



CALIFORNIA STATE SCIENCE FAIR 2002 PROJECT SUMMARY

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| Name(s) Hayley E. Swantek | Project Number 22537 |
| Project Title Oil Spill Clean-up: Moving or Removing Oil? | |
| Abstract <p>Objectives/Goals The purpose of my investigation into oil spill clean-up was to find the best method of clean-up. My definition of best method included: removal of the greatest percentage of oil from the water, the complete removal of the pollution as opposed to just moving it, allowing the oil to be salvaged, that it t environmentally benign, and works the fastest. I believe that using a clumping agent and then skimming will prove to be the best method.</p> <p>Methods/Materials The methods that were tested in this experiment were the ones most commonly used. They were: burning, flushing, chemical dispersants/ clumping agents, skimming, bioremediation, and joint methods. The materials used were: distilled water with sea salt added, low gravity crude petroleum, a clumping agent, pure alcohol, a large plastic container, a metal bucket, a metal skimmer, petroleum eating bacteria, a type of paint stripping pad manufactured by 3M, 4 one gallon glass jars, measuring beakers, measuring spoons, and syringes.</p> <p>Results The results overwhelming proved that skimming with a stripping pad material was by far the best method. It removed approximately 98% of the oil leaving behind a mere film on the top of the water. No water was taken out of the test area, only the oil, which was then transferred into a container where it could be used as it had originally been intended.</p> <p>Conclusions/Discussion Through this project I proved my hypothesis wrong but achieved my objective when I most unexpectedly came across my best method, skimming with a stripping pad. I believe if the major oil spill companies today would try this environmentally benign skimming material when responding to a spill, that the spill would be a much less tragic occurrence.</p> | |
| Summary Statement My project is about finding the most effective and enviornmentally benign method to clean up an oil spill. | |
| Help Received Dad got a peteroleum sample for me and took me shopping for other supplies. Mom helped by proofreading my written materials. | |