

# CWSF 2009 - Winnipeg, Manitoba



## Kimberly Gulevich

### Got Gas?

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

**Category:** Senior

**Region:** Northern British Columbia

**City:** Fort St. John, BC

**School:** North Peace Secondary

**Abstract:** This project studies the feasibility of methane capture from a household sewage lagoon. Phase One designed and created a hydrogen sulphide scrubber to scrub the collected biogas. The iron oxide absorption method was used and found to reduce hydrogen sulphide levels to below Canadian Oil and Gas Pipeline Standards. Phase Two is proposed to collect biogas from a lagoon to complete the methane collection system.

### Biography

I was born and raised in Fort St. John, BC and enjoy living and learning in the North. I am a grade eleven student, currently enrolled in North Peace Senior Secondary. This is my fourth CWSF and I was happy to receive two bronze medals at the 2006 CWSF, and an honourable mention at the 2008 CWSF. As a result of my experiences, I attended and competed in the Taiwan International Science Fair in February of 2008. There, I received a third place award in my category. Last year I was appointed editor of my school's yearbook, and was involved in the layouts and planning of the yearbook. This year at the regional science fair, I was honoured to receive the British Columbia Innovation Council's Young Innovator Scholarship. In my spare time I enjoy competing and performing in Irish Dance which I have been doing since I was nine years old. I also enjoy pursuing outdoor activities with my family.

### Awards

### Value

Engineers Without Borders - Canada Award Sponsor: Engineers Without Borders - Canada	\$1 500
The University of Western Ontario Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Western Ontario	\$1 000
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Bronze Medal - Earth & Environmental Sciences - Senior Sponsor: Petro-Canada	\$300
<b>Total</b>	<b>\$3 800</b>