

AIR AND WATER POLLUTION CONTROL (AWPC) EXAM 2 PRACTICE (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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THE FULL VERSION STUDY GUIDE**

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. What is a J-hook vane in stream stabilization?**
 - A. A measure to measure water velocity
 - B. A dam used to block fish passage
 - C. An underwater valve for irrigation
 - D. In-stream rock or log structures designed to stabilize streambanks by deflecting high-velocity flow away from the bank toward the channel center
- 2. What change did the 1997 amendment make to BAT?**
 - A. Expanded BAT to all pollutants
 - B. Changed BAT to only toxic substances
 - C. Abolished BAT
 - D. Removed BAT from regulation
- 3. What does SWPPP stand for in stormwater management?**
 - A. Site Water Pollution Plan
 - B. Stormwater Pollution Prevention Plan
 - C. Stormwater Protection Program Plan
 - D. Sustainable Water Pollution Plan
- 4. Which expression defines hazard in environmental risk terms?**
 - A. Toxicity x Exposure
 - B. Exposure x Dose
 - C. Toxicity + Exposure
 - D. Dose x Toxicity
- 5. Which statement correctly describes the typical behavior of LNAPL and DNAPL at a contaminated site?**
 - A. LNAPL rises to the surface and DNAPL sinks.
 - B. DNAPL rises to the surface and LNAPL sinks.
 - C. Both rise to the surface.
 - D. Both sink.

6. What are the THREE biggest changes in fuel sources over the past 20 years?
- A. renewables, coal, natural gas
 - B. coal, oil, renewables
 - C. coal, natural gas, renewables
 - D. coal, natural gas, renewables
7. MTBE is an acronym for which chemical name?
- A. Methyl Ethyl Ether
 - B. Dimethyl Ether
 - C. Methyl TertButyl Ether
 - D. Methoxypropane
8. When is a SWPPP required?
- A. When disturbing more than two acres of land
 - B. When disturbing more than an acre of land
 - C. When disturbing less than half an acre
 - D. When disturbance occurs on a hillside
9. What did the Supreme Court say about EPA having to study CO₂?
- A. There was enough information to require EPA to conduct a study
 - B. CO₂ is not harmful
 - C. Not enough information to require EPA to conduct a study
 - D. EPA must regulate CO₂ immediately
10. Which state is noted as the second-largest solar producer and is expected to become the largest soon?
- A. California
 - B. Texas
 - C. Florida
 - D. New Mexico

Answers

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1. D
2. B
3. B
4. A
5. A
6. C
7. C
8. B
9. C
10. B

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Explanations

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1. What is a J-hook vane in stream stabilization?

- A. A measure to measure water velocity
- B. A dam used to block fish passage
- C. An underwater valve for irrigation
- D. In-stream rock or log structures designed to stabilize streambanks by deflecting high-velocity flow away from the bank toward the channel center**

A J-hook vane is a type of in-stream stabilization structure. It's a rock or log vane installed at the bank toe that projects into the flow with a J-shaped downstream end. Its main function is to deflect high-velocity flow away from the bank and toward the channel center, which reduces bank shear and erosion right at the bank edge. The hooked downstream end helps anchor the structure and resist scour, keeping it in place during floods. This reshapes the local flow so sediment is less likely to be eroded from the bank and the channel remains more stable over time. This differs from devices that simply measure velocity, from barriers that block fish passage, or from valves used for irrigation.

2. What change did the 1997 amendment make to BAT?

- A. Expanded BAT to all pollutants
- B. Changed BAT to only toxic substances**
- C. Abolished BAT
- D. Removed BAT from regulation

Best Available Techniques (BAT) are standards that regulate emissions by requiring the most effective technology currently available to address pollutants. The 1997 amendment refined BAT by applying it specifically to toxic substances, rather than to all pollutants. This focuses regulatory controls on substances that pose the greatest risks to health and the environment, ensuring that the effort and cost of control are directed where they matter most. It does not remove BAT or expand its reach to every pollutant; instead, it narrows the scope to substances with significant toxicity, aligning regulation with hazard rather than simply with quantity.

3. What does SWPPP stand for in stormwater management?

- A. Site Water Pollution Plan
- B. Stormwater Pollution Prevention Plan**
- C. Stormwater Protection Program Plan
- D. Sustainable Water Pollution Plan

SWPPP stands for Stormwater Pollution Prevention Plan. The main idea here is that this document specifies how a project will prevent or minimize pollution in runoff from stormwater. It's the formal, site-specific plan that lays out the practices and controls needed to keep sediments, nutrients, metals, and other pollutants from leaving the site and reaching waterways. A SWPPP is required under the NPDES stormwater program for many construction sites and certain industrial activities. It typically includes a site map showing drainage patterns and pollutant sources, planned erosion and sediment control measures (like stabilization of disturbed areas, sediment barriers), proposed stormwater management practices, a schedule for installing and maintaining controls, clearly assigned responsibilities, and procedures for inspections, maintenance, and corrective actions. By documenting these elements, the plan ensures that pollution prevention is built into site activities from the start and throughout construction. Other terms listed don't reflect the standard terminology used in stormwater management, so they aren't the official or commonly used name for this plan.

4. Which expression defines hazard in environmental risk terms?

A. Toxicity x Exposure

B. Exposure x Dose

C. Toxicity + Exposure

D. Dose x Toxicity

Hazard in environmental risk terms comes from how harmful a substance could be and how much contact people or the environment has with it. Toxicity tells you how severe the harm could be if exposure occurs, while exposure tells you how much contact occurs in the real world. When you multiply these two factors, you get a measure that increases when either the substance is more toxic or the exposure is greater, which is exactly how potential harm is driven in practice. Using only toxicity misses how often or how intensely people are exposed. Using only exposure misses how severe the harm could be if exposure happens. Using dose instead of exposure shifts the focus to the amount that actually gets into or reaches a target, which isn't the same as the overall contact risk in the environment. An additive combination or mixing dose and toxicity doesn't capture the way hazard scales with both factors together.

5. Which statement correctly describes the typical behavior of LNAPL and DNAPL at a contaminated site?

A. LNAPL rises to the surface and DNAPL sinks.

B. DNAPL rises to the surface and LNAPL sinks.

C. Both rise to the surface.

D. Both sink.

The typical behavior is controlled by density relative to water. LNAPL is lighter than water, so it is buoyant in the subsurface and tends to rise through the vadose and saturated zones, accumulating at the water table or reaching the surface. DNAPL is heavier than water, so it sinks through the saturated zone until it encounters an impermeable layer or low-permeability pocket where it can pool. That's why the correct statement is that LNAPL rises to the surface while DNAPL sinks. The other possibilities fail because they contradict the buoyancy differences: DNAPL would not rise, and LNAPL would not sink.

6. What are the THREE biggest changes in fuel sources over the past 20 years?

A. renewables, coal, natural gas

B. coal, oil, renewables

C. coal, natural gas, renewables

D. coal, natural gas, renewables

The main idea is that the fuel mix for electricity and heat has shifted away from coal toward cleaner and cheaper options, with three big changes driving most of the transformation: coal use has fallen, natural gas has risen, and renewables have grown rapidly. Coal has declined because natural gas became the cheaper, cleaner option for power generation. Gas-fired plants emit less CO₂ per unit of electricity and can ramp up quickly to meet demand, and the shale gas boom dramatically increased its supply and lowered prices, encouraging a switch from coal in many regions. At the same time, costs for wind and solar plummeted and policy support, financing innovations, and better grid integration made renewables much more competitive and widely deployed. This combination—replacing coal with natural gas and adding substantial renewable capacity—drives the most significant shifts in fuel sources over the past two decades.

7. MTBE is an acronym for which chemical name?

- A. Methyl Ethyl Ether
- B. Dimethyl Ether
- C. Methyl TertButyl Ether**
- D. Methoxypropane

MTBE is about how ether names are formed from the two groups attached to the oxygen. The acronym stands for a methyl group on one side and a tert-butyl group on the other, giving methyl tert-butyl ether. Its structure is $\text{CH}_3\text{-O-C(CH}_3)_3$, showing the methyl (Me) and the tert-butyl (tBu) group connected by an oxygen atom. This distinguishes it from the other options: methyl ethyl ether would be a methoxyethane (MeOEt) without the tert-butyl group, dimethyl ether is Me-O-Me, and methoxypropane is Me-O-CH₂-CH₂-CH₃. So the correct interpretation of MTBE is methyl tert-butyl ether.

8. When is a SWPPP required?

- A. When disturbing more than two acres of land
- B. When disturbing more than an acre of land**
- C. When disturbing less than half an acre
- D. When disturbance occurs on a hillside

A SWPPP is required whenever construction activity disturbs one acre or more of land, or when a larger development plan is in play that cumulatively disturbs one acre or more. This threshold exists to ensure there is a plan to prevent stormwater pollution from runoff by laying out erosion and sediment controls, stabilization, and maintenance steps. The rule is based on how much land is disturbed, not on terrain features like being on a hillside. So disturbing more than one acre triggers the need for a SWPPP, while disturbing less than one acre generally does not, unless the disturbance is part of a larger plan totaling one acre or more.

9. What did the Supreme Court say about EPA having to study CO₂?

- A. There was enough information to require EPA to conduct a study
- B. CO₂ is not harmful
- C. Not enough information to require EPA to conduct a study**
- D. EPA must regulate CO₂ immediately

The main idea is how the Supreme Court read EPA's duties under the Clean Air Act for greenhouse gases. The Court did not order EPA to conduct a new CO₂ study. Instead, it held that EPA must decide, based on the statute's endangerment criterion, whether CO₂ endangers public health or welfare and provide a reasoned explanation for its decision. Because the Court remanded for EPA to make that endangerment determination, there wasn't a requirement to perform a separate CO₂ study in the Court's ruling. In short, the Court didn't force a CO₂ study; it required EPA to assess endangerment under the law and act accordingly.

10. Which state is noted as the second-largest solar producer and is expected to become the largest soon?

- A. California
- B. Texas**
- C. Florida
- D. New Mexico

Capacities and rankings for solar production change as new projects come online and states scale up their solar programs. Texas is noted as the second-largest solar producer today and is expanding rapidly, with many large-scale installations and a growing demand for clean power in the ERCOT market. Its abundant sunny days, vast land for projects, and ongoing investments in solar and storage mean it's expected to surpass the current leader in the near future. California remains the leader today due to its long-running solar base, but Texas' faster growth puts it in position to overtake soon. Florida and New Mexico have solar growth too, but not at the same scale as Texas, which is why Texas fits the description best.

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Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://awpc2.examzify.com>

We wish you the very best on your exam journey. You've got this!

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