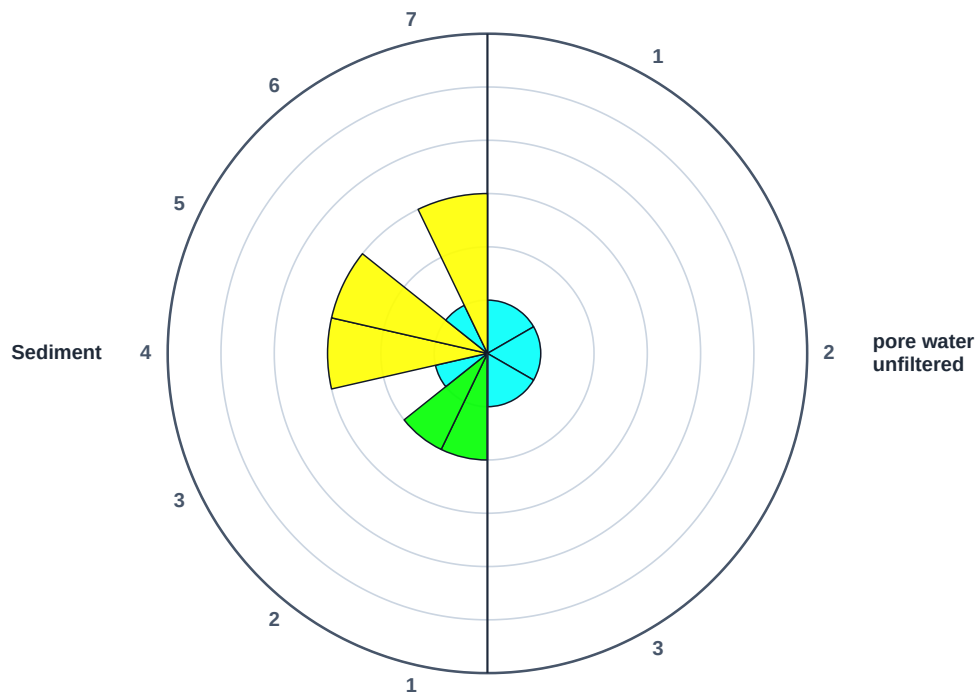


# Ecotoxicology Analysis

## 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)
<b>A</b>	Non-toxic	Undiluted sample: inhibition / stimulation -19.99% – 19.99%
<b>B</b>	Low toxicity	Undiluted sample: stimulation 20% – 50%, or Undiluted sample: inhibition 20% – 50%
<b>C</b>	Medium toxicity	Undiluted sample: stimulation 51% – 90%, or Undiluted sample: inhibition 51% – 90%
<b>D</b>	High toxicity	At 10% sample concentration: inhibition / stimulation -50.99% – 50.99%, or EC50 10% – 50%
<b>E</b>	Very high toxicity	At 10% sample concentration: inhibition 51% – 100%, or EC50 1% – 10%
<b>F</b>	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

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

*No chemistry data recorded for this phase.*