Oxytetracycline (OTC) is one of the most widely used antibiotics in aquaculture worldwide because of its broad spectrum of activity. The prevalence of OTC-resistant environmental bacteria poses a serious risk in human and veterinary medicine. In this study, we isolated 140 and 142 OTC-resistant bacteria (>60μg/ml) from Port Dickson (PD) and Port Klang (PK), respectively. Among these OTC-resistant bacteria, 79 isolates (25 from PD and 54 from PK) were highly resistant to OTC (>240μg/ml). These 79 isolates were then separated into different OTUs by restriction fragment length polymorphism (RFLP) method using three restriction enzymes (RsaI, CfoI, DdeI). The different OTUs were identified via 16S rDNA partial sequencing. The dominant OTC-resistant bacteria in both sites were Alteromonas spp., Pseudoalteromonas spp., Shewanella spp. and Vibrio spp. Further testing on the susceptibility of these OTC-resistant bacteria against different classes of antibiotics will be carried out since OTC resistance is known to have cross-resistance to other unrelated antibiotics.