

## Color and Clarity of Industrial Effluents

### *Introduction*

Most wastewater treatment applications call for water that is essentially clear and colorless. This ideal goal is rarely achieved in industrial processes. Discharge criteria such as Oil & Grease and COD indicate the total organic loading of an effluent stream. Oil & Grease usually refers to the emulsified petroleum hydrocarbon component, whereas COD covers both soluble and insoluble (dispersed and emulsified) contaminants.

ECA\* Water Demulsifiers are formulated to remove completely the emulsified oils and yield clear water. They also reduce the soluble organics and as a result produce a lighter color water. Thus, turbidity and color of a treated wastewater are a useful indicator of the residual Oil & Grease. Here is a handy aid:

<i>Color</i>	<i>water- white</i>		<i>pale yellow</i>		<i>yellowish</i>		<i>yellow/orange</i>		<i>orange/red</i>		
							<i>orange</i>				
<i>Oil &amp; Grease (mg/L)</i>	<i>0</i>	<i>10</i>	<i>20</i>	<i>30</i>	<i>40</i>	<i>50</i>	<i>100</i>	<i>200</i>	<i>300</i>	<i>400</i>	<i>500</i>
<i>Clarity</i>	<i>crystal clear</i>		<i>clear bright</i>		<i>clear</i>		<i>faintly turbid</i>		<i>cloudy</i>		
							<i>hazy</i>				

### *Observations from our customers:*

Occasionally water treated to a clear, pale yellow at the optimum pH of 8-9 may become more intensely colored at pH 9-11.

Many spent metalworking coolants are demulsified to a clear pink or green color; not due to soluble metals.

The presence of very small concentrations of dyes and pigments can obscure the original color and clarity of a treated wastewater. In certain instances ECA\* demulsifiers may reduce or remove such color.

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