Atlantic Alliance Meeting
Dundalk, County Louth
June 21, 2006

Ireland
United Kingdom
Germany
France
United States

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U.S. Mine Safety and Health Administration
Small Mines (Quarries) Assistance Program

- The Mine Safety and Health Administration (MSHA) established a Small Mine Office (SMO) to address the needs of the nearly 6,500 small mines.

- Small Mines are mines with 5 employees or less.
Why the Small Mines Office was created...

- Fatal incident rate at small mine operations was more than double the rate for larger mines
- Stakeholders at small mines requested MSHA’s compliance assistance
SMO Also Provides Assistance
(As Requested)

- Contractors
- Small Underground Mines
- Larger Mines
Profile of the Small Mines Industry

Small Metal and Nonmetal Mines

- 6,000 total small mines
  - Mostly sand & gravel and quarry operations
- Located in all 45 field office areas
  - Most - Manchester, NH area
    - 360 small mines
  - Least - San Juan, PR area
    - 16 small mines
SMO Goals & Objectives

- Improve MSHA-operator cooperation
- Provide on-site compliance assistance
- Help operators develop S & H programs
  - Effective
  - Tailored to fit the company
- Reduce small mine injuries & illnesses
- Support MSHA’s 15/50 goals
Services provided by SMO...

- On-site compliance assistance
- Help mine operators improve or develop their safety & health program, including:
  - Fatality and injury reduction
  - Hazard identification and analysis
  - Risk management assistance
  - Safety and health training
More SMO Services...

- **Regular contact with operators:**
  - Phone, E-mails and letters

- **Make small operators aware of other resources:**
  - States Grants
  - Educational Field Services
  - Technical Support
  - Holmes Safety Association
  - Trade associations
Benefits to Small Mine Operators

- Reduced injuries, accidents and fatalities
- Reduced medical costs
- Fewer hazardous conditions
- Lower risk
- Improved task performance
- Reduced operating costs:
  - Production and maintenance
More SMO benefits...

- Reduced insurance rates
  - Due to a formal safety program
- More knowledgeable of safety and health standards and policies
- More familiarity with other resources:
  - EFS, Mine Academy, State Grants
- Improved relationship with MSHA
Employees Benefit from SMO

- Active involvement in safety
- Improved sense of safety ownership
- More aware of MSHA standards and policies
- More positive attitude towards safety and health programs
- Fewer accidents and injuries
Time for SMO Initial Visit

- **Varies:**
  - 2 to 4 hours
  - 1 to 2 days

- **Time spent at the mine depends on the need of the small mines operator**
Creating a Health and Safety Program for a Small Mine

WATCH OUT FOR PINCH POINTS

BEST PRACTICES
Elements of a Small Mines Safety & Health Program

- Policy development & publication
- Management commitment
- Hazard identification
- Hazard control
- Equipment maintenance
- Safe work practices
- Training
- PPE
- Contractors
Typical S & H Policy (1/2)

- Provide & maintain a safe plant and equipment
- Control safety and health risks
- Prevent injuries and illnesses
- Consult with employees on matters affecting safety and health
Ensure employees are trained and competent to do their task
Provide information, instruction and supervision for employees
Ensure safe handling and use of substances
Review & revise S & H policy regularly
Management Commitment

- Follow-up and correct hazards
  - Schedule and perform maintenance
- Work with employees to design and install permanent controls to prevent:
  - Injury recurrence
  - Citation recurrence
- Re-evaluate hazards and controls when work areas and activities change
- New equipment will meet current safety and health standards
Define Responsibilities

1. Management has overall responsibility for safety and health

2. Day-to-day responsibility for safety & health
   Johns Sands, superintendent

3. Area responsibilities:

<table>
<thead>
<tr>
<th>Name</th>
<th>Area of Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jim Dynamite</td>
<td>Quarry, haulage &amp; roadways</td>
</tr>
<tr>
<td>Mary Crusher</td>
<td>Plant operations</td>
</tr>
<tr>
<td>Bob Mechanic</td>
<td>Maintenance &amp; repair</td>
</tr>
<tr>
<td>All Employees</td>
<td>Workplace &amp; mobile equipment pre-operation examinations</td>
</tr>
</tbody>
</table>
Employee Ownership and Involvement

- All employees are encouraged to:
  - Be responsible for their own safety and health
  - Cooperate with supervisors and management on health and safety issues
  - Not bypass health and safety safeguards
  - Report all safety and health hazards
  - Bring all safety and health concerns to management’s attention
Safe Work Practices

- Management and employees examine workplace for hazards
- Lock and tag before performing maintenance
- Management monitors work practices
- Management corrects actions when safe work practices are not followed
SMO and Contractor Safety
Example from Mine in Georgia

- Helped several contractors develop own safety and health programs
- Welding contractor instituted a knee pad program
- Mine operator and trucking contractor
  - Improved haul roads
  - Changed road configuration and traffic pattern to remove blind spots
- Mine adopted work vest program for improved visibility
### Feedback from Small Mines Visited

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mines using SMO Safety &amp; Health Program</td>
<td>90%</td>
</tr>
<tr>
<td>Mines sharing S &amp; H Program w/ Miners</td>
<td>78%</td>
</tr>
<tr>
<td>Mines using SMO “Tool Box Talks”</td>
<td>72%</td>
</tr>
<tr>
<td>Mines using SMO “Start Each Day w/ Safety”</td>
<td>48%</td>
</tr>
<tr>
<td>Mines using SMO S &amp; H Audit</td>
<td>42%</td>
</tr>
<tr>
<td>Description</td>
<td>Percentage</td>
</tr>
<tr>
<td>--------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Mines better able to comply with MSHA regulations</td>
<td>92 %</td>
</tr>
<tr>
<td>Mines requesting more SMO assistance</td>
<td>88 %</td>
</tr>
<tr>
<td>Mines receiving SMO S &amp; H tour or audit</td>
<td>84 %</td>
</tr>
<tr>
<td>Mines reporting S &amp; H audit was benefit</td>
<td>82 %</td>
</tr>
<tr>
<td>Received recordkeeping help</td>
<td>54 %</td>
</tr>
</tbody>
</table>
Mines “satisfied” or “very satisfied” w/ SMO help 96 %

Mines reporting “Improved Safety Conditions” 88 %

Mines reporting “Improved Relationship” w/ MSHA 46 %
72% Fatality Reduction

- **Fatal Incidence Rate** before SMO
  - 2000 – 2002 baseline
    - Small mines, before assistance 0.053

- **Fatal Incident Rate** since SMO
  - 2003 – 2004
    - Small mines, no assistance 0.069
    - Small mines, w/ assistance 0.015
27% - 40% Total Injury Reduction

- **Total Injury Incidence Rate before SMO**
  - Using 2000 – 2002 as baseline
  - Small mines, before SMO assistance 2.94

- **Fatal Incident Rate since SMO**
  - 2003 (relatively unchanged) 3.02
  - 2004
  - Small mines, no SMO assistance 2.42
  - Small mines, w/ SMO assistance 1.77