

# FIXING A CRITICAL PROBLEM: USED OIL FILTERS

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## SUMMARY

This paper presents a brief overview of the environmental problem solving approach that helped Israel address the problem of water and soil contamination from used oil.

## 1 INTRODUCTION

In 2002, the Ministry of the Environment of Israel (in cooperation with the Israel Garage Association) initiated a unique pioneer project for the collection of used oil from the country's garages. Today, there is no question that the project worked.

The project is a product of cooperation – among divisions within the Ministry of the Environment and relevant stakeholders outside the ministry, including the Israel Garage Association, the country's major bus companies, the Israel Police and vehicle import companies. Utilizing the Environmental Problem Solving model, which was developed in the United States by Dr. Malcolm Sparrow, all of the stakeholders came together to “fix” a critical problem – the contamination of water sources and soil from used oil originating in garages throughout the country.

## 2 PROJECT OVERVIEW

### 2.1 Collection of Used Oil Filters for Recycling

While the project included three components – collection of used oil filters for recycling, collection of used oil for reuse, and installation of oil/fuel separators – the greatest progress was achieved in the

collection of used oil filters.

It is estimated that used oil filters include up to 0.5 liters of used oil each. Yet until recently, most of this oil made its way to the municipal waste system. Of some 2000 garages that produce about 3 million used oil filters per year, only a few dozen collected about 14,000 used filters on a voluntary basis prior to the initiation of the project. Today, as a result of increased enforcement, education and cooperation with the Israel Garage Association, the number of garages which have contractually committed to collect used oil filters has increased to 1,300 – some 65% of the total. And even more impressive – the number of filters collected from these garages has skyrocketed, reaching 1.26 million in 2003.

And finally, the market forces which helped catalyze this revolution also brought about the purchase and operation of an oil filter recycling machine in Ramat Hovav which separates the used filters into their components: the metal and used oil are transferred for recycling and the oil-saturated paper is transferred for incineration.

### 2.2 Collection of Used Oil for Reuse

In 2003, some 15,922 tons of used oil were collected, nearly a quarter of the total quantity of mineral oil sold per year and 56% of the quantity of used oil available for collection from garages. This rep-

resents a 12% increase in comparison to 2002. Moreover, the establishment of an additional plant for used oil recycling led to a doubling in the quantity recycled and a two-thirds reduction in the quantity exported for recycling in comparison to 2002.

### 2.3 Installation of Oil/Fuel Separators

At the beginning of the used oil collection project, nearly no garages in Israel had installed oil/fuel separators. Today, some 210 oil separators have been installed and enforcement measures have been stepped up. Dozens of warnings have been issued to garages concerning requirements for oil/fuel separators.

## 3 CONCLUSION: A WIN-WIN APPROACH

The Environmental Problem Solving approach calls for picking important problems and fixing them. This is exactly what Israel did. Utilizing a well-structured

procedure, the Ministry of the Environment set about to clearly define a critical problem, establish a steering committee with the participation of relevant stakeholders, determine indicators for problem solving, and formulate a detailed action plan. The initial goal called for the collection of 350,000 used oil filters per year. The results far exceeded expectations. Using carrot and stick methozone-depleting substances, the method worked so well that used filter collection companies were set up, contracts were signed, a recycling machine was purchased – and most important of all – 1.5 million filters were collected.

The initiators of the project in the Ministry of the Environment, Dr. Motti Sela, director of the Industry and Business Licensing Division, and Adv. Zohar Shkalim, director of the Enforcement Coordination Division, are more than pleased with the results. Yet both are determined to keep fingers on pulse. Both are convinced that market forces, education, and stringent enforcement have made a difference.