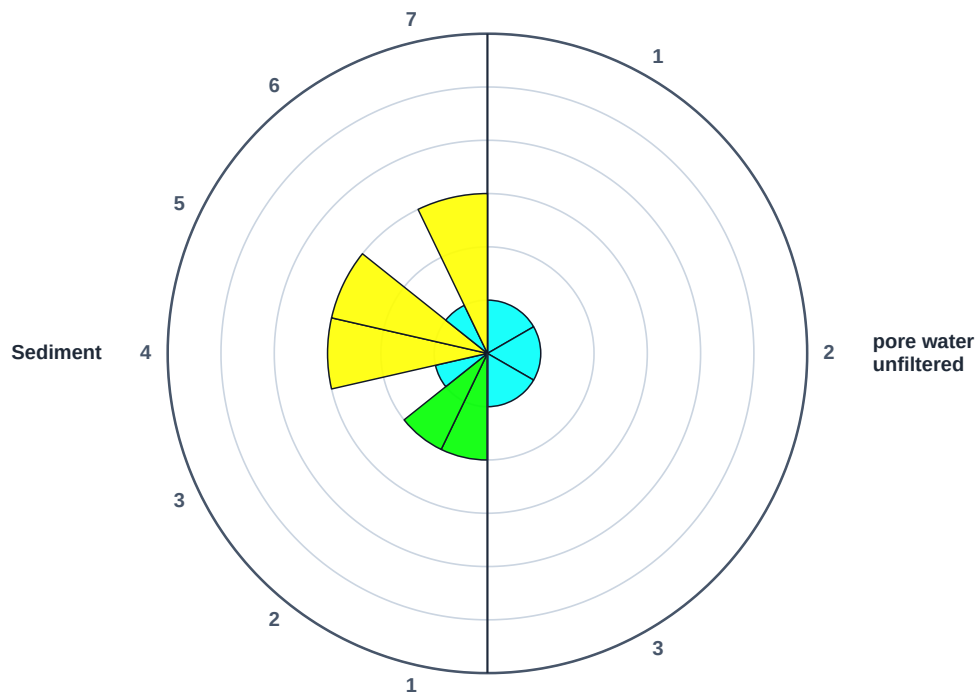


Ecotoxicology Analysis

During Remediation

Locality: Ferrara, Italy, ER-site
Method: Microorganisms
Bioremediation method: During Bioremediation
Sample type: water, soil
Collection date: 2025-07-18 – 2026-01-16



ORGANISMS

- 1 *A. fischeri* 15
- 2 *A. fischeri* 30
- 3 Algae
- 4 *A. fischeri* kinetic 15
- 5 *A. fischeri* kinetic 30
- 6 *Daphnids*
- 7 *Lettuce terestic*

CATEGORIES

- A Non-toxic
- B Low toxicity
- C Medium toxicity
- D High toxicity
- E Very high toxicity
- F Extreme toxicity

Category Distribution (% of organism readings)

A: 50%

B: 20%

C: 30%

Resulting category: **C** Medium toxicity

Test Organisms by Type

Consumers: *Daphnids*

Producers: *Algae, Lettuce terestic*

Destruent: *A. fischeri 15, A. fischeri 30, A. fischeri kinetic 15, A. fischeri kinetic 30*

Most sensitive organism: Lettuce terestic

Active ecotoxicity management recommended

Samples fall into category C. Inhibition in the undiluted sample is 51–90% for at least one test organism and a clear toxic effect is present.

- It is recommended to perform regular monitoring and compare results with previous steps.

Ecotoxicity Assessment Criteria

CATEGORY	DESCRIPTION	CRITERIA (ACTIVE RULES)
A	Non-toxic	Undiluted sample: inhibition / stimulation -19.99% – 19.99%
B	Low toxicity	Undiluted sample: stimulation 20% – 50%, or Undiluted sample: inhibition 20% – 50%
C	Medium toxicity	Undiluted sample: stimulation 51% – 90%, or Undiluted sample: inhibition 51% – 90%
D	High toxicity	At 10% sample concentration: inhibition / stimulation -50.99% – 50.99%, or EC50 10% – 50%
E	Very high toxicity	At 10% sample concentration: inhibition 51% – 100%, or EC50 1% – 10%
F	Extreme toxicity	At 1% sample concentration: inhibition 10.01% – 100%, or EC50 0% – 0.99%

Notes: A sample's category is the worst (most toxic) grade reached by any single test organism. Determination of EC50 takes precedence over the inhibition value. In a luminescence bacterial test, an undiluted sample corresponds to a sample concentration of 500 mL/L.

Chemical Risk Assessment

During Remediation

Locality:	Ferrara, Italy, ER-site
Method:	Microorganisms
Bioremediation method:	During Bioremediation
Sample type:	water, soil
Collection date:	2025-07-18 – 2026-01-16

No chemistry data recorded for this phase.