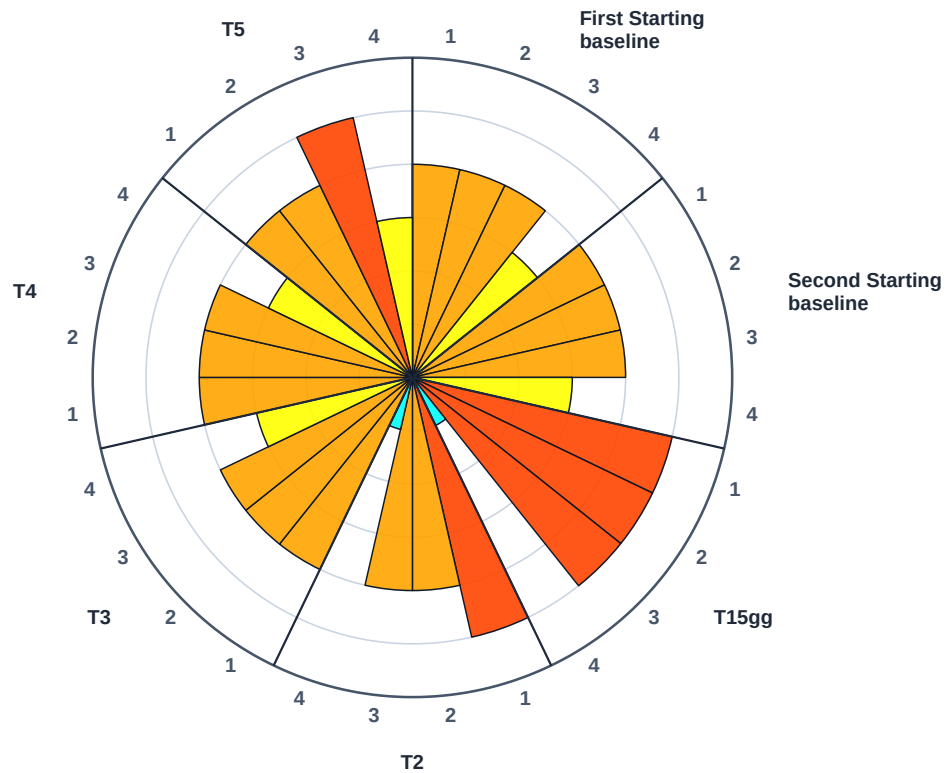


Ecotoxicology Analysis

During Remediation

Locality: Ferrara, Italy, ER-site
Method: Enhanced anaerobic in situ biodegradation (PZSEC 162)
Bioremediation method: During Bioremediation
Sample type: water
Collection date: 2024-12-19 – 2025-07-08



ORGANISMS

- 1 *A. fischeri*
- 2 *Daphnids*
- 3 *Algae*
- 4 *Lettuce aquatic*

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: 7%

C: 18%

D: 57%

E: 18%

Resulting category: **E** Very high toxicity

Test Organisms by Type

Consumers:	<i>Daphnids</i>
Producers:	<i>Algae, Lettuce aquatic</i>
Destruent:	<i>A. fischeri</i>

Most sensitive organism: Daphnids

Critical ecotoxicological response recommended

Samples fall into category E. At 10% sample concentration inhibition is 51–100%, or EC50 is 1–10%. A severe toxic effect is present.

- It is recommended to implement immediate measures and conduct intensive monitoring.

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:	Enhanced anaerobic in situ biodegradation (PZSEC 162)
Bioremediation method:	During Bioremediation
Sample type:	water
Collection date:	2024-12-19 – 2025-07-08

No chemistry data recorded for this phase.