TABLE 6: Occupation (AXTAT CODES) and % Predicted FEV[1] (On Health Assessment)

	80-84%	75-79%	<75%
Underground Mining	5.0	3.3	2.2
Surface Mining	5.5	3.6	3.5
Processing Worker	5.1	2.5	3.3
Tradesperson (electrician, fitter etc)	5.7	3.0	3.0
Managerial, admin etc	4.4	2.7	2.7
Exploration, geology	5.2	2.2	1.8
Equipment operator - surface	6.9	3.6	4.5
Non-mining	3.3	-	-
AVERAGE:	**5.4**	**2.9**	**3.1**

TABLE 7 Occupation (AXTAT CODES) and X-Ray Findings (ILO Classification, 'B' Reader Perth Chest Clinic)

	%0/1	%1/0+	NUMBER OF X-RAYS
Underground Mining	2.8	0.20	496
Surface Mining	3.2	-	591
Processing Worker	1.3	-	754
Tradesperson (electrician, fitter etc)	2.2	0.17	1146
Managerial, admin etc	2.7	0.17	1168
Exploration, geology	1.2	0.11	888
Equipment operator - surface	3.1	0.38	1051
Non-mining	-	-	7
TOTAL:	**2.4**	**0.16**	**6101**

TABLE 8: Occupation (AXTAT CODES) and % Hearing Loss (On Health Assessment)

	%6-10%	%11-20%	%>20%
Underground Mining	5.5	4.2	1.9
Surface Mining	5.6	3.8	1.3
Processing Worker	5.6	3.6	1.5
Tradesperson (electrician, fitter etc)	5.9	4.0	1.9
Managerial, admin etc	5.6	3.6	1.8
Exploration, geology	3.1	1.9	0.6
Equipment operator - surface	7.4	5.1	2.4
Non-mining	0	3.3	0
AVERAGE:	**5.7**	**3.8**	**1.7**

TABLE 9: Occupation (AXTAT CODES) And Smoking Status: (Reported on MRC)

	% CURRENT	% QUIT
Underground Mining	45	21
Surface Mining	40	23
Processing Worker	38	27
Tradesperson (electrician, fitter etc)	35	23
Managerial, admin etc	25	25
Exploration, geology	47	18
Equipment operator - surface	43	26
Non-mining	40	27
AVERAGE:	**36**	**24**

DISCUSSION:

The health surveillance data collection is now two years on and clearly, will prove of real value, once we complete the data collection at the end of year five.This will foster trend analysis of those mine employees who remain in the mining industry for the duration of these five years.

The initial results of those entering the mining industry, along with those who have been in the mining industry longer than two years (prior to December 1995) suggests that these are statistically significant differences between the occupational groups and their reporting of respiratory symptoms (implying bronchitis, wheezing, asthma, shortness of breath).The tables above, using a general chi square review, find that there are significant differences between the groups in all the items other than the x-ray findings (this is due to the large numbers in the database).

As indicated on the context diagram the department also has a number of other databases. They are linked and will allow more detailed review for possible associations between the minehealth data and atmospheric exposures (CONTAM) data at a later stage.The potential to review exposures say, of a group of underground mines, within a minerals sector, for example, identify the health outcome data, and determine correlations, is high.

Similarly this database will have the capacity to scrutinise the main confounder of smoking (pack-years) to identify whether exposure data, per se, is associated with lung function changes; or whether smoking is a potentiating factor; or whether smoking in its own right (which we already know) is a factor.The implication for the mining industry could be considerable.

Other issues: during the development and data collection for this minehealth system a number of issues have become apparent.

Quality assurance is vital in the collection of the information. Most importantly being the completion of the questionnaire (filled in by the approved person, the occupational nurse, the doctor), and the accurate measuring of lung function and audiometry.We found, initially, that the quality at best, was indifferent. Over the last two years, however, there has been a progressive improvement.A programme for instrument (spirometer) calibration, whilst currently under consideration, has not been introduced todate.

Quality control for the data input into the database is generally good, as this is controlled by a departmental staff member, with the input clerks referring to this staff member, as necessary.

The creation of the 'approved person' position following their attendance at an accredited