          STATISTICS FOR MINERS WORKING IN BARBOUR COUNTY, WEST VIRGINIA

SURVEY DATES   SURVEY LOCATIONS
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05/22/2006 thru 05/26/2006 LEE AND WISE COUNTIES, VIRIGINA
07/19/2008 thru 07/26/2008 HARRISON & BARBOUR, COUNTIES, WEST VIRGINIA

DEMOGRAPHICS

    Survey Statistics   5-Year Statistics
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                                       Estimated
    Estimated 2008 employment: 234 2004 - 2008 employment   271
    Number of miners examined: 60 5-YEAR miners examined: 66
    Survey participation rate: 26% 5-year participation rate: 24%

                              N   Mean   Range
    Tenure: 58   18   0 - 42
    Age: 60   48   21 - 74
    Tenure at the Face: 54   17   1 - 42

PREVALENCE OF DISEASE: n=60

    Pneumoconiosis: 3 (5%) PMF: 1 (2%) Advanced: 1 (2%)

EXPECTED PREVALENCE OF DISEASE FOR WORKERS WITH 15 OR MORE TENURE
YEARS AND THE AVERAGE LEVEL OF DUST FOR THE COUNTIES OF 0.835 MG/M3: n=32

    Pneumoconiosis: 2 (6%) PMF: 1 (3%) Advanced: 1 (3%)

DISTRIBUTION OF RADIOGRAPHIC FINDINGS: n=60

    Profusion of
    Small Opacities   Large Opacities   Symbols
    0/0:   54 (90%)   O: 59 (98%)   ax: 1 (2%)
    0/1:   3 (5%)   A: 0 (0%)
    1/0:   0 (0%)   B: 1 (2%)
    1/1:   0 (0%)   C: 0 (0%)
    1/2:   2 (3%)
    2/1:   0 (0%)
    2/2:   0 (0%)
    2/3:   0 (0%)
    3/2:   0 (0%)
    3/3:   1 (2%)
    3/+:   0 (0%)

PREVALENCE OF CLINICAL FINDINGS: n=59

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    Chronic cough:          11 ( 19%)   Chest tightness:      17 ( 29%)
    Phlegm:                 15 ( 25%)   Chronic bronchitis:    8 ( 14%)
    Wheezing:               17 ( 29%)   Emphysema:             3 (  5%)
    Attacks of wheezing:    18 ( 31%)   Pneumonia:             9 ( 15%)
    Dyspnea (on level):     17 ( 29%)   Asthma:                5 (  8%)
    Dyspnea (up hill):      36 ( 61%)   Tuberculosis:          0 (  0%)
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Smoking status: n=59

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    Never                   Former                  Current
    Smoked:     29 ( 49%)   Smoker:    18 ( 31%)    Smoker:    12 ( 20%)
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SPIROMETRY RESULTS: n=59

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    Obstructive:     4 (  7%) Restrictive:     4 (  7%) Mixed:      0 (  0%)
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METHODS

DEMOGRAPHICS

    SURVEY PARTICIPATION RATE: count of the number of miners with a valid x-ray
    during the survey period (NUMBER OF MINERS EXAMINED) divided by the count
    of the names on the most recent mine rosters submitted to NIOSH by the mine
    operators (ESTIMATED CURRENT EMPLOYMENT).

    5-YEAR PARTICIPATION RATE: count of the number miners with a valid x-ray
    during the 5-year period preceding the date of the end of the survey
    (5-YEAR MINERS EXAMINED) divided by the count of the names on the mine
    rosters that accompanied the mine plans that were submitted to NIOSH by the
    miner operators during the 5-year period preceding the date of the end of
    the survey (ESTIMATED 5-YEAR EMPLOYMENT).

    TENURE - MEAN: summation of the reported years in various underground
    mining occupations divided by count of participating miners with a
    completed work history (N).

    AGE - MEAN: summation of the calculated age at time of the x-ray divided by
    count of participating miners who provided their date of birth (N).

    TENURE AT THE FACE - MEAN: summation of the reported years of working at
    the face divided by count of participating miners who reported working at
    the face (N).

PREVALENCE OF DISEASE

    PNEUMOCONIOSIS: number of x-rays with a final determination (consensus
    based upon NIOSH procedures) of the International Labour Office (ILO) small
    opacity profusion category 1/0 or higher or with the presence of large
    opacities, divided by the number of participating miners with a valid
    x-ray.

    PMF: number of x-rays with a final determination of ILO large opacity
    category "A", "B", or "C" divided by the number of participating miners
    with a valid x-ray.

    ADVANCED: number of x-rays with a final determination of ILO small opacity
    profusion category 2/1 or higher and presence of symbol "ax" (coalescence
    of small opacities) or ILO large opacity category of "A", "B", or "C"
    divided by the number of participating miners with a valid x-ray.

EXPECTED PREVALENCE

    PNEUMOCONIOSIS, PMF & ADVANCED: count and percent of expected cases of
    pneumoconiosis, PMF, and advanced disease for a given mean respirable dust
    level (concentration) and for the specific type of coal in the region,
    calculated according to Attfield MD, Morring K. Am Ind Hyg Assoc J 1992*:
    53:486-492.

                           METHODS (continued)

DISTRIBUTION OF RADIOGRAPHIC FINDINGS

    PROFUSION OF SMALL OPACITIES, LARGE OPACITIES & SYMBOLS: count and percent
    of the x-rays using the final determination of the ILO small opacity, the
    final determination of the ILO large opacity, and symbol "ax".

PREVALENCE OF CLINICAL FINDINGS

    SELF-REPORTED: count and percent of self-reported symptoms and/or medical
    conditions based on the participating miners who completed the health
    questionnaire survey.

SMOKING STATUS

    NEVER SMOKER, FORMER SMOKER, & CURRENT SMOKER: count and percent of
    participating miners who completed the health questionnaire survey miners
    reporting each smoking history.

SPIROMETRY RESULTS

    OBSTRUCTIVE, RESTRICTIVE, & MIXED: number and percent of miners who
    participated in the spirometry testing and whose results showed one of the
    following categories of respiratory impairment using forced expiratory
    volume in one second (FEV1) and forced vital capacity (FVC) ratio:

        OBSTRUCTIVE - FEV1/FVC < lower limit of normal (LLN) and FVC >= LLN
        RESTRICTIVE - FEV1/FVC > LLN and FVC < LLN
        MIXED - FEV1/FVC < LLN and FVC < LLN