



IF NATURE CAN'T WORK FOR YOU - YOU HAVE TO WORK FOR NATURE

MALIBU GARDENS CONDO INFORMATION

6448 - 6486 & 6488 Cavalleri Rd, Malibu CA 90265

Building Data

Building Style - Mediterranean

Year Built - 1975

Number of Units - 56

Number of Floors - 2

1 Bedroom, 2 Bedrooms and 3 Bedroom units

There are two individual septic tanks and one series of four septic tanks serving different numbers of units in the project. All discharge into common pump tank where the effluent from all the septic tanks become mixed. The pump tank sequentially pumps the mixed effluent to three seepage pit fields totaling +/- 78 seepage pits. One field is within the interior grounds and landscaping of the community. The other two are in areas designated for disposal within the same AP#. The Demo Project was to monitor Pirana effluent quality in the two individual septic tanks and the mixed effluent in the pump tank.

The 6000-gallon two-chamber septic tank, a part of the Demo Project, accepts sewage from 12 units and has four P80 Pirana units installed. The 8000-gallon two-chamber septic tank, a part of the Demo Project, accepts sewage from 16 units and has four P80 Pirana units installed. The four septic tanks in series accept sewage from 28 units with the first tank being a single chamber anaerobic trash or solids retaining tank followed by three two-chamber, 4000-gallon septic tanks. Tanks two and three had a P80 Pirana unit installed in each of their two chambers (total of four P80s) and the last tank acted as a clarifier.

The four septic tanks in series was not considered in the Demo Project because the installation of four P80 Pirana units was not overseen by the City of Malibu and the treatment process was not identical to the individual septic tanks with Pirana units installed. The test results of the mixed effluent from the pump tank would indicate if there was a dramatic difference between the individual septic tanks in the Demo Project and the four tanks in series. The pump tank effluent indicated the four tanks in series with P80 Pirana units installed had comparable effluent quality.

We initially provided a manually operated 250-gallon Pirana Bacteria Inoculator (PBI) to grow massive numbers of Pirana Blend Bacteria outside of the septic system and discharge them into the failed disposal field on a daily basis. The head of maintenance at Malibu Gardens operated the PBI. Every day he was on the job, he discharged the PBI directly into the pump tank, refilled it with potable water and re-charged it with nutrients and feed stock. This occurred a minimum of five days a week, sometimes six. Over several months of using the PBI, the seepage pit fields were no longer in failure.

The goal of using the PBI was to prove the PBI could remediate enough of the failed seepage pits so the septic system would no longer be in failure. The subsequent installation of the Pirana units into septic tanks two and three in the series was to see if the normal installation of the Pirana would continue remediation and keep the seepage pit fields from failing again. The result was a success and met all our expectations.

The 2003 PBI process and the installation of the four Pirana P80s in tanks two and three of the four tanks in series was done without City of Malibu permit or permission. It was "our real life" test site so we could see if the two different methods of using the Pirana would remediate failed seepage pits. The Pirana at that time had only been used to remediate failed leach fields.

A year or so after the successful remediation, the City of Malibu discovered our project when a pumper "mentioned" to the city inspector that Malibu Gardens' seepage pit fields were no longer failed and he didn't understand how and why. After making a surprise inspection of the septic tanks and seeing the seepage pit fields were indeed no longer in failure, the city inspector was amazed to say the least, having never heard of the Pirana nor considered the idea of remediation of disposal fields, much less seepage pits. The Pirana being a new technology that didn't follow the accepted parameters and limitations of aerobic treatment in septic systems and the idea of remediation of seepage pits considered impossible, the City of Malibu wanted a Demo Project they could oversee.

The Pirana is not an Aerobic Treatment Unit (ATU). It is an Aerobic Bacteria Generator (ABG), a term coined in 2000 to distinguish the Pirana technology from NSF40 certified ATUs. Other than the use of air, the multi-purpose, multi-use Pirana departs from the single purpose, single use of all other aerobic septic systems (to recycle the water component of sewage). Test results should not be viewed using the single propose limits of an ATU or other aerobic treatment.

The use of a Pirana Bacteria Inoculator isn't the primary or most efficient means of applying the advantages of the Pirana process. The PBI method of frequent and ongoing inoculation of massive numbers of Pirana Blend Bacteria into a failed drain field can be valuable in circumstances where access to septic tanks is impossible. We have used the technique in many different waste treatment and septic system installations as well as different applications other than just wastewater treatment.