

FY 2009 RESEARCH PROBLEM STATEMENT

Use this form to submit a problem statement

Submittal via E-mail is preferred: Save the form and give it a new, descriptive name, then send to:
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TITLE

GHE-09-30 Health Risk Exposure to Naturally Occurring Hazardous Minerals During Construction Activity

PROBLEM (Description of need)

Naturally occurring hazardous minerals are found throughout the state and can be easily overlooked while doing environmental assessments and geologic investigations for specific projects. Asbestiform minerals are a concern to ODOT as a public agency as well as contractors, construction workers and the traveling public regarding carcinogenic effects of exposure. Other minerals that may pose a concern are silica, mercury, arsenic, and pyrite.

Recently FHWA warned ODOT Technical Services of a zeolite mineral Erionite found near Durkee, Oregon. This mineral is considered so hazardous that the EPA requires anyone who intends to manufacture, import or process any article containing Erionite to notify the EPA 90 days in advance.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY

- Develop list of naturally occurring minerals that may be hazardous when disturbed by construction activities such as grading, blasting and ripping.
- Utilize existing resources from the Oregon Department of Geology to determine locations of known naturally occurring hazardous mineral deposits along state highway right-of-way including material sources, staging areas, disposal and stockpile sites.
- Determine what other states are doing to identify and mitigate hazardous minerals impacts.
- Engage assistance from Oregon colleges and universities to identify (test and confirm) hazardous minerals
- Develop a GIS layer showing the identified locations of hazardous minerals around the state
- Develop a list of mitigation measures specific to the various hazardous minerals that may be encountered that will allow for safe work in and around these minerals

BENEFITS

- Reduces ODOT liability by not overlooking naturally occurring hazardous minerals in our geologic investigations and Environmental assessment of Projects and potential pollution liability.
- Reduces unnecessary health risk to ODOT employees, construction workers and the traveling public

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