

# CWSF 2009 - Winnipeg, Manitoba



## Llew Falla

### Phase Inversion of Aqueous Ethylene Copolymers For Water Remediation

**Division:** Engineering & Computing Sciences / Environmental Innovation

**Category:** Intermediate

**Region:** Lambton County

**City:** Sarnia, ON

**School:** Northern C.I. & V.S.

**Abstract:** In this patent pending project, it was discovered that aqueous ethylene copolymer dispersion (AECD) could remove contaminants from water. Spectrophotometer methods were developed to measure effectiveness and to develop mathematical models predicting the amount of AECD required to remove metal ions from water. It was shown that the metals could be reclaimed by heating and mixing a mixture of base, water and the flocculent.

#### Biography

My name is Llew Falla and I reside in Sarnia, Ontario. I am a grade 10 student at Northern C.I.&V.S. My extracurricular school activities include football and rugby. In addition, I am a goalie for travel hockey and lacrosse teams. I also enjoy off-road mountain biking, skiing, and camping. During this past winter, I volunteered with minor lacrosse clinics in my community and coached a house league team this past summer. Reading adventure books and playing strategy games are some of my hobbies and interests. My awards and achievements have been in the educational and sports arenas as well as in the Regional and Canada Wide Science Fairs. I attended ISEF 2008 as part of Team Canada and the Canada Wide Science Fairs in 2006 and 2007 earning two silver medals and two bronze medals. This year, my project "Phase Inversion of Aqueous Ethylene Copolymer Dispersions for Water Remediation" won best in fair at regional. It is an investigation into the use of a polymer system to remove contaminants from water. This work resulted in my first patent applications. I am a hard-working, ethical and responsible young man who aspires to have a career in the scientific or engineering field.

#### Awards

#### Value

The University of Western Ontario Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Western Ontario	\$1 000
Bronze Medal - Earth & Environmental Sciences - Intermediate Sponsor: Petro-Canada	\$300
<b>Total</b>	<b>\$1 300</b>