

Supplementary Material

1 Supplementary Figures and Tables

1.1 Supplementary Figures

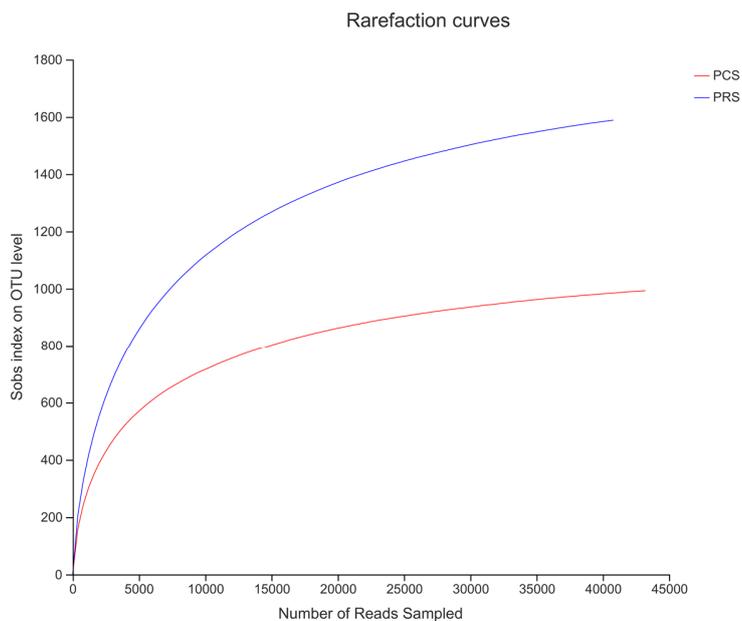


Figure S1. Rarefaction curves of the two soil samples.

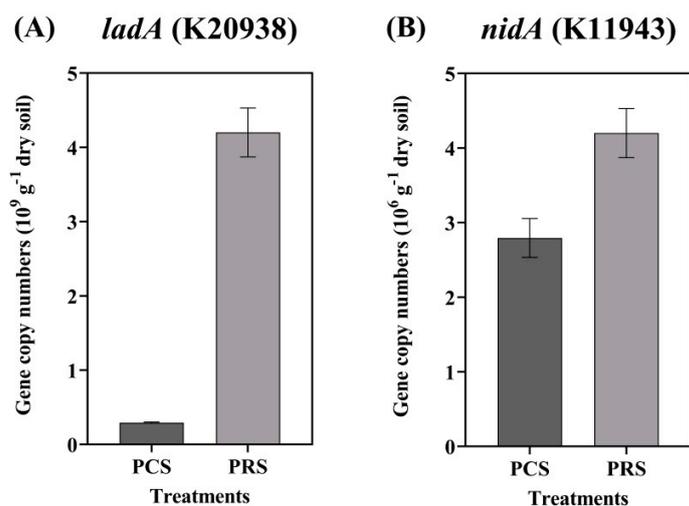


Figure S2. Abundance of *ladA* (A), *nidA* genes (B) in process associated metabolism of PHs and PAHs, respectively.

1.2 Supplementary Tables

Table S1. Physicochemical parameters of the soil samples before and after bioremediation.

| Samples | Before | After |
|-------------------------------------|--------|-------|
| Total petroleum hydrocarbons(mg/kg) | 18 181 | 161 |
| Total nitrogen (mg/kg) | 1030 | 2285 |
| Ammonia nitrogen (mg/kg) | 1.52 | 2.46 |
| pH | 8.86 | 8.05 |
| Organic matter (g/kg) | 47.1 | 36.8 |
| Hydrolysable nitrogen (mg/kg) | 43 | 146 |
| Total salt content (g/kg) | 6.7 | 3.4 |
| Total phosphorus (mg/kg) | 636 | 967 |
| Available phosphorus (mg/kg) | 9.07 | 50.8 |
| Total potassium (g/kg) | 17.4 | 19.3 |
| Available potassium (mg/kg) | 534 | 548 |

Table S2. Primer pairs and PCR conditions used for qPCR.

| Target gene | Primer | Sequence (5'-3') | Amplicon size (bp) | Thermal profile | References |
|-------------|--------|----------------------|--------------------|---|---------------------|
| <i>LadA</i> | LadAF | AGATCGTGTTGGCGGAGA | 116bp | 95°C: 5min; 95°C: 30s; 55°C: 30s; 72°C: 30s; 72°C: 7min; 35 cycles | This study |
| | LadAR | TCCTTACCCACACCAGT | | | |
| <i>nidA</i> | nidAF | TTCCCGAGTACGAGGGATAC | 121bp | 95°C: 5min; 95°C: 15s; 56°C: 30s; 72°C: 30s; 72°C: 10min; 40 cycles | Ren, et al. 2016 |
| | nidAR | TCACGTTGATGAACGACAAA | | | |