

Student Conference for Research and Creative Arts

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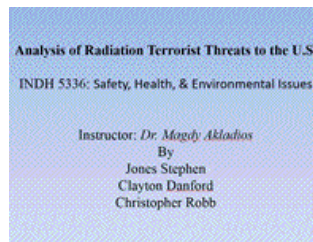
2015 eAbstracts

INDH 5336 - Safety, Health & Environmental Issues

Faculty Sponsor: Dr. Magdy Akladios

1. **Analysis of Radiation Terrorist Threats to the U.S.**

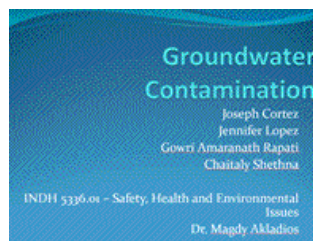
by Jones Stephen, Clayton Danford, and Christopher Robb



Terrorism has been increasing in recent years and has been a major focus to government policies and risk research. This project explores the causes, the consequences and the controls of terrorist radiation threats (dirty bomb) to the United States (U.S.). The focus will be on select U.S. cities with high population densities or previous near misses. Based on this research, we will build a simple Bayesian network model using Agena Risk. This model will be for a few select scenarios and U.S. cities. The results of this model are that given incomplete information (such as a particular city), it will specify a distribution of consequences, controls or causes.

2. **Groundwater Contamination**

by Joseph Cortez, Jennifer Lopez, Gowri Amaranath Rapati, and Chaitaly Shethna



Groundwater contamination could lead to serious health problems and could affect many people in a contaminated area. Although some contamination is naturally occurring, this report examines groundwater contamination due to failed landfills and other waste disposal methods. Prevention of groundwater contamination is a primary focus, as well as proper treatment and control of water once contaminated. The programs and initiatives in place to reduce waste and control groundwater contamination are discussed in detail. Reducing waste can also reduce the chance of groundwater contamination. This report also analyzes the effects of consuming at our current rate and how we compare to other nations, as well as future problems and projected cost consumers face if no changes are made.

3. **United States' Air Pollution**

by Hilary Nickerson, Lorentine Savoy, and Sarah Wang



Air pollution causes small, minute changes over a long period of time, slowly, but surely delivering deleterious effects to the environment, the ecosystem, and health of the human population. It is the primary culprit in global warming, and therefore encourages global temperature shifts, causing further undue harm. The combination of ozone, particulate matter, carbon monoxide, nitrogen oxide, sulfur dioxide, and lead within the outside air are responsible for these destructive effects. Fortunately, these six primary pollutants overall concentrations have decreased significantly since 2013, approximately 62% according to the EPA. This paper will cover the origins and history of air pollution, smog, damages air pollution can cause to the environment, the ecosystem, and human health, remediation techniques, and what the future of air pollution control may look like. Additionally, a brief overview of indoor air quality in relation to outdoor air quality will be covered, as well as Houston's local air pollution issues.

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is clear.