



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Nathaniel B. Tweed	Project Number S1119
Project Title Oily Polymers	
Abstract Objectives/Goals The goal of this experiment is to find a way to separate oil from cross-linked polymers that is more environmentally safe. Methods/Materials I used oil that is similar to light crude oil and saturated the cross-linked polymers. I then used several different solvents, such as: denatured alcohol, acetone, paint thinner, lacquer thinner, etc, to try to separate the oil from the cross-linked polymers. Results After using the solvents, I found that denatured alcohol is the one solvent that separated the oil from the cross-linked polymer. Also some of the other solvents were hydrocarbons, so that is why they did not separate the oil from the cross-linked polymers. Conclusions/Discussion When cross-linked polymers are used to clean up an oil spill in a body of water the method of disposal is to burn the cross-linked polymers along with the oil. My conclusion is that denatured alcohol is a solution to separate oil from cross-linked polymers. This oil can be recycled and you can also distill the denatured alcohol and use it again. This is more environmentally safe than the previous method.	
Summary Statement I am finding a way to separate oil from cross-linked polymers that is more environmentally safe.	
Help Received Mrs. Reed help with lab	