

Flare Performance Research Initiative

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The University of Alberta/Dr. Larry Kostiuik have recently completed a detailed program of research relating to the emissions and efficiency of continuous gas flares (e.g., solution gas flares). This research was based only on experimentation with scaled down pipe flares operating in a well-controlled wind tunnel environment. This environment allowed for the identification and testing of parameters which effect flare performance.

The principle objective of the proposed next phase of UofA research is to build off the earlier their previous work by confirming that the lab-scale results hold true under full-scale laboratory and field conditions. Secondly, the UofA research team will pursue techniques that allow for the accurate and reliable measurement of flare efficiency in field situations

Well test flare performance will also be examined on a large scale laboratory test basis during this phase of research to provide an understanding of the factors which influence the efficiency of these types of flares.

Risks associated with abandonment of this research program include: continued decreased public and

regulatory acceptance of flaring practices leading to greater command and control regulations which are not based on sound and credible scientific research, thereby leading to increased and unwarranted compliance costs.

Strategy: actively support the University of Alberta research project through support of a five year NSERC Industrial Chair to ensure that credible scientific data is available for regulators, industry and public interest groups to base decisions on.

Saskatchewan has provided much detail on salt tolerant crops and related vegetation. In northern areas of oil and gas activity, natural vegetation is more likely to be forestry. There is very little known about the salt tolerance of various species of trees.

It is proposed to do a literature search on salt impacts on forestry. Also proposed to develop a field test methodology for determining if a produced water salt is likely to impact forestry.

Benefit to industry is a clear understanding of salt tolerance of trees, similar to current understanding around crops. This information will be particularly useful to input into the current BC regulatory process reviewing salt criteria.

Risk to industry of not having an understanding of salt impacts on forestry, is that inappropriate risk standards are used in regulations and clean-up criteria.

Report

Final Report

2004 Presentation