

Project Title: The Impact of Contractor Utilization on Health and Safety.

Organization: Boston University School of Public Health

Partnerships: None.

Investigator(s): Leslie I. Boden

Focus Area: Safety

SYNOPSIS

Problem Statement and Justification: How a firm chooses to allocate employment has important consequences for the health and safety of workers. In many other high risk industries such as construction and the petrochemical industry, contracting arrangements have been linked to higher fatality and injury rates. Within the mining industry, it has also been used to avoid collective bargaining arrangements and pension liabilities. The question is whether such arrangements also have an effect on worker health and safety in a manner similar to what is evident in other industries. Contractor utilization, as measured by MSHA, in underground coal mining has experienced sustained growth over the past 25 years. But determining contract operations have not been done on a systematic level and it is unclear what its true prevalence is and resultantly the effect on workers in the underground coal mining industry.

Impact of the Research: Understanding the relationship between contract work and workplace injury and illness is an important aspect to consider in any strategy used to improve worker outcomes. The primary barrier to understanding this relationship is a lack of data on these contracting arrangements. This project will collect data the necessary data to determine the contractual arrangements for operating a mine. It will also provide statistical analysis of the data in order to formally determine the relationship between organizational arrangements and worker health and safety. If differences in health and safety risks exist across organizational choices, it will provide insight into why. This may help to focus resources devoted to improving miner health and safety.

Objective(s) and Research Approach: The three following objectives are the focus of this project:

- 1) Identify contract operations and determine contractor historical status beyond current information using environmental reclamation information.
- 2) Identify changing patterns in contractor utilization over time and assess the risk it poses to workers.
- 3) Test the hypothesis that that underground coal mines operated by independent contractors is more hazardous than similar non-contract mines.

To address these objectives, the following research approach will be taken:

- 1) Traditional data sources on the mining industry will be gathered and compiled from the EIA and MSHA.
- 2) We will gather data from the Office of Surface Mines (OSM) on mines in Kentucky to determine who holds the reclamation bond for current and historical operations in the state. Discrepancies between bondholders and operators listed in the OSM database and the MSHA data will provide information on which mines are likely contract operations. Mines identified by this process will be confirmed with experts in Kentucky's state agencies
- 3) Finally a statistical analysis of a number of outcomes, such as injury rates and citation occurrences, will be done to determine the relationship between contract operations and miner health and safety risks.