We need the proposed analytical suite and relevant methods, along with the sample quantities and field arrangements. The estimate should state those assumptions so you can see exactly what it covers.
- B.** It does not provide change authorization. Under this agreement, extra field work requires an approved written change before it starts. We can discuss availability without representing the work itself as authorized.
- C.** Agreed. Obtain the required client sign-off through the stated process before additional work proceeds. We can be responsive while keeping the quantities, costs, dependencies, and authorization status visible to both teams.
- D.** The current scope of work remains unchanged. We will identify the proposed additions separately and assess their interaction with the existing schedule. Nothing in this request automatically cancels the original assignment.

[Answers and explanations, page 162](#)

One useful distinction

Six existing locations plus four requested locations would make ten locations if approved. That does not automatically mean ten samples: the sampling design, controls, depths, and analytical requirements determine the sample count.

E Conversation

Price the additional work before promising its delivery

Price the additional work before promising its delivery

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

client sign-off / Laboratory turnaround / fee estimate / scope of work / change request /
analytical suite / sample count / change authorization / cost breakdown / site access

- 01 **Grace:** We need four more locations and a second visit. Can your team add those to the assignment and keep the existing report date?
- 02 **Malik:** We can assess that ¹ _____. The signed scope currently covers six locations in one visit. We have not yet assessed the added work, cost, access, or schedule impact.
- 03 **Grace:** I thought four extra locations would simply mean four extra samples. Would that make ten samples altogether once we add them?
- 04 **Malik:** It would make ten locations if approved, but the ² _____ remains to be determined. Methods, depths, quality controls, and analytical needs can affect the number. We should not price an unsupported quantity.
- 05 **Grace:** I can send the access contact and explain why we need those four points. Which laboratory details are still missing for pricing?
- 06 **Malik:** We need the proposed ³ _____ and relevant methods, along with the sample quantities and field arrangements. The estimate should state those assumptions so you can see exactly what it covers.

E Conversation / continued

- 07 **Grace:** The site contact has not confirmed entry for the second visit. I would prefer not to hold up the entire discussion while that is checked.
- 08 **Malik:** We can develop the proposal while recording ⁴ _____ as an unresolved dependency. We cannot turn a preferred visit date into a confirmed field commitment before the necessary arrangements and authorization are in place.
- 09 **Grace:** Can you update me Wednesday at noon? I have a budget discussion that afternoon.
- 10 **Malik:** I can provide the ⁵ _____ status then. If inputs remain outstanding, I will identify them clearly. That is a communication commitment, not a guarantee that the added visit or final report happens that day.

Conversation continues on the next page.

Price the additional work before promising its delivery

CONVERSATION / CONTINUED

- 11 **Grace:** That works. Separate the field visit and laboratory charges so I can explain the increase at the budget meeting.
- 12 **Malik:** I will provide a ⁶ _____ with the assumptions and exclusions. A single unexplained total would make it harder to identify whether the proposed work matches your request or whether anything important remains omitted.
- 13 **Grace:** If the laboratory offers a five-day turnaround, can we tell our internal team that the final report will arrive five days after approval?
- 14 **Malik:** No. ⁷ _____ is only one component. We also need to consider access, mobilization, collection, review, and report preparation. Its starting point and conditions must be confirmed rather than assumed.
- 15 **Grace:** I do not want the team to lose a possible field date while paperwork circulates. Does today's discussion authorize them to reserve and perform the visit?
- 16 **Malik:** It does not provide ⁸ _____. Under this agreement, extra field work requires an approved written change before it starts. We can discuss availability without representing the work itself as authorized.
- 17 **Grace:** Please keep the existing assignment clear. The original six locations have not been cancelled.
- 18 **Malik:** The current ⁹ _____ remains unchanged. We will identify the proposed additions separately and assess their interaction with the existing schedule. Nothing in this request automatically cancels the original assignment.

Price the additional work before promising its delivery / continued

- 19 **Grace:** Then Wednesday's update will cover estimate status, open inputs, and timing questions. Once the written proposal is ready, I will arrange the approval review.
- 20 **Malik:** Agreed. Obtain the required ¹⁰ _____ through the stated process before additional work proceeds. We can be responsive while keeping the quantities, costs, dependencies, and authorization status visible to both teams.

CHECK THE GAPS

1. change request / **2.** sample count / **3.** analytical suite / **4.** site access / **5.** fee estimate / **6.** cost breakdown / **7.** Laboratory turnaround / **8.** change authorization / **9.** scope of work / **10.** client sign-off

[Why these answers fit, page 164](#)

F Check accuracy and scope

Price the additional work before promising its delivery

Return to the case

The signed assignment covers six sampling locations during one site visit, followed by the agreed laboratory work and report. Client manager Grace requests four additional locations and a second visit. Project manager Malik has not assessed the additional methods, sample quantities, laboratory work, access requirements, cost, or schedule. Under this fictional agreement, additional field work requires a written approved change before it starts. Malik will provide a change-estimate status on Wednesday at 12:00; that is not a field-visit or report-delivery commitment. The existing six-location scope remains unchanged unless the parties approve a change.

Choose one answer per question. Use the case facts and keep any uncertainty or limits intact.

1. What is required before extra field work under this agreement?

- A. A preferred date in a draft estimate
- B. An approved written change
- C. A casual mention in a meeting
- D. An assumed approval from silence

2. Which schedule statement is unsupported?

- A. The laboratory turnaround equals the full report-delivery period.
- B. Site access is an unresolved dependency.
- C. The added visit needs schedule assessment.
- D. The estimate update is due Wednesday at noon.

[Answers and explanations, page 165](#)

Listen for the distinction

Swap roles for turns 11-20 and distinguish laboratory turnaround from report delivery.

Cooperation does not require an instant promise

A client may hear a scope boundary as resistance. Acknowledge the request, identify the concrete information needed to price it, and give a useful next contact. Keep willingness to assess the change separate from authorization or a delivery guarantee.

F Say it / transfer to a new case

Confirm a smaller scope change

A current agreement covers five locations in one visit. The client requests three additional locations and a second visit. Sample count is unresolved, and an approved written change is required before extra field work.

Complete the four gaps. With a partner, read alternate roles, then switch. Studying alone, read both roles and pause before each response.

WORD AND PHRASE BANK

unresolved / second / eight / change

- 01 **Manager:** The proposed expanded scope would cover ¹ _____ locations.
- 02 **Client:** The requested visit would be the ² _____ visit.
- 03 **Manager:** The sample count is still ³ _____.
- 04 **Client:** Before extra field work, we need an approved written ⁴ _____.

CHECK THE GAPS

1. eight / 2. second / 3. unresolved / 4. change

[Why these answers fit, page 165](#)

F Say it / transfer to a new case / continued

Rebuild the exchange

Choose the missing response. Read the completed three-turn exchange aloud, changing roles on the second reading.

1. Rebuild the exchange from "Price the additional work before promising its delivery".
Grace: "If the laboratory offers a five-day turnaround, can we tell our internal team that the final report will arrive five days after approval?" Malik: [missing response] Grace: "I do not want the team to lose a possible field date while paperwork circulates. Does today's discussion authorize them to reserve and perform the visit?" Which response belongs in the gap?

- A.** We need the proposed analytical suite and relevant methods, along with the sample quantities and field arrangements. The estimate should state those assumptions so you can see exactly what it covers.
- B.** No. Laboratory turnaround is only one component. We also need to consider access, mobilization, collection, review, and report preparation. Its starting point and conditions must be confirmed rather than assumed.
- C.** It does not provide change authorization. Under this agreement, extra field work requires an approved written change before it starts. We can discuss availability without representing the work itself as authorized.
- D.** We can assess that change request. The signed scope currently covers six locations in one visit. We have not yet assessed the added work, cost, access, or schedule impact.

[Answers and explanations, page 166](#)

Review 4 / Meaning and context

Use language from the lessons you have completed. Choose one answer per question.

Case file

Revisit "Community and Stakeholder Meetings" and "Proposal, Scope, and Client Expectations". Choose precise terminology, then reconstruct the missing responses using both neighboring turns. The final two questions also revisit earlier conversations.

1. A colleague needs the term for this meaning: A gathering for sharing information and receiving public questions. Which term fits?

- A. non-detect
- B. temporal coverage
- C. responsible authority
- D. public meeting

2. A colleague needs the term for this meaning: A projected charge based on stated work and assumptions. Which term fits?

- A. fee estimate
- B. sample count
- C. schedule impact
- D. scope of work

3. Rebuild the exchange from "A partial electricity estimate cannot support a company-wide claim". Leo: "The excluded factory and company vehicles must remain visible. Otherwise a reader could assume they were checked and contributed no emissions." Ana: [missing response] Leo: "What about suppliers and customer use? Those are not included either, so our statement should not imply that we measured them." Which response belongs in the gap?

- A. Yes. Relevant direct sources may fall within Scope 1, depending on the organizational boundary. Excluding a source from this calculation says nothing by itself about whether that source emits zero, forty, or any other amount.
- B. Keep the relevant Scope 3 boundary explicit. The applicable categories require their own assessment. A two-office electricity figure cannot stand in for upstream and downstream emissions simply because it is the number currently available.
- C. Then do not invent a base year comparison. A reduction claim needs a comparable basis and supporting data. We can report the current limited estimate without claiming a trend that has not been established.
- D. Scope 2 can include purchased steam, heat, and cooling as well as electricity. This file covers only two offices and excludes purchased heat. Do not describe it as complete company-wide Scope 2 reporting.

Review 4 / Meaning and context / continued

4. Rebuild the exchange from "Price the additional work before promising its delivery". Grace: "Please keep the existing assignment clear. The original six locations have not been cancelled." Malik: [missing response] Grace: "Then Wednesday's update will cover estimate status, open inputs, and timing questions. Once the written proposal is ready, I will arrange the approval review." Which response belongs in the gap?

- A.** It does not provide change authorization. Under this agreement, extra field work requires an approved written change before it starts. We can discuss availability without representing the work itself as authorized.
- B.** The current scope of work remains unchanged. We will identify the proposed additions separately and assess their interaction with the existing schedule. Nothing in this request automatically cancels the original assignment.
- C.** Agreed. Obtain the required client sign-off through the stated process before additional work proceeds. We can be responsive while keeping the quantities, costs, dependencies, and authorization status visible to both teams.
- D.** We need the proposed analytical suite and relevant methods, along with the sample quantities and field arrangements. The estimate should state those assumptions so you can see exactly what it covers.

[Answers and explanations, page 176](#)

Language for the next case

One soil result, two mass bases

mass basis

Mass basis identifies whether the denominator is wet sample mass or dry solids mass; identical mg/kg labels alone do not establish comparability.

Leon: Check the mass basis first. The laboratory's ten is per kilogram of wet sample. The draft uses kilograms of dry solids.

dry-weight concentration

The dry-weight concentration is 10 divided by 0.80, or 12.5 mg/kg; a smaller mass denominator gives a higher concentration without adding analyte.

Leon: That is the dry-weight concentration under the supplied conversion. Retain both the source value and the calculation so another reviewer can reconcile them.

sample-specific value

The solids percentage belongs to the individual sample; borrowing S14's percentage for other samples would impose an unsupported conversion.

Leon: No. Use the sample-specific value supplied for each sample. Consistent presentation does not justify assigning identical moisture conditions to different material.

percent solids

Percent solids is the dry-solids mass divided by wet sample mass, expressed as a percentage; eighty percent becomes 0.80 in this calculation.

Leon: Exactly. The supplied percent solids is eighty. Convert that to zero point eight before dividing the wet-basis result.

Moisture content

Moisture content here is the twenty-percent water fraction; it is not the eighty-percent solids fraction required by the supplied conversion.

Leon: Yes. Moisture content is the water fraction here, not the solids fraction used in this calculation. Label both clearly.

audit trail

An audit trail retains the original result, solids fraction, basis label, calculation, and reviewed output so the conversion can be checked.

Leon: Correct. Keep an audit trail of the original value, basis, solids fraction, and calculated output. Do not overwrite the laboratory report.

Read the phrases aloud. Then complete the conversation on the following pages using the word bank.

Conversation

One soil result, two mass bases

Fictional soil sample S14: 10 mg/kg wet weight, 80% solids by mass. For this arithmetic exercise, dry-basis concentration equals wet-basis concentration divided by the solids fraction. The comparison table uses dry weight. No cleanup criterion or risk conclusion is supplied.

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

mass basis / Moisture content / dry-weight concentration / sample-specific value /
audit trail / percent solids

- 01 **Priya:** The laboratory sheet says ten milligrams per kilogram, but our draft table says twelve point five. Have we transcribed the wrong result?
- 02 **Leon:** Check the ¹ _____ first. The laboratory's ten is per kilogram of wet sample. The draft uses kilograms of dry solids.
- 03 **Priya:** Both columns say milligrams per kilogram. Without wet or dry in the heading, they look like contradictory measurements of the same sample.
- 04 **Leon:** Exactly. The supplied ² _____ is eighty. Convert that to zero point eight before dividing the wet-basis result.
- 05 **Priya:** Ten divided by zero point eight is twelve point five milligrams per kilogram dry weight. We are changing the denominator, not adding contaminant.
- 06 **Leon:** That is the ³ _____ under the supplied conversion. Retain both the source value and the calculation so another reviewer can reconcile them.
- 07 **Priya:** Would multiplying by zero point eight give eight? That was the number in an earlier spreadsheet version.
- 08 **Leon:** It would, but that reverses this conversion. Your denominator is getting smaller, so the concentration should increase, not decrease.
- 09 **Priya:** The same sheet also says twenty percent moisture. Could someone mistakenly divide by zero point two instead?
- 10 **Leon:** Yes. ⁴ _____ is the water fraction here, not the solids fraction used in this calculation. Label both clearly.

Conversation continues on the next page.

One soil result, two mass bases

CONVERSATION / CONTINUED

- 11 **Priya:** I will replace the generic unit heading with milligrams per kilogram dry weight and identify the source wet-weight result in a note.
- 12 **Leon:** Also identify S14 and the laboratory report version. A correct formula applied to another sample's solids percentage would still give the wrong result.
- 13 **Priya:** For the next batch, can I apply eighty percent to every sample so the table is consistent?
- 14 **Leon:** No. Use the ⁵ _____ supplied for each sample. Consistent presentation does not justify assigning identical moisture conditions to different material.
- 15 **Priya:** What if the laboratory already reports the next result on a dry-weight basis? The spreadsheet currently converts every row automatically.
- 16 **Leon:** Then that row must not be converted again. Add a basis check before the calculation rather than assuming every incoming value is wet weight.
- 17 **Priya:** We should distinguish a converted concentration from a fresh analysis. Nothing in this arithmetic says the material changed between tests.
- 18 **Leon:** Correct. Keep an ⁶ _____ of the original value, basis, solids fraction, and calculated output. Do not overwrite the laboratory report.
- 19 **Priya:** I will send the corrected table for review. The heading and calculation note should explain why ten and twelve point five can both be consistent.
- 20 **Leon:** Good. The figures now reconcile. That doesn't settle the cleanup classification, whether our sampling is adequate, or what the results mean for exposure.

CHECK THE GAPS

1. mass basis / 2. percent solids / 3. dry-weight concentration / 4. Moisture content / 5. sample-specific value / 6. audit trail

[Why these answers fit, page 179](#)

Check the basis before converting

Sample T2 has 6 mg/kg wet weight and 60% solids. Use dry concentration = wet concentration / solids fraction. Sample T3 is already reported as 9 mg/kg dry weight. No other correction applies.

Complete the exchange using each phrase once. Read both roles, then switch roles and repeat with the bank covered.

WORD AND PHRASE BANK

0.60 / 10 / 9 / basis

- 01 **Consultant:** T2's solids fraction in decimal form is ¹ _____.
- 02 **Reviewer:** T2 converts to ² _____ mg/kg dry weight.
- 03 **Consultant:** T3 remains at ³ _____ mg/kg dry weight.
- 04 **Reviewer:** The table must retain the reporting ⁴ _____ beside mg/kg.

CHECK THE GAPS

1. 0.60 / 2. 10 / 3. 9 / 4. basis

[Why these answers fit, page 179](#)

Keep the distinction audible

Reconcile wet- and dry-weight reporting without confusing a conversion with a new test.

Language for the next case

A higher limit is not a higher result

less-than sign

The less-than sign identifies the reported upper threshold for a non-detect in this case; the number following it is not a measured concentration.

Nadia: Those entries start with a less-than sign. We have plotted the reporting thresholds as if they were measured concentrations.

dilution

The laboratory's stated dilution raised the sample-specific reporting threshold; this explanation does not convert the non-detect into a measured value.

Nadia: The dilution explains the higher threshold in this supplied record. Ask for the sample-specific reporting details if they are missing from the export.

censored results

Censored results provide a threshold rather than an exact concentration; preserving that status prevents inappropriate plotting and summary calculations.

Nadia: Exactly. These January and April entries are censored results. A numeric-only export strips away information essential to their interpretation.

reporting limit

The reporting limit is the stated threshold associated with this result, not a detected value; five cannot be treated as the April concentration.

Nadia: Yes. The April reporting limit is higher, but that alone does not show that the environmental concentration rose.

estimated detection

The supplied laboratory legend defines 0.3 J as an estimated detected concentration, which differs from a non-detect or a missing result.

Nadia: Here J marks an estimated detection, not a missing result. Restore the value with its qualification and the laboratory's definition.

micrograms per litre

Micrograms per litre is the shared concentration unit in this case; preserving it prevents a thousandfold error when exchanging values with mg/L tables.

Nadia: Agreed. Keep micrograms per litre in the heading. Another table uses milligrams per litre, so the import also needs a unit check.

Read the phrases aloud. Then complete the conversation on the following pages using the word bank.

Conversation

A higher limit is not a higher result

Fictional groundwater results for X, in micrograms per litre: January <0.5, April <5.0 after dilution, July 0.3 J. This laboratory defines J as an estimated detected concentration below its routine reporting limit. No trend analysis, health threshold, or cleanup criterion is supplied.

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

reporting limit / censored results / estimated detection / dilution / micrograms per litre / less-than sign

- 01 **Owen:** The chart climbs from zero point five in January to five in April. The client is asking why X increased tenfold.
- 02 **Nadia:** Those entries start with a ¹ _____. We have plotted the reporting thresholds as if they were measured concentrations.
- 03 **Owen:** So the April number is not a detected concentration of five. I need to remove the line implying a measured rise.
- 04 **Nadia:** Yes. The April ² _____ is higher, but that alone does not show that the environmental concentration rose.
- 05 **Owen:** The laboratory says it diluted the April sample. Does that explain why the reported threshold changed?
- 06 **Nadia:** The ³ _____ explains the higher threshold in this supplied record. Ask for the sample-specific reporting details if they are missing from the export.
- 07 **Owen:** Would replacing both entries with zero solve the misleading graph? That would at least avoid inventing an increase.
- 08 **Nadia:** It would invent two exact zeros instead. Keep the limits and non-detect status; choose any statistical treatment through the project's documented review process.
- 09 **Owen:** There is a third entry: zero point three J in July. Our import routine has turned every letter-qualified result into a blank cell.
- 10 **Nadia:** Here J marks an ⁴ _____, not a missing result. Restore the value with its qualification and the laboratory's definition.

Conversation continues on the next page.

A higher limit is not a higher result

CONVERSATION / CONTINUED

- 11 **Owen:** I have seen J used in other reports. Should I assume the explanation is identical across every laboratory and data-validation package?
- 12 **Nadia:** No. Read the applicable legend and validation notes. Preserve both the reported information and any later review qualification with their provenance.
- 13 **Owen:** Then our data table needs more than a single numeric field. We need the number, sign, unit, and qualification to travel together.
- 14 **Nadia:** Exactly. These January and April entries are ⁵ _____. A numeric-only export strips away information essential to their interpretation.
- 15 **Owen:** Can I still say July was cleaner than January because zero point three is smaller than zero point five?
- 16 **Nadia:** Not from this comparison alone. January did not supply an exact value, and the qualified July estimate needs its own review context.
- 17 **Owen:** The chart should show the two non-detect thresholds distinctly and the estimated July detection with its qualifier, not connect three exact values.
- 18 **Nadia:** Agreed. Keep ⁶ _____ in the heading. Another table uses milligrams per litre, so the import also needs a unit check.
- 19 **Owen:** I will correct the three records and explain that the tenfold change is in the reporting threshold, not a demonstrated environmental increase.
- 20 **Nadia:** That answers the client's immediate question. We can then ask the project reviewer what comparisons these data support, without claiming a trend or a safety finding.

CHECK THE GAPS

1. less-than sign / 2. reporting limit / 3. dilution / 4. estimated detection / 5. censored results / 6. micrograms per litre

[Why these answers fit, page 181](#)

Keep a result and its limit separate

For analyte Y, one result is <2 micrograms per litre. Another is 0.7 J; the supplied legend defines J as an estimated detected concentration. An exchange table requires mg/L, and 1,000 micrograms equals 1 milligram. No trend is established.

Complete the exchange using each phrase once. Read both roles, then switch roles and repeat with the bank covered.

WORD AND PHRASE BANK

detection / 0.0007 / zero / qualifier

- 01 **Reviewer:** The <2 entry does not establish a concentration of exactly ¹ _____.
- 02 **Manager:** The 0.7 J entry is an estimated ² _____.
- 03 **Reviewer:** Converted to mg/L, 0.7 micrograms per litre is ³ _____.
- 04 **Manager:** The converted value must retain its ⁴ _____ J.

CHECK THE GAPS

1. zero / 2. detection / 3. 0.0007 / 4. qualifier

[Why these answers fit, page 181](#)

Keep the distinction audible

Discuss non-detects and qualified estimates without treating reporting thresholds as measurements.

Language for the next case

Depth is not water-level elevation

Depth to water

Depth to water is a downward distance from a stated measuring point; different point elevations prevent direct ranking of absolute water-level elevations from depths alone.

Lina: Not on its own. Depth to water starts at each well's measuring point. Those points are at different elevations.

water-level elevation

Water-level elevation is 100.40 m for A and 99.00 m for B after subtracting each depth from the corresponding measuring-point elevation.

Evan: Then the water-level elevation at A is one point four metres higher, despite A having the larger depth reading.

screen intervals

Screen intervals identify the depths or zones open to each well; without assessing them and hydraulic connection, the two levels cannot establish a site-wide flow direction.

Lina: Not on this information alone. We have not assessed the screen intervals or established that the wells represent the same connected unit.

vertical datum

The vertical datum is the common reference for the supplied elevations; mixing unrelated datums would invalidate their direct comparison.

Lina: That shared vertical datum lets us compare elevations. For each well, subtract its downward depth from its own measuring-point elevation.

measuring point

The measuring point must match the point from which the depth was recorded; substituting ground elevation for a casing reference introduces an offset error.

Lina: Use the actual measuring point named in the field record. Do not substitute ground elevation for a casing reference without the appropriate documented offset.

datum offset

A changed reference point can introduce an elevation offset; the identifier alone does not establish that old and new measuring-point references are interchangeable.

Lina: A changed reference point can create a datum offset. Check the survey and reference records instead of assuming the old elevation still applies.

Read the phrases aloud. Then complete the conversation on the following pages using the word bank.

Conversation

Depth is not water-level elevation

Fictional simultaneous readings: well A measuring-point elevation 104.60 m, depth to water 4.20 m; well B 100.80 m and 1.80 m. Both elevations use the same local datum. Depth is measured downward from each stated point. Screen intervals and aquifer connections have not been assessed.

Complete the numbered gaps. Use each bank entry once; some entries contain several words.

WORD AND PHRASE BANK

screen intervals / vertical datum / measuring point / Depth to water / water-level elevation / datum offset

- 01 **Evan:** The summary says B has the higher groundwater level because its depth to water is only one point eight metres. Is that comparison valid?
- 02 **Lina:** Not on its own. ¹ _____ starts at each well's measuring point. Those points are at different elevations.
- 03 **Evan:** A's point is at one hundred four point six metres, and B's is at one hundred point eight. Both use our common local reference.
- 04 **Lina:** That shared ² _____ lets us compare elevations. For each well, subtract its downward depth from its own measuring-point elevation.
- 05 **Evan:** For A, one hundred four point six minus four point two gives one hundred point four metres. I will retain two decimal places in the table.
- 06 **Lina:** Correct. B is one hundred point eight minus one point eight, or ninety-nine point zero metres. The smaller depth did not make its water level higher.
- 07 **Evan:** Then the ³ _____ at A is one point four metres higher, despite A having the larger depth reading.
- 08 **Lina:** Yes. Keep the depth and elevation columns separate. A heading that simply says water level would leave readers unsure which quantity they are comparing.
- 09 **Evan:** The survey sheet gives both top-of-casing and ground elevations. Which one belongs in this subtraction?
- 10 **Lina:** Use the actual ⁴ _____ named in the field record. Do not substitute ground elevation for a casing reference without the appropriate documented offset.

Conversation continues on the next page.

Depth is not water-level elevation

CONVERSATION / CONTINUED

- 11 **Evan:** These are simultaneous readings. That helps avoid comparing measurements taken before and after a changing condition, but it does not settle every interpretation.
- 12 **Lina:** Right. Preserve the timestamps anyway. The calculation reconciles the supplied levels; the hydrogeological interpretation needs more than two numbers.
- 13 **Evan:** The draft map draws a flow arrow from A to B. Can I keep it because A's elevation is higher?
- 14 **Lina:** Not on this information alone. We have not assessed the ⁵ _____ or established that the wells represent the same connected unit.
- 15 **Evan:** And two wells do not establish a complete site-wide flow field. I will mark the arrow as unsupported instead of reversing it mechanically.
- 16 **Lina:** Good. We need the relevant hydrogeological evidence and spatial coverage before interpreting flow direction. A subtraction is not a substitute for that assessment.
- 17 **Evan:** The field team also mentioned a replacement casing cap. Could that matter even if the well identifier stayed the same?
- 18 **Lina:** A changed reference point can create a ⁶ _____. Check the survey and reference records instead of assuming the old elevation still applies.
- 19 **Evan:** I will correct the table to A one hundred point four and B ninety-nine metres, label the common datum, and retain the source depths.
- 20 **Lina:** Then send the unsupported flow arrow for technical review. The corrected levels are useful evidence, with a clear calculation and a separate interpretation question.

CHECK THE GAPS

1. Depth to water / **2.** vertical datum / **3.** water-level elevation / **4.** measuring point / **5.** screen intervals / **6.** datum offset

[Why these answers fit, page 183](#)

Subtract from the matching reference

On a common datum, C's measuring point is 88.40 m and its downward depth is 3.10 m; D's point is 86.00 m and depth is 1.20 m. These are simultaneous readings. Hydraulic connections are not established.

Complete the exchange using each phrase once. Read both roles, then switch roles and repeat with the bank covered.

WORD AND PHRASE BANK

84.80 / direction / 85.30 / 0.50

- 01 **Coordinator:** C's water-level elevation is ¹ _____ m.
- 02 **Reviewer:** D's water-level elevation is ² _____ m.
- 03 **Coordinator:** C's elevation exceeds D's by ³ _____ m.
- 04 **Reviewer:** These figures alone do not establish groundwater flow ⁴ _____.

CHECK THE GAPS

1. 85.30 / 2. 84.80 / 3. 0.50 / 4. direction

[Why these answers fit, page 183](#)

Keep the distinction audible

Reconcile groundwater levels using measuring points and a common vertical reference.

01 / Answers and explanations

A / Read the situation

A1. Which information is missing?

B. The tank-closure record

The brief identifies one outstanding tank-closure record, not an absence of all assessment work.

[Return to the exercise, page 4](#)

A2. What is authorized now?

B. The current Phase I scope, without sampling

The stated scope excludes sampling, and no Phase II investigation has been authorized.

[Return to the exercise, page 4](#)

A3. What is promised for Tuesday at 14:00?

B. A status update

Maya commits to reporting status, not to controlling the archive or completing additional investigation.

[Return to the exercise, page 4](#)

D / Response choices

D1. Which summary is supported?

C. The tank-closure record remains outstanding, and its significance requires review.

The accurate summary names the missing source and preserves the unresolved professional assessment.

[Return to the exercise, page 9](#)

D2. Who assesses the gap's significance?

C. Eric in the environmental-professional role

Eric holds the stated professional-review role; requesting, holding, or purchasing records does not assign this review.

[Return to the exercise, page 9](#)

01 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: Examination of documents relevant to an assessment question. Which term fits?

D. records review

A Not here. professional opinion: A qualified interpretation based on evidence and applicable practice. The usual combination is "support a professional opinion".

B Not here. data gap: Missing or unavailable information relevant to an assessment. The usual combination is "identify a data gap".

C Not here. fire insurance map: A historical map that may describe buildings and past uses. The usual combination is "review a fire insurance map".

D Correct. records review: Examination of documents relevant to an assessment question. The usual combination is "complete the records review".

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D4. Rebuild the exchange from "A missing record is not a clean-site conclusion".

Maya: "The archive might send it tomorrow, although it has given no commitment. I can follow up and identify the request number in our project record." **Eric:** [missing response] **Maya:** "The buyer may skim the qualification. Could I label the gap significant now to make sure it gets noticed?" **Which response belongs in the gap?**

C. Good. Retain that follow-up request and any response. Do not imply that the source is unavailable forever simply because it has not arrived for this draft.

A Not here. This line belongs to turn 8, after Maya says: "The buyer may skim the qualification. Could I label the gap significant now to make sure it gets noticed?" It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 2, after Maya says: "The draft says no further questions remain. We have finished the visit and interviews, but the tank-closure record is still missing. Can that sentence stay?" It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Eric's response in turn 6. It connects Maya's preceding point with Maya's follow-up. The follow-up request traces the effort to obtain missing information without treating the request as successful receipt.

D Not here. This line belongs to turn 16, after Maya says: "I will contact the archive and update you Tuesday at fourteen hundred, whether or not the record arrives. That gives us a clear next contact." It addresses that point, not the missing turn in the supplied exchange.

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E / Conversation

1. data gap

Turn 2. Data gap identifies missing relevant information without deciding its significance or proving an environmental condition.

01 / Answers and explanations / continued

2. release

Turn 4. A release concerns a substance escaping into the environment, not merely an absent administrative record.

3. follow-up request

Turn 6. The follow-up request traces the effort to obtain missing information without treating the request as successful receipt.

4. professional opinion

Turn 8. The professional opinion evaluates the evidence and the gap's significance; emphasis alone cannot supply that assessment.

5. scope of inquiry

Turn 10. The scope of inquiry defines the existing assessment work; it does not automatically expand when a question remains unresolved.

6. executive summary

Turn 12. The executive summary should communicate both major findings and material qualifications instead of replacing them with blanket reassurance.

7. source limitation

Turn 14. The source limitation concerns the outstanding record; it does not automatically invalidate every other source or completed assessment step.

8. authorization

Turn 16. Authorization permits specified work; a communication deadline neither authorizes sampling nor determines the investigation outcome.

9. records review

Turn 18. Records review examines documentary evidence; an incomplete source set must be described accurately rather than treated as a definitive site finding.

10. subject property

Turn 20. Subject property identifies the actual site under assessment, so qualifications are not silently expanded into claims about other properties.

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01 / Answers and explanations / continued

F / Accuracy and scope

F1. Which statement improperly broadens the scope?

C. Sampling is already authorized under this Phase I assignment.

The brief excludes sampling from the current scope and provides no further investigation authorization.

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F2. What should Maya report if the record is still missing on Tuesday?

A. The outstanding status and the continuing review limitation

The update commitment remains valid even if the requested source is still unavailable.

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F / Guided speaking

1. solvent-storage

Consultant: The outstanding source is the solvent-storage record.

Turn 1. The supplied case identifies the solvent-storage record, not a tank document.

2. Nora

Reviewer: The person assessing significance is Nora.

Turn 2. Nora is explicitly assigned the significance review in this separate case.

3. sampling

Consultant: The present assignment excludes sampling.

Turn 3. Sampling is outside the stated scope and cannot be presented as authorized.

4. Friday at 11:00

Reviewer: The archive status update is due Friday at 11:00.

Turn 4. The stated time concerns a status update rather than guaranteed source receipt.

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01 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "A missing record is not a clean-site conclusion".

Maya: "Could the buyer interpret pending review as proof that every other source is unreliable? We have useful interviews and historical records already." **Eric:** [missing response] **Maya:** "I will contact the archive and update you Tuesday at fourteen hundred, whether or not the record arrives. That gives us a clear next contact." **Which response belongs in the gap?**

B. Describe the specific source limitation, not a wholesale failure. The other material remains part of the evidence, with its own context. Precision avoids both false reassurance and unnecessary alarm.

A Not here. This line belongs to turn 12, after Maya says: "I will avoid saying that Phase II work has started. Can the summary list the work completed while clearly leaving the record question open?" It addresses that point, not the missing turn in the supplied exchange.

B Correct. This is Eric's response in turn 14. It connects Maya's preceding point with Maya's follow-up. The source limitation concerns the outstanding record; it does not automatically invalidate every other source or completed assessment step.

C Not here. This line belongs to turn 2, after Maya says: "The draft says no further questions remain. We have finished the visit and interviews, but the tank-closure record is still missing. Can that sentence stay?" It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 10, after Maya says: "Another colleague suggested scheduling samples immediately. Sampling is not in our present assignment, and the client has not approved any additional investigation." It addresses that point, not the missing turn in the supplied exchange.

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02 / Answers and explanations

A / Read the situation

A1. What is missing?

C. The laboratory custodian's receiving signature

The receiving-signature box is blank, while the other named information is available.

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A2. What does the receipt log establish in this case?

B. Recorded laboratory arrival at 16:25

The log provides a recorded arrival time but does not replace the missing signature or quality review.

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A3. What is the correct current data status?

B. Usability remains under review.

Jonas has not decided usability, so neither automatic rejection nor unrestricted acceptance is supported.

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D / Response choices

D1. Which action preserves traceability?

A. Retain the original and request a dated, attributed clarification.

A traceable clarification preserves the original and identifies the later explanation rather than concealing the gap.

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D2. Which statement is supported?

C. The log records receipt at 16:25, but the receiving signature remains missing.

The accurate statement combines the available record with its unresolved documentation limitation.

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02 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: The documented possession and transfer history of a sample or evidence. Which term fits?

B. chain of custody (COC)

A Not here. deviation: A departure from a stated procedure or requirement. The usual combination is "document a deviation".

B Correct. chain of custody (COC): The documented possession and transfer history of a sample or evidence. The usual combination is "maintain chain of custody".

C Not here. equipment blank: A control used to evaluate contamination associated with sampling equipment. The usual combination is "examine an equipment blank".

D Not here. qualifier: A notation communicating a limitation or condition attached to a result. The usual combination is "interpret a data qualifier".

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D4. Rebuild the exchange from "Trace a missing custody signature without inventing it". Elena: "The custodian is available now. Could we just ask for a signature in the empty box, or would that hide when it was added?" Jonas: [missing response] Elena: "Should I tell the client that the result is invalid until we receive that account? The report deadline is approaching." Which response belongs in the gap?

C. We need a traceable amendment, not a reconstruction presented as an original entry. Preserve the record and request an attributed account of the handoff through the applicable quality process.

A Not here. This line belongs to turn 14, after Elena says: "I will attach the original form, receipt log, submission sheet, and any later clarification. Is the intended project decision also relevant?" It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 8, after Elena says: "Should I tell the client that the result is invalid until we receive that account? The report deadline is approaching." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Jonas's response in turn 6. It connects Elena's preceding point with Elena's follow-up. A traceable amendment preserves the original and identifies the later correction, author, timing, and basis.

D Not here. This line belongs to turn 12, after Elena says: "I can confirm that the labels match. I cannot use that identity check to vouch for the analytical value itself, can I?" It addresses that point, not the missing turn in the supplied exchange.

[Return to the exercise, page 22](#)

E / Conversation

1. deviation

Turn 2. Deviation names the departure from this project's signature requirement without inventing why it happened.

02 / Answers and explanations / continued

2. receipt log

Turn 4. The receipt log supplies recorded arrival evidence but does not recreate the missing receiving signature.

3. traceable amendment

Turn 6. A traceable amendment preserves the original and identifies the later correction, author, timing, and basis.

4. data usability

Turn 8. Data usability concerns whether evidence can support the defined project question; its review is not automatic rejection.

5. chain of custody

Turn 10. Chain of custody documents sample possession and transfers; a gap prompts review without itself proving tampering.

6. sample identifier

Turn 12. The sample identifier links the bottle to its records; it does not establish analytical accuracy by itself.

7. data quality objective

Turn 14. The data quality objective specifies what evidence the project decision needs, giving the usability review its purpose.

8. qualifier

Turn 16. A qualifier communicates a result's limitation or condition and must not disappear merely for a cleaner presentation.

9. Data validation

Turn 18. Data validation evaluates evidence against requirements; it is distinct from simply receiving an analytical result.

10. corrective record

Turn 20. The corrective record documents the follow-up without erasing the original gap or pretending the review was always complete.

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02 / Answers and explanations / continued

F / Accuracy and scope

F1. What question should guide usability review?

D. Can these data support the defined project question, given the quality evidence?

Data usability concerns a defined purpose and the relevant evidence; billing, timely receipt, and presentation preferences do not settle it.

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F2. Which claim is an unsupported accusation?

C. Someone tampered with GW03.

No supplied evidence establishes tampering; the missing signature requires investigation rather than accusation.

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F / Guided speaking

1. SW08

Coordinator: The affected sample is SW08.

Turn 1. SW08 is the identifier supplied for this separate documentation case.

2. 10:40

Reviewer: The receipt log records 10:40.

Turn 2. Ten forty is the recorded receipt time, not a fabricated signature time.

3. Mina

Coordinator: The review owner is Mina.

Turn 3. Mina is explicitly responsible for the usability review in the supplied facts.

4. pending

Reviewer: The usability decision remains pending.

Turn 4. The case gives no completed decision, so pending preserves its status.

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02 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "Trace a missing custody signature without inventing it". Elena: "I will attach the original form, receipt log, submission sheet, and any later clarification. Is the intended project decision also relevant?" Jonas: [missing response] Elena: "The report writer wants to remove qualification symbols because they make the table harder to read. What should I tell her?" Which response belongs in the gap?

D. Yes. The data quality objective helps define what the data must support. Review suitability for that question rather than treating usable as an unrestricted label for every possible application.

A Not here. This line belongs to turn 6, after Elena says: "The custodian is available now. Could we just ask for a signature in the empty box, or would that hide when it was added?" It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 12, after Elena says: "I can confirm that the labels match. I cannot use that identity check to vouch for the analytical value itself, can I?" It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 8, after Elena says: "Should I tell the client that the result is invalid until we receive that account? The report deadline is approaching." It addresses that point, not the missing turn in the supplied exchange.

D Correct. This is Jonas's response in turn 14. It connects Elena's preceding point with Elena's follow-up. The data quality objective specifies what evidence the project decision needs, giving the usability review its purpose.

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03 / Answers and explanations

A / Read the situation

A1. What does C7 explicitly request?

A. Additional wet-weather modeling

The comment requests wet-weather modeling but leaves the event parameters unspecified.

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A2. What is Arun's 100-year interpretation?

A. An unconfirmed assumption

Arun proposes an interpretation that the agency has not confirmed.

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A3. What does Friday represent?

B. An internal response-package target

The team has an internal target, but the agency has made no clarification-date commitment.

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D / Response choices

D1. Which agency question is most useful?

D. For C7, please confirm the storm duration, intensity, and return period.

The useful question references the comment and asks for the specific missing parameters without blame or invention.

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D2. Which statement overstates the agency's instruction?

D. C7 requires a 100-year event.

The supplied comment does not state a return period, so the asserted requirement is unsupported.

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03 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: A defined set of conditions evaluated in a model. Which term fits?

C. modeling scenario

A Not here. rainfall intensity: The rate of rainfall over a specified interval. The usual combination is "state rainfall intensity".

B Not here. calibration: Adjustment of model parameters against relevant observations. The usual combination is "document model calibration".

C Correct. modeling scenario: A defined set of conditions evaluated in a model. The usual combination is "specify a modeling scenario".

D Not here. permit condition: A requirement attached to an issued authorization. The usual combination is "interpret a permit condition".

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D4. Rebuild the exchange from "Clarify the requested modeling scenario". Arun: "I drafted 'Please clarify C7.' Is that too vague? I want to get a usable answer without sending another long technical memo." Becca: [missing response] Arun: "I will not call the hundred-year event an agency instruction. Should I explain that return period is different from storm duration?" Which response belongs in the gap?

C. Use a concise written clarification request tied to C7. List only the unresolved parameters and state which baseline is already included. That makes the question easier to answer.

A Not here. This line belongs to turn 8, after Arun says: "I will not call the hundred-year event an agency instruction. Should I explain that return period is different from storm duration?" It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 12, after Arun says: "The project manager called this the last approval step. I can only confirm that we are clarifying the analysis, not securing the permit." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Becca's response in turn 6. It connects Arun's preceding point with Arun's follow-up. Written clarification creates a traceable interpretation of the agency's request instead of relying on an undocumented guess.

D Not here. This line belongs to turn 16, after Arun says: "There may also be a question about whether the current model boundary remains appropriate. Can we include that without introducing an entirely new assignment?" It addresses that point, not the missing turn in the supplied exchange.

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E / Conversation

1. assumption register

Turn 2. The assumption register records an unconfirmed interpretation without converting it into an agency instruction.

03 / Answers and explanations / continued

2. modeling scenario

Turn 4. The modeling scenario requires defined conditions; the broad request does not supply every necessary event parameter.

3. written clarification

Turn 6. Written clarification creates a traceable interpretation of the agency's request instead of relying on an undocumented guess.

4. return period

Turn 8. Return period expresses event frequency statistically; it is neither storm duration nor a guarantee of once-per-century occurrence.

5. response deadline

Turn 10. Here the response deadline is the team's internal target; it must not be represented as an agency commitment.

6. permit condition

Turn 12. A permit condition belongs to an issued authorization; clarification of a modeling request is not permit issuance.

7. comment-response matrix

Turn 14. The comment-response matrix links the original comment, response, and supporting evidence while keeping unresolved items visible.

8. model domain

Turn 16. The model domain defines the represented extent; confirming its applicability is more precise than silently changing that extent.

9. version identifier

Turn 18. The version identifier ties the clarification to the correct model issue and prevents mismatched assumptions across revisions.

10. submission package

Turn 20. The submission package should contain the actual agreed analysis and traceable responses, not unsupported claims of agency approval.

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03 / Answers and explanations / continued

F / Accuracy and scope

F1. What should the response matrix show before clarification arrives?

B. The open parameter question and clarification-request status

An accurate matrix preserves the unresolved question and the actual status of the team's request.

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F2. What does a 100-year return period not mean?

B. Exactly one occurrence every hundred years

Return period is statistical and does not schedule one event at fixed century intervals.

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F / Guided speaking

1. C12

Consultant: The unresolved comment reference is C12.

Turn 1. C12 is the specific agency reference supplied for this separate case.

2. hours

Coordinator: One missing input is the operating hours.

Turn 2. Operating hours are explicitly unspecified and must not be guessed.

3. Dev

Consultant: The clarification owner is Dev.

Turn 3. Dev is assigned the clarification request in the given facts.

4. Monday

Coordinator: The internal package target is Monday.

Turn 4. Monday is the team's target, not an agency-guaranteed reply or approval.

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03 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "Clarify the requested modeling scenario". Arun: "I will track the request and response under C7. We need readers to find the same question across the correspondence and revised package." Becca: [missing response] Arun: "There may also be a question about whether the current model boundary remains appropriate. Can we include that without introducing an entirely new assignment?" Which response belongs in the gap?

A. Use the comment-response matrix for that connection. Leave the item open until its actual response status supports a change. Do not close it merely because we sent an email.

A Correct. This is Becca's response in turn 14. It connects Arun's preceding point with Arun's follow-up. The comment-response matrix links the original comment, response, and supporting evidence while keeping unresolved items visible.

B Not here. This line belongs to turn 8, after Arun says: "I will not call the hundred-year event an agency instruction. Should I explain that return period is different from storm duration?" It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 6, after Arun says: "I drafted 'Please clarify C7.' Is that too vague? I want to get a usable answer without sending another long technical memo." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 12, after Arun says: "The project manager called this the last approval step. I can only confirm that we are clarifying the analysis, not securing the permit." It addresses that point, not the missing turn in the supplied exchange.

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04 / Answers and explanations

A / Read the situation

A1. Which option has the lower implementation estimate?

C. B at \$90,000

B's stated implementation estimate is lower, but that component excludes its longer monitoring period.

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A2. What is A's stated monitoring cost?

C. \$60,000

Twelve months multiplied by five thousand dollars gives sixty thousand dollars for A's monitoring component.

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A3. What remains unresolved?

D. Technical suitability and regulatory acceptability

The brief explicitly leaves technical suitability, regulatory acceptability, and completion criteria unassessed.

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D / Response choices

D1. What is B's stated combined total?

B. \$210,000

Ninety thousand plus twenty-four times five thousand equals two hundred ten thousand dollars.

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D2. Which comparison is accurate?

A. B has shorter implementation but longer monitoring.

The supplied periods are two versus four implementation weeks and twenty-four versus twelve monitoring months.

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04 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: The location from which contamination originates or is concentrated. Which term fits?

A. source area

A Correct. source area: The location from which contamination originates or is concentrated. The usual combination is "characterize the source area".

B Not here. treatability study: An investigation of how a treatment may perform for particular material or conditions. The usual combination is "scope a treatability study".

C Not here. engineering control: A physical measure intended to reduce exposure or contaminant movement. The usual combination is "maintain an engineering control".

D Not here. undiscounted estimate: An estimate that does not adjust future amounts to present value. The usual combination is "present an undiscounted estimate".

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D4. Rebuild the exchange from "Faster implementation is not necessarily a shorter project". Omar: "So A is one hundred eighty thousand overall, and B is two hundred ten thousand, assuming only these stated components." Tess: [missing response] Omar: "That changes the cost ranking. Management will ask why we cannot recommend A now. What is still missing from that decision?" Which response belongs in the gap?

B. Correct. Each is an undiscounted estimate. We have not adjusted future amounts to present value or added escalation and other costs. Do not present either number as a fixed complete price.

A Not here. This line belongs to turn 10, after Omar says: "Does B's shorter implementation mean the whole project finishes earlier?" It addresses that point, not the missing turn in the supplied exchange.

B Correct. This is Tess's response in turn 6. It connects Omar's preceding point with Omar's follow-up. An undiscounted estimate adds the stated future amounts without present-value adjustment and does not remove uncertainty or exclusions.

C Not here. This line belongs to turn 14, after Omar says: "The client team also wants to know whether the regulator will accept either proposal. Do these preliminary estimates tell us that?" It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 20, after Omar says: "I will report A's lower stated total and B's shorter implementation, then list technical suitability, acceptance, and completion criteria as unresolved." It addresses that point, not the missing turn in the supplied exchange.

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E / Conversation

1. implementation period

Turn 2. Implementation period covers the stated active work, not the later monitoring or all completion obligations.

04 / Answers and explanations / continued

2. monitoring period

Turn 4. Monitoring period determines the number of monthly costs in this limited comparison: twelve for A and twenty-four for B.

3. undiscounted estimate

Turn 6. An undiscounted estimate adds the stated future amounts without present-value adjustment and does not remove uncertainty or exclusions.

4. Feasibility

Turn 8. Feasibility concerns practical suitability under site conditions; the limited cost calculation does not establish it.

5. completion criterion

Turn 10. The completion criterion defines when obligations are fulfilled; implementation duration alone cannot establish that endpoint.

6. performance criterion

Turn 12. A performance criterion states how success will be evaluated; a short schedule does not demonstrate that outcome.

7. regulatory acceptability

Turn 14. Regulatory acceptability requires relevant review against applicable expectations; a commercial estimate does not supply that decision.

8. life-cycle cost

Turn 16. Life-cycle cost spans defined stages and costs; this limited table excludes other costs and is not a complete analysis.

9. contingency allowance

Turn 18. A contingency allowance addresses specified cost uncertainty; none is included in the supplied figures, so it cannot be assumed.

10. remedial objective

Turn 20. The remedial objective defines the environmental outcome sought; choosing a price or schedule does not establish that the outcome is achievable.

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04 / Answers and explanations / continued

F / Accuracy and scope

F1. Which recommendation exceeds the evidence?

D. Select A because its lower stated total proves technical suitability.

The cost difference does not establish whether either remedy is technically suitable or acceptable.

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F2. What should appear beside the totals?

A. Included components, undiscounted basis, exclusions, and unresolved criteria

The comparison depends on its stated components and assumptions, while technical and acceptance questions remain unresolved.

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F / Guided speaking

1. 12,000

Consultant: C's monitoring component is 12,000 dollars.

Turn 1. Six monitoring months at two thousand dollars total twelve thousand dollars.

2. 52,000

Client: C's stated combined estimate is 52,000 dollars.

Turn 2. Forty thousand plus twelve thousand equals fifty-two thousand on the limited basis.

3. 59,000

Consultant: D's stated combined estimate is 59,000 dollars.

Turn 3. Thirty-five thousand plus twenty-four thousand equals fifty-nine thousand on the same basis.

4. unassessed

Client: Technical suitability remains unassessed.

Turn 4. The brief explicitly leaves suitability unresolved despite the completed arithmetic.

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04 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "Faster implementation is not necessarily a shorter project". Omar: "The client team also wants to know whether the regulator will accept either proposal. Do these preliminary estimates tell us that?" Tess: [missing response] Omar: "I need a useful heading for the comparison table. It should show the cost difference without sounding like a final recommendation." Which response belongs in the gap?

B. They do not establish regulatory acceptability. We should name that as unresolved rather than imply acceptance. Technical suitability, authority requirements, cost, and timing are related questions, but they are not interchangeable answers.

A Not here. This line belongs to turn 6, after Omar says: "So A is one hundred eighty thousand overall, and B is two hundred ten thousand, assuming only these stated components." It addresses that point, not the missing turn in the supplied exchange.

B Correct. This is Tess's response in turn 14. It connects Omar's preceding point with Omar's follow-up. Regulatory acceptability requires relevant review against applicable expectations; a commercial estimate does not supply that decision.

C Not here. This line belongs to turn 10, after Omar says: "Does B's shorter implementation mean the whole project finishes earlier?" It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 20, after Omar says: "I will report A's lower stated total and B's shorter implementation, then list technical suitability, acceptance, and completion criteria as unresolved." It addresses that point, not the missing turn in the supplied exchange.

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05 / Answers and explanations

A / Read the situation

A1. How many findings are verified closed?

C. Two

F1 and F2 have the required effectiveness evidence and are closed under the stated local process.

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A2. How many findings remain open?

B. Four

F3-F6 remain open: two await effectiveness checks and two lack plans and owners.

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A3. What is missing for F5 and F6?

C. Both a documented action plan and an assigned owner

The brief explicitly states that F5 and F6 have neither plans nor owners.

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D / Response choices

D1. Which dashboard headline is accurate?

D. Two closed, two awaiting effectiveness checks, two without plans or owners.

The accurate headline preserves all three distinct states supplied in the brief.

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D2. What is the verified closure rate?

A. Approximately 33.3%

Two verified closures divided by six total findings gives approximately thirty-three point three percent.

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05 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: Verifiable information supporting a finding or conclusion. Which term fits?

B. objective evidence

A Not here. closure rate: The proportion of defined findings meeting the stated closure condition. The usual combination is "calculate the closure rate".

B Correct. objective evidence: Verifiable information supporting a finding or conclusion. The usual combination is "examine objective evidence".

C Not here. correction: Action addressing a detected problem or instance. The usual combination is "document the immediate correction".

D Not here. closure evidence: Information supporting closure under the applicable process. The usual combination is "retain closure evidence".

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D4. Rebuild the exchange from "A documented action is not automatically a closed finding". Ruby: "F5 and F6 need a different label: no owner and no plan. Who is going to get those assignments agreed?" Ian: [missing response] Ruby: "You are coordinating the assignment, not necessarily taking responsibility for both corrective actions. I will show that distinction in the status note." Which response belongs in the gap?

C. I will secure an action owner for each. Until that is confirmed, do not put my name in the owner field as though the action responsibility has already been settled.

A Not here. This line belongs to turn 20, after Ruby says: "The corrected dashboard will show two closed, two awaiting effectiveness checks, and two lacking plans and owners. It will keep the six-finding denominator." It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 12, after Ruby says: "The slide says '33.3% compliant.' That is worse than the wrong count: it makes six findings sound like the whole facility." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Ian's response in turn 6. It connects Ruby's preceding point with Ruby's follow-up. The action owner is accountable for follow-up; assigning that person is necessary coordination, not evidence that the finding is resolved.

D Not here. This line belongs to turn 8, after Ruby says: "You are coordinating the assignment, not necessarily taking responsibility for both corrective actions. I will show that distinction in the status note." It addresses that point, not the missing turn in the supplied exchange.

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E / Conversation

1. corrective-action plan

Turn 2. A corrective-action plan documents intended work; its existence alone does not establish implementation or verified effectiveness.

05 / Answers and explanations / continued

2. open finding

Turn 4. An open finding has not met the stated closure requirements, even if a plan and owner already exist.

3. action owner

Turn 6. The action owner is accountable for follow-up; assigning that person is necessary coordination, not evidence that the finding is resolved.

4. escalation route

Turn 8. The escalation route raises unresolved responsibility through the agreed process rather than hiding the ownership gap in the report.

5. closure rate

Turn 10. Closure rate uses findings meeting the closure condition as its numerator; here that is two of six, not four planned actions.

6. audit scope

Turn 12. Audit scope limits what the review covers; a finding-closure percentage cannot establish a percentage of overall facility compliance.

7. evidence register

Turn 14. The evidence register links each claimed closure to its supporting information, making the status reviewable rather than merely asserted.

8. effectiveness check

Turn 16. An effectiveness check evaluates the action's result; pending means that evaluation is incomplete, not necessarily that the action failed.

9. target date

Turn 18. The target date here is for a status review, not a promised completion date for every corrective action.

10. audit trail

Turn 20. The audit trail records how evidence and decisions support status changes, including the correction of a misleading dashboard count.

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05 / Answers and explanations / continued

F / Accuracy and scope

F1. What must not be inferred from Thursday's review time?

A. All findings will be resolved by then.

A status-review appointment is not a commitment that every corrective action will be complete.

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F2. Which record best supports closure in this case?

D. Verified effectiveness evidence linked to the finding

The local process explicitly requires effectiveness evidence rather than planning or implementation milestones alone.

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F / Guided speaking

1. three

Coordinator: The number verified closed is three.

Turn 1. Three findings explicitly meet the verified-closure condition in the supplied case.

2. five

Reviewer: The number still open is five.

Turn 2. Eight total findings minus three verified closures leaves five open findings.

3. 37.5%

Coordinator: The verified closure rate is 37.5%.

Turn 3. Three divided by eight equals thirty-seven point five percent of this review's findings.

4. Monday

Reviewer: The next status review is Monday.

Turn 4. Monday is the review appointment, not a guaranteed resolution date.

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05 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "A documented action is not automatically a closed finding". Ruby: "I will link F1 and F2 to the verification records. A dashboard reader should be able to locate the basis for closure." Ian: [missing response] Ruby: "For F3 and F4, I will show the checks as pending. I will not claim that the actions failed simply because verification is incomplete." Which response belongs in the gap?

B. Put those references in the evidence register. A closed label without the supporting record is harder to check and easier to misinterpret when the next reviewer takes over.

A Not here. This line belongs to turn 2, after Ruby says: "The dashboard shows four of six findings closed. I traced the count to the four corrective-action plans, but that seems wrong." It addresses that point, not the missing turn in the supplied exchange.

B Correct. This is Ian's response in turn 14. It connects Ruby's preceding point with Ruby's follow-up. The evidence register links each claimed closure to its supporting information, making the status reviewable rather than merely asserted.

C Not here. This line belongs to turn 12, after Ruby says: "The slide says '33.3% compliant.' That is worse than the wrong count: it makes six findings sound like the whole facility." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 8, after Ruby says: "You are coordinating the assignment, not necessarily taking responsibility for both corrective actions. I will show that distinction in the status note." It addresses that point, not the missing turn in the supplied exchange.

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06 / Answers and explanations

A / Read the situation

A1. What does the 40-tonne estimate cover?

A. Purchased electricity at two offices during 2025

The calculation explicitly covers purchased electricity for two offices in the stated year.

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A2. Which headline is unsupported?

A. Our company is carbon neutral.

A partial electricity estimate does not substantiate a company-wide carbon-neutrality claim.

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A3. What must not be inferred from excluded sources?

C. Their emissions are zero.

Exclusion means a source was not included, not that it produced no emissions.

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D / Response choices

D1. Which replacement headline is supported?

B. Estimated 2025 purchased-electricity emissions for two offices: 40 tonnes CO₂e.

The accurate headline preserves the activity, two-office boundary, year, estimate status, and unit.

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D2. Which statement about Scope 2 is accurate?

A. It can include purchased heat, steam, and cooling as well as electricity.

Scope 2 covers relevant purchased or acquired energy categories, not only the electricity subset in this case.

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06 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: The operations included under the chosen organizational accounting approach. Which term fits?

B. organizational boundary

A Not here. purchased electricity: Electricity obtained from an external supplier for consumption. The usual combination is "quantify purchased electricity use".

B Correct. organizational boundary: The operations included under the chosen organizational accounting approach. The usual combination is "define the organizational boundary".

C Not here. carbon-neutrality claim: An assertion about balancing or neutralizing emissions under a specified substantiated basis. The usual combination is "substantiate a carbon-neutrality claim".

D Not here. reporting year: The period assigned to an emissions or sustainability report. The usual combination is "specify the reporting year".

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D4. Rebuild the exchange from "A partial electricity estimate cannot support a company-wide claim". Leo: "I will name the two offices and year. The unit is tonnes of carbon dioxide equivalent, not kilowatt-hours of electricity consumed." Ana: [missing response] Leo: "Can I say we have completed Scope 2 reporting? I thought Scope 2 was simply purchased electricity, which is what this file calculates." Which response belongs in the gap?

A. Correct. CO2e is the emissions unit. Electricity consumption is activity data used in the calculation, alongside the applicable factors and method. Keep those quantities distinct in the table and headline.

A Correct. This is Ana's response in turn 6. It connects Leo's preceding point with Leo's follow-up. CO2e expresses emissions on a common warming-potential basis; it is not a unit of electricity consumption.

B Not here. This line belongs to turn 14, after Leo says: "Our team checked the arithmetic. Would verified imply independent review rather than our internal check?" It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 16, after Leo says: "Someone suggested purchasing forty credits and retaining the carbon-neutral headline. We have no company-wide inventory or substantiation package for that claim." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 2, after Leo says: "The headline says our company is carbon neutral. I assumed the forty-tonne estimate covered the whole footprint." It addresses that point, not the missing turn in the supplied exchange.

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06 / Answers and explanations / continued

E / Conversation

1. emissions inventory

Turn 2. An emissions inventory has defined boundaries; this calculation covers only the stated electricity sources rather than the whole company.

2. reporting boundary

Turn 4. The reporting boundary states what is included, preventing a partial office estimate from becoming a company-wide assertion.

3. CO₂e

Turn 6. CO₂e expresses emissions on a common warming-potential basis; it is not a unit of electricity consumption.

4. Scope 2

Turn 8. Scope 2 includes relevant purchased or acquired energy, so selected office electricity is only a subset of its potential coverage.

5. Scope 1

Turn 10. Scope 1 concerns direct emissions from owned or controlled sources under the chosen boundary; omitted sources cannot be presumed zero.

6. Scope 3

Turn 12. Scope 3 addresses other indirect value-chain emissions under the framework, which are outside this limited calculation.

7. Assurance

Turn 14. Assurance is an independent evaluation under an agreed engagement; internal preparation alone does not establish that status.

8. carbon credit

Turn 16. A carbon credit is a separate quantified unit under a program; purchasing it does not supply a complete inventory or substantiate every claim.

9. base year

Turn 18. A base year provides a defined comparison reference; no comparable prior-year calculation is supplied in this case.

06 / Answers and explanations / continued

10. emission factor

Turn 20. The emission factor links activity data to the calculated emissions and should be documented with the method and boundary.

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F / Accuracy and scope

F1. What does lack of independent assurance mean here?

C. The estimate must not be described as independently assured.

No assurance engagement has established independent assurance, but its absence does not itself prove the estimate false.

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F2. Which question addresses the headline's main defect?

A. Does the evidence cover and substantiate the company-wide claim?

The main defect is the narrow boundary; reconciliation, unit consistency, and consultation do not extend it company-wide.

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F / Guided speaking

1. 12

Analyst: The estimated emissions are 12 tonnes CO₂e.

Turn 1. Twelve is the emissions quantity supplied for this separate limited calculation.

2. warehouse

Editor: The included location is one warehouse.

Turn 2. The calculation covers one warehouse, not every company operation.

3. 2024

Analyst: The reporting year is 2024.

Turn 3. The supplied reporting period is 2024 and must remain attached to the figure.

4. not

Editor: Independent assurance has not been completed.

Turn 4. The brief explicitly states that independent assurance has not been completed.

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06 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "A partial electricity estimate cannot support a company-wide claim". Leo: "Our team checked the arithmetic. Would verified imply independent review rather than our internal check?" Ana: [missing response] Leo: "Someone suggested purchasing forty credits and retaining the carbon-neutral headline. We have no company-wide inventory or substantiation package for that claim." Which response belongs in the gap?

A. No. Assurance has not been completed. Say estimated and give the calculation boundary. Accurate confidence comes from describing what we have, not borrowing a status the evidence does not support.

A Correct. This is Ana's response in turn 14. It connects Leo's preceding point with Leo's follow-up. Assurance is an independent evaluation under an agreed engagement; internal preparation alone does not establish that status.

B Not here. This line belongs to turn 6, after Leo says: "I will name the two offices and year. The unit is tonnes of carbon dioxide equivalent, not kilowatt-hours of electricity consumed." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 2, after Leo says: "The headline says our company is carbon neutral. I assumed the forty-tonne estimate covered the whole footprint." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 16, after Leo says: "Someone suggested purchasing forty credits and retaining the carbon-neutral headline. We have no company-wide inventory or substantiation package for that claim." It addresses that point, not the missing turn in the supplied exchange.

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07 / Answers and explanations

A / Read the situation

A1. What does the sampling cover?

C. Three locations on one June morning

The brief limits the results to three locations, one collection period, and the listed analytes.

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A2. What does below the reporting limit establish?

C. The laboratory did not report a quantitative value at or above that limit for X.

A below-limit result is tied to the laboratory reporting basis and does not prove universal absence or safety.

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A3. Where should requests for current health or water-use advice go?

A. The responsible public authority

The responsible authority provides current advice; study summaries, analytical reporting limits, and meeting consensus do not replace it.

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D / Response choices

D1. Which public statement is accurate?

A. X was below the reporting limit in these three preliminary samples.

The supported statement preserves the analyte, sample count, analytical limit, and preliminary status.

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D2. Which phrase improperly expands time coverage?

B. The area is safe in every season.

Every season claims evidence beyond the single collection period supplied in the case.

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07 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: The place where a sample was collected. Which term fits?

A. sampling location

A Correct. sampling location: The place where a sample was collected. The usual combination is "identify the sampling location".

B Not here. representativeness: The extent to which data reflect the conditions relevant to a question. The usual combination is "evaluate representativeness".

C Not here. public advisory: An official notice giving relevant information or guidance to the public. The usual combination is "check the current public advisory".

D Not here. quantitation: Determination of an amount or concentration under the method's conditions. The usual combination is "describe the quantitation limit".

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D4. Rebuild the exchange from "Answer a safety question without extending the evidence". Daniel: "Those limits may sound evasive. Can you explain the result briefly without calling the whole area clean?" Suki: [missing response] Daniel: "We should name the June collection date. Otherwise the chart could appear to describe the whole year." Which response belongs in the gap?

C. Use a plain-language summary, but avoid clean as a blanket label. Say what was tested, where, and when. Then explain that the result does not establish conditions at untested locations or for unlisted substances.

A Not here. This line belongs to turn 2, after Daniel says: "Residents will ask whether the results prove the whole area is safe. They need to know what this means for their families." It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 20, after Daniel says: "Our closing message will give the three locations, one June morning, listed analytes, below-limit result for X, and the limits on wider conclusions." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Suki's response in turn 6. It connects Daniel's preceding point with Daniel's follow-up. A plain-language summary simplifies wording without replacing the result's limits with a misleading label.

D Not here. This line belongs to turn 4, after Daniel says: "The chart shows X below the reporting limit at all three locations. Some readers will interpret that as no X anywhere." It addresses that point, not the missing turn in the supplied exchange.

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E / Conversation

1. spatial coverage

Turn 2. Spatial coverage identifies represented places; three sampling locations do not characterize the whole area.

07 / Answers and explanations / continued

2. analyte

Turn 4. Analyte names the tested substance; the result concerns X rather than every possible substance.

3. plain-language summary

Turn 6. A plain-language summary simplifies wording without replacing the result's limits with a misleading label.

4. temporal coverage

Turn 8. Temporal coverage identifies represented times; one morning does not establish conditions throughout the year.

5. responsible authority

Turn 10. The responsible authority provides current advice; the consultant must not invent guidance from these limited results.

6. follow-up contact

Turn 12. A follow-up contact offers further communication without implying that the study answers the water-use question.

7. screening level

Turn 14. A screening level supports further evaluation, not an automatic cleanup criterion or universal safety determination.

8. preliminary result

Turn 16. A preliminary result can be explained with its stage and limits; preliminary does not mean false.

9. question log

Turn 18. The question log keeps community concerns and their follow-up status visible, including unresolved questions.

10. risk communication

Turn 20. Risk communication combines accurate evidence and uncertainty with respectful attention to affected people's practical concerns.

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07 / Answers and explanations / continued

F / Accuracy and scope

F1. How should Suki respond to a drinking-water question?

A. Acknowledge the concern and refer current advice to the responsible authority.

The study does not establish drinking-water advice, so Suki should acknowledge the question and use the appropriate referral.

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F2. Which comparison is correct?

B. Screening levels and cleanup levels serve different purposes.

Screening values support further evaluation and are not automatically the applicable cleanup criteria or a health determination.

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F / Guided speaking

1. two

Consultant: The report covers two locations.

Turn 1. P1 and P2 are the two locations explicitly included in the report.

2. 8 May

Resident: The collection date was 8 May.

Turn 2. Eight May is the supplied sampling date, not a claim about other periods.

3. Y

Consultant: The reported analyte is Y.

Turn 3. Y is the only analyte included in this separate report.

4. preliminary

Resident: The results are still preliminary.

Turn 4. The supplied report is preliminary and must not be presented as a final determination.

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07 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "Answer a safety question without extending the evidence". Daniel: "Someone may bring a screening-level table from another report. Should we tell them any number below that table is automatically safe?" Suki: [missing response] Daniel: "The meeting materials should also make clear that the results are preliminary. Does that mean we should avoid discussing them at all?" Which response belongs in the gap?

C. No. A screening level has a defined purpose and assumptions. It is not automatically a cleanup standard or a universal dividing line between safe and unsafe for every place, substance, and exposure.

A Not here. This line belongs to turn 10, after Daniel says: "If someone asks whether they can drink water from a particular source, can we answer from these results alone?" It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 12, after Daniel says: "Please give us a named contact, not just 'ask the authorities.' Families will want to know where their unanswered question is going." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Suki's response in turn 14. It connects Daniel's preceding point with Daniel's follow-up. A screening level supports further evaluation, not an automatic cleanup criterion or universal safety determination.

D Not here. This line belongs to turn 4, after Daniel says: "The chart shows X below the reporting limit at all three locations. Some readers will interpret that as no X anywhere." It addresses that point, not the missing turn in the supplied exchange.

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08 / Answers and explanations

A / Read the situation

A1. What does the existing agreement cover?

C. Six locations during one visit, with agreed laboratory work and report

The signed assignment specifies six locations and one visit; the requested additions are not yet approved.

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A2. What is requested as additional work?

A. Four more locations and a second visit

Grace requests four additional locations and another visit beyond the existing agreement.

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A3. What does Wednesday at 12:00 represent?

A. A change-estimate status update

Malik promises an estimate-status update, not delivery, field access, or approval of additional work.

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D / Response choices

D1. If the request is approved, how many locations would be included?

D. Ten locations, with sample count still to be determined

Six plus four gives ten locations, but the brief does not establish the number of samples.

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D2. Which reply is cooperative and accurate?

A. We can assess the extra work and provide estimate status Wednesday at noon.

The accurate reply offers a concrete assessment step without inventing authorization, cost, or delivery commitments.

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08 / Answers and explanations / continued

D3. A colleague needs the term for this meaning: Work or cost explicitly outside an agreed scope or estimate. Which term fits?

D. exclusion

A Not here. cost breakdown: An allocation of a total estimate into named components. The usual combination is "provide a cost breakdown".

B Not here. acceptance condition: A requirement used to determine whether a deliverable is accepted. The usual combination is "define the acceptance condition".

C Not here. laboratory turnaround: The specified or estimated time for laboratory completion under stated conditions. The usual combination is "confirm laboratory turnaround".

D Correct. exclusion: Work or cost explicitly outside an agreed scope or estimate. The usual combination is "state the exclusion".

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D4. Rebuild the exchange from "Price the additional work before promising its delivery". Grace: "I can send the access contact and explain why we need those four points. Which laboratory details are still missing for pricing?" Malik: [missing response] Grace: "The site contact has not confirmed entry for the second visit. I would prefer not to hold up the entire discussion while that is checked." Which response belongs in the gap?

A. We need the proposed analytical suite and relevant methods, along with the sample quantities and field arrangements. The estimate should state those assumptions so you can see exactly what it covers.

A Correct. This is Malik's response in turn 6. It connects Grace's preceding point with Grace's follow-up. The analytical suite defines the testing included; changing locations does not by itself specify the laboratory work required.

B Not here. This line belongs to turn 16, after Grace says: "I do not want the team to lose a possible field date while paperwork circulates. Does today's discussion authorize them to reserve and perform the visit?" It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 20, after Grace says: "Then Wednesday's update will cover estimate status, open inputs, and timing questions. Once the written proposal is ready, I will arrange the approval review." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 18, after Grace says: "Please keep the existing assignment clear. The original six locations have not been cancelled." It addresses that point, not the missing turn in the supplied exchange.

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08 / Answers and explanations / continued

E / Conversation

1. change request

Turn 2. The change request proposes extra work; it does not itself amend the agreement or authorize performance.

2. sample count

Turn 4. Sample count depends on the sampling design and quality requirements, not simply the number of locations.

3. analytical suite

Turn 6. The analytical suite defines the testing included; changing locations does not by itself specify the laboratory work required.

4. site access

Turn 8. Site access is an unresolved practical dependency; drafting a proposal does not establish permission or a confirmed visit.

5. fee estimate

Turn 10. The fee estimate projects charges on a defined basis; the promised status update does not guarantee every pricing input will be resolved.

6. cost breakdown

Turn 12. The cost breakdown separates estimate components so the client can review what the proposed change adds and excludes.

7. Laboratory turnaround

Turn 14. Laboratory turnaround covers the stated laboratory service period, not all access, collection, review, and reporting steps.

8. change authorization

Turn 16. Change authorization requires the approved written change specified by this agreement; discussion or interest alone does not permit extra field work.

9. scope of work

Turn 18. The scope of work remains the agreed six-location assignment until the parties approve a change; a request does not silently replace it.

08 / Answers and explanations / continued

10. client sign-off

Turn 20. Client sign-off documents approval under the agreement; arranging a review is not the same as receiving that approval.

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F / Accuracy and scope

F1. What is required before extra field work under this agreement?

B. An approved written change

The fictional agreement expressly requires approved written authorization for the additional field work.

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F2. Which schedule statement is unsupported?

A. The laboratory turnaround equals the full report-delivery period.

Laboratory work is only one component; collection, review, access, and reporting also affect the schedule.

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F / Guided speaking

1. eight

Manager: The proposed expanded scope would cover eight locations.

Turn 1. Five existing plus three requested locations equals eight if the change is approved.

2. second

Client: The requested visit would be the second visit.

Turn 2. The client requests a second visit beyond the one already agreed.

3. unresolved

Manager: The sample count is still unresolved.

Turn 3. Location arithmetic does not determine the sample count, which the brief leaves unresolved.

4. change

Client: Before extra field work, we need an approved written change.

Turn 4. The supplied agreement explicitly requires an approved written change before additional field work.

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08 / Answers and explanations / continued

F / Rebuild the exchange

1. Rebuild the exchange from "Price the additional work before promising its delivery". Grace: "If the laboratory offers a five-day turnaround, can we tell our internal team that the final report will arrive five days after approval?" Malik: [missing response] Grace: "I do not want the team to lose a possible field date while paperwork circulates. Does today's discussion authorize them to reserve and perform the visit?" Which response belongs in the gap?

B. No. Laboratory turnaround is only one component. We also need to consider access, mobilization, collection, review, and report preparation. Its starting point and conditions must be confirmed rather than assumed.

A Not here. This line belongs to turn 6, after Grace says: "I can send the access contact and explain why we need those four points. Which laboratory details are still missing for pricing?" It addresses that point, not the missing turn in the supplied exchange.

B Correct. This is Malik's response in turn 14. It connects Grace's preceding point with Grace's follow-up. Laboratory turnaround covers the stated laboratory service period, not all access, collection, review, and reporting steps.

C Not here. This line belongs to turn 16, after Grace says: "I do not want the team to lose a possible field date while paperwork circulates. Does today's discussion authorize them to reserve and perform the visit?" It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 2, after Grace says: "We need four more locations and a second visit. Can your team add those to the assignment and keep the existing report date?" It addresses that point, not the missing turn in the supplied exchange.

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Review 1 / Explanations

Cumulative review

1. A colleague needs the term for this meaning: Past uses of a property or surrounding land. Which term fits?

C. historical land use

A Not here. environmental professional: A professional meeting the applicable qualifications for the assessment role. The usual combination is "refer to the environmental professional".

B Not here. historical aerial photograph: An overhead image documenting past site appearance. The usual combination is "compare historical aerial photographs".

C Correct. historical land use: Past uses of a property or surrounding land. The usual combination is "investigate historical land use".

D Not here. interview record: Documentation of information obtained from an interview. The usual combination is "retain the interview record".

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2. A colleague needs the term for this meaning: A signature documenting a specified custody handoff. Which term fits?

A. transfer signature

A Correct. transfer signature: A signature documenting a specified custody handoff. The usual combination is "obtain the required transfer signature".

B Not here. field blank: A control sample used to evaluate potential contamination associated with field handling. The usual combination is "assess a field blank".

C Not here. reporting limit: A project or laboratory threshold for routine quantitative reporting; lower values may be reported as qualified estimates. The usual combination is "state the reporting limit".

D Not here. sampling plan: A document defining the intended collection and analysis of samples. The usual combination is "follow the sampling plan".

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Review 1 / Explanations / continued

3. Rebuild the exchange from "A missing record is not a clean-site conclusion".

Maya: "Another colleague suggested scheduling samples immediately. Sampling is not in our present assignment, and the client has not approved any additional investigation." **Eric:** [missing response] **Maya:** "I will avoid saying that Phase II work has started. Can the summary list the work completed while clearly leaving the record question open?" Which response belongs in the gap?

C. Then keep the scope of inquiry explicit. A further investigation would need a defined question, appropriate professional input, and the necessary authorization. This conversation does not supply those things.

A Not here. This line belongs to turn 2, after Maya says: "The draft says no further questions remain. We have finished the visit and interviews, but the tank-closure record is still missing. Can that sentence stay?" It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 14, after Maya says: "Could the buyer interpret pending review as proof that every other source is unreliable? We have useful interviews and historical records already." It addresses that point, not the missing turn in the supplied exchange.

C Correct. This is Eric's response in turn 10. It connects Maya's preceding point with Maya's follow-up. The scope of inquiry defines the existing assessment work; it does not automatically expand when a question remains unresolved.

D Not here. This line belongs to turn 12, after Maya says: "I will avoid saying that Phase II work has started. Can the summary list the work completed while clearly leaving the record question open?" It addresses that point, not the missing turn in the supplied exchange.

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Review 1 / Explanations / continued

4. Rebuild the exchange from "Trace a missing custody signature without inventing it". Elena: "I will leave the issue open, send the evidence package, and ask for your review status before the report is finalized." Jonas: [missing response] Elena: "My update will identify the blank receiving signature, the corroborating records, and the pending decision. It will not blame the custodian." Which response belongs in the gap?

D. Good. Data validation and the usability decision need their own status. The presence of a number in a laboratory report does not show that these review steps are complete.

A Not here. This line belongs to turn 12, after Elena says: "I can confirm that the labels match. I cannot use that identity check to vouch for the analytical value itself, can I?" It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 8, after Elena says: "Should I tell the client that the result is invalid until we receive that account? The report deadline is approaching." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 6, after Elena says: "The custodian is available now. Could we just ask for a signature in the empty box, or would that hide when it was added?" It addresses that point, not the missing turn in the supplied exchange.

D Correct. This is Jonas's response in turn 18. It connects Elena's preceding point with Elena's follow-up. Data validation evaluates evidence against requirements; it is distinct from simply receiving an analytical result.

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Review 2 / Explanations

Cumulative review

1. A colleague needs the term for this meaning: A table linking each comment to a response and supporting material. Which term fits?

B. comment-response matrix

A Not here. assumption register: A record of assumptions and their confirmation status. The usual combination is "maintain an assumption register".

B Correct. comment-response matrix: A table linking each comment to a response and supporting material. The usual combination is "update the comment-response matrix".

C Not here. storm duration: The period over which a storm event is represented. The usual combination is "confirm the storm duration".

D Not here. input parameter: A value supplied to a model. The usual combination is "confirm an input parameter".

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2. A colleague needs the term for this meaning: Practical suitability of an approach under the relevant conditions. Which term fits?

D. feasibility

A Not here. monitored natural attenuation: A monitored strategy relying on natural processes under appropriate evaluated conditions. The usual combination is "evaluate monitored natural attenuation".

B Not here. residual risk: Risk remaining after specified controls or actions. The usual combination is "evaluate residual risk".

C Not here. remediation: Work intended to address environmental contamination under defined objectives. The usual combination is "evaluate remediation options".

D Correct. feasibility: Practical suitability of an approach under the relevant conditions. The usual combination is "assess technical feasibility".

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Review 2 / Explanations / continued

3. Rebuild the exchange from "Trace a missing custody signature without inventing it". Elena: "The client may ask whether the missing signature proves that someone changed the bottle or contaminated its contents." Jonas: [missing response] Elena: "I can confirm that the labels match. I cannot use that identity check to vouch for the analytical value itself, can I?" Which response belongs in the gap?

B. It does not establish either allegation. Describe the chain of custody gap accurately and refer the question to the review. Avoid turning missing documentation into an accusation about a person's conduct.

A Not here. This line belongs to turn 20, after Elena says: "My update will identify the blank receiving signature, the corroborating records, and the pending decision. It will not blame the custodian." It addresses that point, not the missing turn in the supplied exchange.

B Correct. This is Jonas's response in turn 10. It connects Elena's preceding point with Elena's follow-up. Chain of custody documents sample possession and transfers; a gap prompts review without itself proving tampering.

C Not here. This line belongs to turn 6, after Elena says: "The custodian is available now. Could we just ask for a signature in the empty box, or would that hide when it was added?" It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 8, after Elena says: "Should I tell the client that the result is invalid until we receive that account? The report deadline is approaching." It addresses that point, not the missing turn in the supplied exchange.

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Review 2 / Explanations / continued

4. Rebuild the exchange from "Faster implementation is not necessarily a shorter project". Omar: "Could unforeseen work change either total? We have not included a reserve or any amount for uncertain additional work in these figures." Tess: [missing response] Omar: "I will report A's lower stated total and B's shorter implementation, then list technical suitability, acceptance, and completion criteria as unresolved." Which response belongs in the gap?

A. Yes. No contingency allowance is included here. That does not mean uncertainty is absent. It means this comparison has not assigned an additional amount to it.

A Correct. This is Tess's response in turn 18. It connects Omar's preceding point with Omar's follow-up. A contingency allowance addresses specified cost uncertainty; none is included in the supplied figures, so it cannot be assumed.

B Not here. This line belongs to turn 4, after Omar says: "A has twelve monitoring months, and both use five thousand dollars per month. What does that make the monitoring totals?" It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 2, after Omar says: "B looks best: ninety thousand dollars and two weeks. Why would we choose the option costing more and taking longer?" It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 8, after Omar says: "That changes the cost ranking. Management will ask why we cannot recommend A now. What is still missing from that decision?" It addresses that point, not the missing turn in the supplied exchange.

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Review 3 / Explanations

Cumulative review

1. A colleague needs the term for this meaning: A requirement or benchmark used to evaluate evidence. Which term fits?

C. audit criterion

A Not here. corrective-action plan: A documented proposal to address an identified problem and its cause. The usual combination is "approve a corrective-action plan".

B Not here. evidence register: An organized record linking evidence to review items. The usual combination is "update the evidence register".

C Correct. audit criterion: A requirement or benchmark used to evaluate evidence. The usual combination is "identify the audit criterion".

D Not here. effectiveness check: Evaluation of whether an action achieved its intended result. The usual combination is "complete an effectiveness check".

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2. A colleague needs the term for this meaning: Other indirect value-chain emissions within the applicable accounting framework. Which term fits?

D. Scope 3

A Not here. greenhouse gas (GHG): A gas that contributes to the atmosphere's heat-trapping effect. The usual combination is "quantify greenhouse gas emissions".

B Not here. emission factor: A coefficient relating an activity to an emissions quantity. The usual combination is "document the emission factor".

C Not here. assurance: An independent evaluation of reported information under an agreed engagement. The usual combination is "obtain independent assurance".

D Correct. Scope 3: Other indirect value-chain emissions within the applicable accounting framework. The usual combination is "assess Scope 3 categories".

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Review 3 / Explanations / continued

3. Rebuild the exchange from "Faster implementation is not necessarily a shorter project". Omar: "Does B's shorter implementation mean the whole project finishes earlier?" Tess: [missing response] Omar: "I see. We need to distinguish the physical work from the subsequent checks, and avoid making the short schedule sound like final closure." Which response belongs in the gap?

D. No. We do not have the completion criterion needed to make that claim. Installation duration and overall completion are different. The longer monitoring requirement also matters when describing what follows implementation.

A Not here. This line belongs to turn 6, after Omar says: "So A is one hundred eighty thousand overall, and B is two hundred ten thousand, assuming only these stated components." It addresses that point, not the missing turn in the supplied exchange.

B Not here. This line belongs to turn 14, after Omar says: "The client team also wants to know whether the regulator will accept either proposal. Do these preliminary estimates tell us that?" It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 20, after Omar says: "I will report A's lower stated total and B's shorter implementation, then list technical suitability, acceptance, and completion criteria as unresolved." It addresses that point, not the missing turn in the supplied exchange.

D Correct. This is Tess's response in turn 10. It connects Omar's preceding point with Omar's follow-up. The completion criterion defines when obligations are fulfilled; implementation duration alone cannot establish that endpoint.

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Review 3 / Explanations / continued

4. Rebuild the exchange from "A partial electricity estimate cannot support a company-wide claim". Leo: "Could we compare this estimate with last year instead? I do not have a matching calculation for the same two offices and methodology." Ana: [missing response] Leo: "The revised headline will state estimated 2025 purchased-electricity emissions for two offices: forty metric tonnes of CO₂e. The exclusions will appear immediately below." Which response belongs in the gap?

A. Then do not invent a base year comparison. A reduction claim needs a comparable basis and supporting data. We can report the current limited estimate without claiming a trend that has not been established.

A Correct. This is Ana's response in turn 18. It connects Leo's preceding point with Leo's follow-up. A base year provides a defined comparison reference; no comparable prior-year calculation is supplied in this case.

B Not here. This line belongs to turn 12, after Leo says: "What about suppliers and customer use? Those are not included either, so our statement should not imply that we measured them." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 8, after Leo says: "Can I say we have completed Scope 2 reporting? I thought Scope 2 was simply purchased electricity, which is what this file calculates." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 10, after Leo says: "The excluded factory and company vehicles must remain visible. Otherwise a reader could assume they were checked and contributed no emissions." It addresses that point, not the missing turn in the supplied exchange.

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Review 4 / Explanations

Cumulative review

1. A colleague needs the term for this meaning: A gathering for sharing information and receiving public questions. Which term fits?

D. public meeting

A Not here. non-detect: A result indicating an analyte was not detected at the stated analytical threshold. The usual combination is "explain a non-detect".

B Not here. temporal coverage: The period or times represented by the data. The usual combination is "explain temporal coverage".

C Not here. responsible authority: The body with the relevant responsibility for the matter. The usual combination is "contact the responsible authority".

D Correct. public meeting: A gathering for sharing information and receiving public questions. The usual combination is "prepare a public meeting".

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2. A colleague needs the term for this meaning: A projected charge based on stated work and assumptions. Which term fits?

A. fee estimate

A Correct. fee estimate: A projected charge based on stated work and assumptions. The usual combination is "prepare a fee estimate".

B Not here. sample count: The number of samples specified for collection or analysis. The usual combination is "verify the sample count".

C Not here. schedule impact: The effect of a proposed change on planned timing. The usual combination is "assess the schedule impact".

D Not here. scope of work: The agreed tasks, boundaries, and deliverables of an assignment. The usual combination is "define the scope of work".

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Review 4 / Explanations / continued

3. Rebuild the exchange from "A partial electricity estimate cannot support a company-wide claim". Leo: "The excluded factory and company vehicles must remain visible. Otherwise a reader could assume they were checked and contributed no emissions." Ana: [missing response] Leo: "What about suppliers and customer use? Those are not included either, so our statement should not imply that we measured them." Which response belongs in the gap?

A. Yes. Relevant direct sources may fall within Scope 1, depending on the organizational boundary. Excluding a source from this calculation says nothing by itself about whether that source emits zero, forty, or any other amount.

A Correct. This is Ana's response in turn 10. It connects Leo's preceding point with Leo's follow-up. Scope 1 concerns direct emissions from owned or controlled sources under the chosen boundary; omitted sources cannot be presumed zero.

B Not here. This line belongs to turn 12, after Leo says: "What about suppliers and customer use? Those are not included either, so our statement should not imply that we measured them." It addresses that point, not the missing turn in the supplied exchange.

C Not here. This line belongs to turn 18, after Leo says: "Could we compare this estimate with last year instead? I do not have a matching calculation for the same two offices and methodology." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 8, after Leo says: "Can I say we have completed Scope 2 reporting? I thought Scope 2 was simply purchased electricity, which is what this file calculates." It addresses that point, not the missing turn in the supplied exchange.

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Review 4 / Explanations / continued

4. Rebuild the exchange from "Price the additional work before promising its delivery". Grace: "Please keep the existing assignment clear. The original six locations have not been cancelled." Malik: [missing response] Grace: "Then Wednesday's update will cover estimate status, open inputs, and timing questions. Once the written proposal is ready, I will arrange the approval review." Which response belongs in the gap?

B. The current scope of work remains unchanged. We will identify the proposed additions separately and assess their interaction with the existing schedule. Nothing in this request automatically cancels the original assignment.

A Not here. This line belongs to turn 16, after Grace says: "I do not want the team to lose a possible field date while paperwork circulates. Does today's discussion authorize them to reserve and perform the visit?" It addresses that point, not the missing turn in the supplied exchange.

B Correct. This is Malik's response in turn 18. It connects Grace's preceding point with Grace's follow-up. The scope of work remains the agreed six-location assignment until the parties approve a change; a request does not silently replace it.

C Not here. This line belongs to turn 20, after Grace says: "Then Wednesday's update will cover estimate status, open inputs, and timing questions. Once the written proposal is ready, I will arrange the approval review." It addresses that point, not the missing turn in the supplied exchange.

D Not here. This line belongs to turn 6, after Grace says: "I can send the access contact and explain why we need those four points. Which laboratory details are still missing for pricing?" It addresses that point, not the missing turn in the supplied exchange.

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Additional case 1 / Explanations

Extended conversation

1. mass basis

Turn 2. Mass basis identifies whether the denominator is wet sample mass or dry solids mass; identical mg/kg labels alone do not establish comparability.

2. percent solids

Turn 4. Percent solids is the dry-solids mass divided by wet sample mass, expressed as a percentage; eighty percent becomes 0.80 in this calculation.

3. dry-weight concentration

Turn 6. The dry-weight concentration is 10 divided by 0.80, or 12.5 mg/kg; a smaller mass denominator gives a higher concentration without adding analyte.

4. Moisture content

Turn 10. Moisture content here is the twenty-percent water fraction; it is not the eighty-percent solids fraction required by the supplied conversion.

5. sample-specific value

Turn 14. The solids percentage belongs to the individual sample; borrowing S14's percentage for other samples would impose an unsupported conversion.

6. audit trail

Turn 18. An audit trail retains the original result, solids fraction, basis label, calculation, and reviewed output so the conversion can be checked.

[Return to the conversation, page 116](#)

Transfer exchange

1. 0.60

Consultant: T2's solids fraction in decimal form is 0.60.

Turn 1. Sixty percent equals 0.60; the forty-percent moisture fraction is not the denominator here.

Additional case 1 / Explanations / continued

2. 10

Reviewer: T2 converts to 10 mg/kg dry weight.

Turn 2. Six divided by 0.60 equals ten on the stated dry-weight basis.

3. 9

Consultant: T3 remains at 9 mg/kg dry weight.

Turn 3. T3 is already reported on the required basis and needs no second conversion.

4. basis

Reviewer: The table must retain the reporting basis beside mg/kg.

Turn 4. The wet or dry basis specifies the mass denominator that the bare unit mg/kg does not distinguish.

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Additional case 2 / Explanations

Extended conversation

1. less-than sign

Turn 2. The less-than sign identifies the reported upper threshold for a non-detect in this case; the number following it is not a measured concentration.

2. reporting limit

Turn 4. The reporting limit is the stated threshold associated with this result, not a detected value; five cannot be treated as the April concentration.

3. dilution

Turn 6. The laboratory's stated dilution raised the sample-specific reporting threshold; this explanation does not convert the non-detect into a measured value.

4. estimated detection

Turn 10. The supplied laboratory legend defines 0.3 J as an estimated detected concentration, which differs from a non-detect or a missing result.

5. censored results

Turn 14. Censored results provide a threshold rather than an exact concentration; preserving that status prevents inappropriate plotting and summary calculations.

6. micrograms per litre

Turn 18. Micrograms per litre is the shared concentration unit in this case; preserving it prevents a thousandfold error when exchanging values with mg/L tables.

[Return to the conversation, page 120](#)

Transfer exchange

1. zero

Reviewer: The <2 entry does not establish a concentration of exactly zero.

Turn 1. A non-detect below a threshold does not prove the substance is present at exactly zero concentration.

Additional case 2 / Explanations / continued

2. detection

Manager: The 0.7 J entry is an estimated detection.

Turn 2. The supplied legend explicitly classifies this as detected but estimated, not missing or non-detected.

3. 0.0007

Reviewer: Converted to mg/L, 0.7 micrograms per litre is 0.0007.

Turn 3. Divide by one thousand to convert micrograms per litre to milligrams per litre.

4. qualifier

Manager: The converted value must retain its qualifier J.

Turn 4. Changing units does not remove the original estimated-status qualification or the need to interpret it.

[Return to the conversation, page 122](#)

Additional case 3 / Explanations

Extended conversation

1. Depth to water

Turn 2. Depth to water is a downward distance from a stated measuring point; different point elevations prevent direct ranking of absolute water-level elevations from depths alone.

2. vertical datum

Turn 4. The vertical datum is the common reference for the supplied elevations; mixing unrelated datums would invalidate their direct comparison.

3. water-level elevation

Turn 7. Water-level elevation is 100.40 m for A and 99.00 m for B after subtracting each depth from the corresponding measuring-point elevation.

4. measuring point

Turn 10. The measuring point must match the point from which the depth was recorded; substituting ground elevation for a casing reference introduces an offset error.

5. screen intervals

Turn 14. Screen intervals identify the depths or zones open to each well; without assessing them and hydraulic connection, the two levels cannot establish a site-wide flow direction.

6. datum offset

Turn 18. A changed reference point can introduce an elevation offset; the identifier alone does not establish that old and new measuring-point references are interchangeable.

[Return to the conversation, page 124](#)

Transfer exchange

1. 85.30

Coordinator: C's water-level elevation is 85.30 m.

Turn 1. Subtracting C's depth of 3.10 from its measuring-point elevation of 88.40 gives 85.30 metres.

Additional case 3 / Explanations / continued

2. 84.80

Reviewer: D's water-level elevation is 84.80 m.

Turn 2. Subtracting D's depth of 1.20 from its own elevation of 86.00 gives 84.80 metres.

3. 0.50

Coordinator: C's elevation exceeds D's by 0.50 m.

Turn 3. The elevation difference is 85.30 minus 84.80, or half a metre, on the common datum.

4. direction

Reviewer: These figures alone do not establish groundwater flow direction.

Turn 4. The supplied elevations do not establish hydraulic connection or provide a complete hydrogeological interpretation of flow direction.

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Find a phrase by purpose

Phase I and Phase II Site Assessments

Identify the outstanding source: The tank-closure record has not arrived.

Name completed work: The scheduled visit, interviews, and available records review are complete.

Limit the conclusion: We cannot say that no further questions remain.

[Full phrase bank, page 8](#)

Sampling Plans and Data Quality

Locate the gap: The receiving-signature box for GW03 is blank.

Identify the requirement: Project plan P6 requires that signature for this handoff.

Preserve the evidence: Keep the original record unchanged.

[Full phrase bank, page 21](#)

Permitting and Agency Coordination

Cite the comment: We are responding to comment C7.

State what is clear: The comment requests wet-weather modeling.

Name the existing case: The submission includes a dry-weather baseline.

[Full phrase bank, page 35](#)

Remediation Options and Risk

Define the question: Best depends on the criteria we are comparing.

Compare the initial component: B has the lower implementation estimate.

Add the monitoring component: A includes 12 months of monitoring at \$5,000 per month.

[Full phrase bank, page 48](#)

Find a phrase by purpose / continued

Regulatory Compliance and Audits

Correct the headline: Four findings have plans, but only two are closed.

State the denominator: The review contains six findings in total.

Name the closed items: F1 and F2 have verified effectiveness evidence.

[Full phrase bank, page 63](#)

Sustainability and ESG Reporting

Name the measured activity: The estimate covers purchased electricity at two offices.

State the reporting period: The reporting year is 2025.

Give the correct unit: The estimate is 40 metric tonnes of CO₂e.

[Full phrase bank, page 75](#)

Community and Stakeholder Meetings

Acknowledge the concern: I understand that you need information for everyday decisions.

State the sampling coverage: These results cover S1, S2, and S3 on one June morning.

Name the tested substance: This statement concerns analyte X.

[Full phrase bank, page 90](#)

Proposal, Scope, and Client Expectations

Acknowledge the request: You are requesting four additional locations and a second visit.

Restate the agreement: The current scope covers six locations during one visit.

Separate willingness and approval: We can assess the request; it is not yet authorized.

[Full phrase bank, page 103](#)

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acceptance condition[Lesson 08, p. 102](#)**activity data**[Lesson 06, p. 72](#)**adjoining property**[Lesson 01, p. 6](#)**all appropriate inquiries (AAI)**[Lesson 01, p. 5](#)**analytical suite**[Lesson 08, p. 102](#)**area-wide claim**[Lesson 07, p. 89](#)**assumption register**[Lesson 03, p. 34](#)**audit criterion**[Lesson 05, p. 61](#)**audit trail**[Lesson 05, p. 62](#), [Case 1, p. 115](#)**avoided emissions**[Lesson 06, p. 73](#)**baseline condition**[Lesson 03, p. 33](#)**calibration**[Lesson 03, p. 34](#)**carbon dioxide equivalent (CO₂e)**[Lesson 06, p. 72](#)**censored results**[Case 2, p. 119](#)**change authorization**[Lesson 08, p. 101](#)**cleanup level**[Lesson 07, p. 88](#)**closure evidence**[Lesson 05, p. 62](#)**comment-response matrix**[Lesson 03, p. 33](#)**community liaison**[Lesson 07, p. 88](#)**compliance obligation**[Lesson 05, p. 61](#)**containment**[Lesson 04, p. 45](#)**contingency allowance**[Lesson 04, p. 46](#)**action owner**[Lesson 05, p. 61](#)**additional service**[Lesson 08, p. 101](#)**agency comment**[Lesson 03, p. 33](#)**analyte**[Lesson 07, p. 88](#)**annual exceedance probability**[Lesson 03, p. 33](#)**assumption**[Lesson 08, p. 101](#)**assurance**[Lesson 06, p. 73](#)**audit scope**[Lesson 05, p. 61](#)**authorization**[Lesson 01, p. 7](#)**base year**[Lesson 06, p. 73](#)**boundary condition**[Lesson 03, p. 33](#)**carbon credit**[Lesson 06, p. 74](#)**carbon-neutrality claim**[Lesson 06, p. 73](#)**chain of custody (COC)**[Lesson 02, p. 18](#)**change request**[Lesson 08, p. 101](#)**client sign-off**[Lesson 08, p. 102](#)**closure rate**[Lesson 05, p. 62](#)**commercial review**[Lesson 08, p. 102](#)**completion criterion**[Lesson 04, p. 47](#)**conceptual site model**[Lesson 04, p. 45](#)**contaminant of concern**[Lesson 04, p. 45](#)**correction**[Lesson 05, p. 61](#)

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corrective action[Lesson 05, p. 61](#)**corrective-action plan**[Lesson 05, p. 61](#)**custodian**[Lesson 02, p. 18](#)**data quality objective (DQO)**[Lesson 02, p. 18](#)**data validation**[Lesson 02, p. 19](#)**deliverable**[Lesson 08, p. 101](#)**dependency**[Lesson 08, p. 102](#)**detection limit**[Lesson 02, p. 19](#)**dilution**[Case 2, p. 119](#)**dry-weight concentration**[Case 1, p. 115](#)**emission factor**[Lesson 06, p. 73](#)**engineering control**[Lesson 04, p. 46](#)**equipment blank**[Lesson 02, p. 19](#)**estimated detection**[Case 2, p. 119](#)**ex situ treatment**[Lesson 04, p. 45](#)**executive summary**[Lesson 01, p. 7](#)**exposure pathway**[Lesson 04, p. 45](#)**fee estimate**[Lesson 08, p. 101](#)**field duplicate**[Lesson 02, p. 19](#)**fire insurance map**[Lesson 01, p. 6](#)**follow-up request**[Lesson 01, p. 6](#)**greenhouse gas (GHG)**[Lesson 06, p. 72](#)**corrective record**[Lesson 02, p. 20](#)**cost breakdown**[Lesson 08, p. 101](#)**data gap**[Lesson 01, p. 5](#)**data usability**[Lesson 02, p. 20](#)**datum offset**[Case 3, p. 123](#)**demobilization**[Lesson 08, p. 101](#)**Depth to water**[Case 3, p. 123](#)**deviation**[Lesson 02, p. 18](#)**dry-weather flow**[Lesson 03, p. 33](#)**effectiveness check**[Lesson 05, p. 62](#)**emissions inventory**[Lesson 06, p. 72](#)**environmental professional**[Lesson 01, p. 5](#)**escalation route**[Lesson 05, p. 62](#)**evidence register**[Lesson 05, p. 62](#)**exclusion**[Lesson 08, p. 101](#)**exposure assessment**[Lesson 07, p. 88](#)**feasibility**[Lesson 04, p. 45](#)**field blank**[Lesson 02, p. 19](#)**finding**[Lesson 05, p. 61](#)**follow-up contact**[Lesson 07, p. 89](#)**global warming potential (GWP)**[Lesson 06, p. 73](#)**historical aerial photograph**[Lesson 01, p. 6](#)

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References and publication notes

All cases, organizations, figures, and conversations are fictional teaching material, not transcripts. Communication practice does not replace qualified advice or current workplace procedures.

[1] U.S. Environmental Protection Agency. Brownfields All Appropriate Inquiries.

Background on environmental site inquiries, professional review, and assessment context. The fictional site is not an AAI determination or an opinion about liability protection. Source checked 1 October 2026.

<https://www.epa.gov/brownfields/brownfields-all-appropriate-inquiries>

[2] U.S. Environmental Protection Agency, Region 4. Sample and Evidence Management.

Background on traceable sample custody and documentation. This regional procedure is not a universal rule; the fictional missing signature concerns a field-team-to-laboratory handoff required by the stated project plan, not a common-carrier signature. Source checked 1 October 2026.

<https://www.epa.gov/sites/default/files/2015-06/documents/Sample-and-Evidence-Management.pdf>

[3] U.S. Environmental Protection Agency. Regional Screening Levels: User Guide.

Background on screening, site-specific evaluation, and exposure context. No actual screening value or cleanup criterion is supplied or prescribed. Source checked 1 October 2026.

<https://www.epa.gov/risk/regional-screening-levels-rsls-users-guide>

[4] Greenhouse Gas Protocol. Corporate Accounting and Reporting Standard.

Background vocabulary for organizational boundaries and emissions scopes. The book does not certify an inventory, establish carbon neutrality, or treat standards under revision as adopted requirements. Source checked 1 October 2026.

<https://ghgprotocol.org/sites/default/files/ghgp/standards/ghg-protocol-revised.pdf>

Companion course

The website offers the eight-lesson course and related practice. This book can be used independently. No audio access or external account is needed for its exercises.

<https://englishladder.com/efsp-environmental-consulting.html>

Define the boundary. Trace the evidence. Explain the finding.

Eight consulting conversations: qualify a site assessment, investigate a custody gap, clarify an agency request, compare remediation proposals, report audit progress, correct an emissions claim, address residents, and negotiate a scope change.

Phase I and Phase II Site Assessments

A data gap is not automatically a significant data gap, and neither label alone proves a release. The environmental professional evaluates its significance using the assessment context and applicable requirements.

Sampling Plans and Data Quality

A receipt log and matching identifier provide relevant evidence, but they do not supply a missing signature. Conversely, the missing signature does not itself prove tampering, contamination, or that every result is unusable.

Permitting and Agency Coordination

A 100-year return period does not mean an event occurs exactly once every century. It expresses frequency statistically under stated assumptions. Here, no return period has been specified by the agency.

Remediation Options and Risk

A totals \$180,000 and B totals \$210,000 on the stated implementation-plus-monitoring basis. These are undiscounted estimates, not complete life-cycle costs or proof that A is technically preferable.

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English Ladder / English for Work / Revised 2026 edition

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