

## XI. APPENDIX A

### COMPOSITION OF THE NOHSM MINE SAMPLE

- <sup>\*1</sup> The mineral commodity is essentially the same name that MSHA uses for that MSHA SIC with two exceptions. NIOSH combined the Alumina (Mill) and Aluminum (Ore) commodities into one commodity, Aluminum and combined Clay, Ceramic & Refractory, NEC; Clay (Common); and Clay (Fire); into one commodity, Clay.
- <sup>\*2</sup> The MSHA SIC is a five digit coding classification for each mineral commodity that MSHA constructed from the four-digit Standard Industrial Classification used in all industries.
- <sup>\*3</sup> FID represents the NOHSM facility identification number for the surveyed mining facility.
- <sup>\*4</sup> The number of employees is defined as the total number of workers which were on the facility's payroll at the time the NOHSM survey was conducted.
- <sup>\*5</sup> SRU/NSRU represents either a self-representing unit or a non-self-representing unit and is defined in the sample selection section of this report.
- <sup>\*6</sup> These mining facilities were inactive at the time the NOHSM survey was being conducted, even though they were active when the mines were selected for that commodity.
- <sup>\*7</sup> This mining facility was selected under the Limestone (Crushed & Broken) commodity, but was already surveyed under the Vermiculite commodity at an earlier time (MSHA had changed that facility's standard industrial classification to Limestone (Crushed & Broken)).

NOTE: When a mineral commodity includes only SRU mining facilities as being surveyed, every mining facility in that mineral commodity was surveyed under NOHSM. In effect, a census of the commodity was performed.

MINERAL COMMODITY <sup>*1</sup>	MSHA SIC <sup>*2</sup>	FID <sup>*3</sup>	NUMBER OF EMPLOYEES <sup>*4</sup>	SRU/NSRU <sup>*5</sup>
Aluminum	10510	5	**	NSRU
Aluminum	10510	6	1162	SRU
Aluminum	10510	7	**	SRU
Aluminum	10510	9	111	SRU
Aluminum	10510	31	11	SRU
Aluminum	10510	52	**	NSRU
Aluminum	10510	54	259	NSRU
Aluminum	10510	125	800	SRU
Aluminum	10510	128	807	SRU
Anthracite Coal	11110	432	5	NSRU
Anthracite Coal	11110	433	22	NSRU
Anthracite Coal	11110	434	56	SRU
Anthracite Coal	11110	435	34	NSRU
Anthracite Coal	11110	436	67	SRU
Anthracite Coal	11110	437	224	SRU
Anthracite Coal	11110	438	67	NSRU
Anthracite Coal	11110	439	7	NSRU
Anthracite Coal	11110	440	96	SRU
Anthracite Coal	11110	441	24	NSRU
Anthracite Coal	11110	442	14	SRU
Anthracite Coal	11110	443	90	SRU
Anthracite Coal	11110	444	10	NSRU
Anthracite Coal	11110	445	45	SRU
Anthracite Coal	11110	446	13	NSRU
Anthracite Coal	11110	447	10	NSRU
Anthracite Coal	11110	448	3	NSRU
Anthracite Coal	11110	449	17	NSRU
Anthracite Coal	11110	450	**	NSRU
Anthracite Coal	11110	451	13	NSRU
Anthracite Coal	11110	452	7	NSRU

**APPENDIX A (CONT.)**

<b>MINERAL COMMODITY*1</b>	<b>MSHA SIC*2</b>	<b>FID*3</b>	<b>NUMBER OF EMPLOYEES*4</b>	<b>SRU/NSRU*5</b>
Anthracite Coal	11110	453	27	NSRU
Anthracite Coal	11110	454	**	NSRU
Anthracite Coal	11110	455	3	NSRU
Anthracite Coal	11110	456	40	NSRU
Anthracite Coal	11110	457	**	NSRU
Anthracite Coal	11110	458	10	NSRU
Anthracite Coal	11110	459	27	NSRU
Anthracite Coal	11110	460	8	NSRU
Anthracite Coal	11110	461	79	NSRU
Anthracite Coal	11110	462	46	NSRU
Anthracite Coal	11110	463	6	NSRU
Anthracite Coal	11110	464	25	NSRU
Anthracite Coal	11110	465	41	NSRU
Aplite	14591	148	32	SRU
Aplite	14591	150	**	SRU
Asbestos	14991	16	123	SRU
Asbestos	14991	17	59	SRU
Asbestos	14991	21	92	SRU
Asbestos	14991	146	170	SRU
Barite	14720	632	53	NSRU
Barite	14720	642	22	NSRU
Barite	14720	652	12	NSRU
Barite	14720	665	22	NSRU
Barite	14720	691	14	NSRU
Beryl	10992	134	15	SRU
Beryl	10992	137	106	SRU
Bituminous Coal	12110	401	504	NSRU
Bituminous Coal	12110	402	119	NSRU
Bituminous Coal	12110	403	397	NSRU
Bituminous Coal	12110	404	480	NSRU
Bituminous Coal	12110	405	132	NSRU
Bituminous Coal	12110	406	455	NSRU
Bituminous Coal	12110	407	42	NSRU
Bituminous Coal	12110	408	352	NSRU
Bituminous Coal	12110	409	282	NSRU
Bituminous Coal	12110	410	53	NSRU
Bituminous Coal	12110	411	36	NSRU
Bituminous Coal	12110	412	276	NSRU
Bituminous Coal	12110	413	77	NSRU
Bituminous Coal	12110	414	719	NSRU
Bituminous Coal	12110	415	404	NSRU
Bituminous Coal	12110	416	786	NSRU
Bituminous Coal	12110	417	364	NSRU
Bituminous Coal	12110	418	**	NSRU
Bituminous Coal	12110	419	2	NSRU
Bituminous Coal	12110	420	**	NSRU
Bituminous Coal	12110	421	185	NSRU
Bituminous Coal	12110	422	**	NSRU
Bituminous Coal	12110	423	826	NSRU
Bituminous Coal	12110	424	219	NSRU
Bituminous Coal	12110	425	**	NSRU
Bituminous Coal	12110	426	37	NSRU
Bituminous Coal	12110	427	68	NSRU
Bituminous Coal	12110	428	51	NSRU
Bituminous Coal	12110	429	36	NSRU
Bituminous Coal	12110	430	414	NSRU

**APPENDIX A (CONT.)**

<b>MINERAL COMMODITY*1</b>	<b>MSHA SIC*2</b>	<b>FID*3</b>	<b>NUMBER OF EMPLOYEES*4</b>	<b>SRU/NSRU*5</b>
Bituminous Coal	12110	431	143	NSRU
Bituminous Coal	12110	466	736	NSRU
Bituminous Coal	12110	467	1182	NSRU
Boron Minerals	14741	15	226	SRU
Boron Minerals	14741	23	805	SRU
Boron Minerals	14741	24	229	SRU
Boron Minerals	14741	71	84	SRU
Cement	32410	606	88	NSRU
Cement	32410	610	192	NSRU
Cement	32410	611	180	NSRU
Cement	32410	618	127	NSRU
Cement	32410	631	226	NSRU
Cement	32410	640	147	NSRU
Cement	32410	656	175	NSRU
Cement	32410	674	36	NSRU
Cement	32410	682	97	NSRU
Cement	32410	708	317	NSRU
Clay	14530	201	69	NSRU
Clay	14530	214	56	NSRU
Clay	14530	218	204	NSRU
Clay	14530	228	225	NSRU
Clay	14530	229	320	SRU
Clay	14530	230	227	NSRU
Clay	14530	231	536	SRU
Clay	14530	232	37	NSRU
Clay	14530	233	132	NSRU
Clay	14530	234	462	NSRU
Clay	14530	235	12	NSRU
Clay	14530	236	40	NSRU
Clay	14530	237	366	SRU
Clay	14530	239	72	NSRU
Clay	14530	240	185	SRU
Clay	14530	241	233	NSRU
Clay	14530	242	299	NSRU
Clay	14530	243	354	SRU
Clay	14530	244	35	NSRU
Clay	14530	247	65	NSRU
Clay	14530	250	53	NSRU
Clay	14530	252	85	NSRU
Clay	14530	258	109	NSRU
Clay	14530	259	119	NSRU
Clay	14530	261	98	NSRU
Clay	14530	277	6	NSRU
Clay	14530	287	76	NSRU
Clay	14530	290	102	NSRU
Clay	14530	293	55	NSRU
Clay	14530	294	42	NSRU
Clay	14530	297	139	NSRU
Clay	14530	308	4	NSRU
Clay	14530	311	53	NSRU
Clay	14530	312	11	NSRU
Copper	10210	603	920	NSRU
Copper	10210	604	1716	NSRU
Copper	10210	645	804	SRU
Copper	10210	660	690	NSRU
Copper	10210	676	46	NSRU

**APPENDIX A (CONT.)**

<b>MINERAL COMMODITY*1</b>	<b>MSHA SIC*2</b>	<b>FID*3</b>	<b>NUMBER OF EMPLOYEES*4</b>	<b>SRU/NSRU*5</b>
Copper	10210	680	**	NSRU
Copper	10210	681	**	NSRU
Copper	10210	696	460	NSRU
Feldspar	14593	549	6	NSRU
Feldspar	14593	552	126	NSRU
Feldspar	14593	571	20	NSRU
Fluorspar	14730	634	84	SRU
Fluorspar	14730	635	9	SRU
Fluorspar	14730	636	**	SRU
Fluorspar	14730	637	14	SRU
Fluorspar	14730	638	22	SRU
Fluorspar	14730	657	**	SRU
Fluorspar	14730	684	8	SRU
Gemstones	14992	57	36	SRU
Gemstones	14992	103	44	SRU
Gilsonite	14993	135	28	SRU
Gilsonite	14993	136	16	SRU
Gilsonite	14993	138	**	NSRU
Gilsonite	14993	141	3	NSRU
Gilsonite	14993	142	16	SRU
Gilsonite	14993	143	7	SRU
Gilsonite	14993	144	36	SRU
Gilsonite	14993	145	9	NSRU
Gold	10410	3	**	NSRU
Gold	10410	19	78	NSRU
Gold	10410	25	12	NSRU
Gold	10410	27	**	NSRU
Gold	10410	64	**	NSRU
Gold	10410	66	44	NSRU
Gold	10410	69	171	SRU
Gold	10410	70	300	SRU
Gold	10410	75	177	NSRU
Gold	10410	76	141	SRU
Gold	10410	77	222	SRU
Gold	10410	79	16	NSRU
Gold	10410	81	145	NSRU
Gold	10410	82	137	NSRU
Gold	10410	83	297	SRU
Gold	10410	84	148	SRU
Gold	10410	86	42	NSRU
Gold	10410	87	**	NSRU
Gold	10410	106	**	NSRU
Gold	10410	123	1473	SRU
Granite (Crushed & Broken)	14230	202	13	NSRU
Granite (Crushed & Broken)	14230	203	191	SRU
Granite (Crushed & Broken)	14230	205	46	NSRU
Granite (Crushed & Broken)	14230	209	110	NSRU
Granite (Crushed & Broken)	14230	220	45	NSRU
Granite (Crushed & Broken)	14230	223	24	NSRU
Granite (Crushed & Broken)	14230	225	50	NSRU
Granite (Crushed & Broken)	14230	226	40	NSRU
Granite (Crushed & Broken)	14230	227	63	NSRU
Granite (Crushed & Broken)	14230	238	33	NSRU
Granite (Crushed & Broken)	14230	245	14	NSRU
Granite (Crushed & Broken)	14230	246	36	NSRU
Granite (Crushed & Broken)	14230	255	53	NSRU

**APPENDIX A (CONT.)**

<b>MINERAL COMMODITY*1</b>	<b>MSHA SIC*2</b>	<b>FID*3</b>	<b>NUMBER OF EMPLOYEES*4</b>	<b>SRU/NSRU*5</b>
Granite (Crushed & Broken)	14230	260	31	NSRU
Granite (Crushed & Broken)	14230	266	156	SRU
Granite (Crushed & Broken)	14230	269	82	NSRU
Granite (Crushed & Broken)	14230	271	128	NSRU
Granite (Crushed & Broken)	14230	272	31	NSRU
Granite (Crushed & Broken)	14230	273	26	NSRU
Granite (Crushed & Broken)	14230	274	46	NSRU
Granite (Crushed & Broken)	14230	275	37	NSRU
Granite (Crushed & Broken)	14230	278	37	NSRU
Granite (Crushed & Broken)	14230	280	30	NSRU
Granite (Crushed & Broken)	14230	284	35	NSRU
Granite (Crushed & Broken)	14230	285	86	NSRU
Granite (Crushed & Broken)	14230	288	5	NSRU
Granite (Crushed & Broken)	14230	304	65	NSRU
Granite (Crushed & Broken)	14230	306	64	NSRU
Granite (Crushed & Broken)	14230	307	44	NSRU
Granite (Crushed & Broken)	14230	309	16	NSRU
Granite (Dimension)	14111	219	*6	NSRU
Granite (Dimension)	14111	221	15	NSRU
Granite (Dimension)	14111	224	4	NSRU
Granite (Dimension)	14111	248	6	NSRU
Granite (Dimension)	14111	256	10	NSRU
Granite (Dimension)	14111	257	8	NSRU
Granite (Dimension)	14111	263	21	NSRU
Granite (Dimension)	14111	286	5	NSRU
Granite (Dimension)	14111	292	25	NSRU
Granite (Dimension)	14111	295	28	NSRU
Granite (Dimension)	14111	301	70	NSRU
Granite (Dimension)	14111	310	20	NSRU
Gypsum	14920	8	42	NSRU
Gypsum	14920	43	49	SRU
Gypsum	14920	44	30	NSRU
Gypsum	14920	45	116	NSRU
Gypsum	14920	46	16	NSRU
Gypsum	14920	58	84	NSRU
Gypsum	14920	67	13	NSRU
Gypsum	14920	100	87	SRU
Gypsum	14920	112	*6	SRU
Gypsum	14920	113	24	NSRU
Gypsum	14920	126	40	NSRU
Gypsum	14920	127	41	NSRU
Gypsum	14920	147	50	NSRU
Iron Ore	10110	646	475	NSRU
Iron Ore	10110	647	89	NSRU
Iron Ore	10110	648	655	NSRU
Kyanite	14594	518	*6	SRU
Kyanite	14594	585	62	SRU
Kyanite	14594	586	16	SRU
Kyanite	14594	588	35	SRU
Lead/Zinc	10310	620	145	NSRU
Lead/Zinc	10310	651	118	NSRU
Lead/Zinc	10310	654	111	NSRU
Lead/Zinc	10310	675	123	NSRU
Lead/Zinc	10310	677	123	NSRU
Lead/Zinc	10310	679	246	NSRU
Leonardite	29900	99	3	SRU

**APPENDIX A (CONT.)**

<b>MINERAL COMMODITY*1</b>	<b>MSHA SIC*2</b>	<b>FID*3</b>	<b>NUMBER OF EMPLOYEES*4</b>	<b>SRU/NSRU*5</b>
Leonardite	29900	107	34	SRU
Leonardite	29900	108	15	SRU
Lime	32740	501	21	NSRU
Lime	32740	504	57	NSRU
Lime	32740	524	74	NSRU
Lime	32740	536	770	SRU
Lime	32740	541	28	NSRU
Lime	32740	563	139	NSRU
Lime	32740	564	207	NSRU
Lime	32740	569	112	NSRU
Lime	32740	582	94	SRU
Limestone (Crushed & Broken)	14220	503	112	NSRU
Limestone (Crushed & Broken)	14220	506	17	NSRU
Limestone (Crushed & Broken)	14220	509	80	NSRU
Limestone (Crushed & Broken)	14220	514	24	NSRU
Limestone (Crushed & Broken)	14220	520	11	NSRU
Limestone (Crushed & Broken)	14220	522	57	NSRU
Limestone (Crushed & Broken)	14220	523	36	NSRU
Limestone (Crushed & Broken)	14220	525	118	NSRU
Limestone (Crushed & Broken)	14220	526	13	NSRU
Limestone (Crushed & Broken)	14220	527	*7	NSRU
Limestone (Crushed & Broken)	14220	529	126	NSRU
Limestone (Crushed & Broken)	14220	534	330	NSRU
Limestone (Crushed & Broken)	14220	535	152	NSRU
Limestone (Crushed & Broken)	14220	537	15	NSRU
Limestone (Crushed & Broken)	14220	544	266	NSRU
Limestone (Crushed & Broken)	14220	556	140	NSRU
Limestone (Crushed & Broken)	14220	557	207	NSRU
Limestone (Crushed & Broken)	14220	559	132	NSRU
Limestone (Crushed & Broken)	14220	562	195	NSRU
Limestone (Crushed & Broken)	14220	566	197	NSRU
Limestone (Crushed & Broken)	14220	570	142	NSRU
Limestone (Crushed & Broken)	14220	572	69	NSRU
Limestone (Crushed & Broken)	14220	573	1	NSRU
Limestone (Crushed & Broken)	14220	574	34	NSRU
Limestone (Crushed & Broken)	14220	575	45	NSRU
Limestone (Crushed & Broken)	14220	577	11	NSRU
Limestone (Crushed & Broken)	14220	578	8	NSRU
Limestone (Crushed & Broken)	14220	583	88	NSRU
Limestone (Crushed & Broken)	14220	589	33	NSRU
Limestone (Crushed & Broken)	14220	592	16	NSRU
Limestone (Dimension)	14112	601	12	NSRU
Limestone (Dimension)	14112	650	38	NSRU
Limestone (Dimension)	14112	653	50	NSRU
Limestone (Dimension)	14112	692	3	NSRU
Limestone (Dimension)	14112	699	71	NSRU
Limestone (Dimension)	14112	703	20	NSRU
Lithium	14791	666	18	SRU
Lithium	14791	668	84	SRU
Lithium	14791	669	34	SRU
Lithium	14791	670	34	SRU
Magnesite	14595	65	135	SRU
Magnesite	14595	78	3	SRU
Magnesite	14595	104	19	SRU
Manganese	10614	217	38	SRU
Manganese	10614	249	26	SRU

**APPENDIX A (CONT.)**

<b>MINERAL COMMODITY**1</b>	<b>MSHA SIC**2</b>	<b>FID**3</b>	<b>NUMBER OF EMPLOYEES**4</b>	<b>SRU/NSRU**5</b>
Manganese	10614	291	5	SRU
Manganese	10614	296	12	SRU
Manganese	10614	299	21	SRU
Marble (Crushed & Broken)	14291	502	163	NSRU
Marble (Crushed & Broken)	14291	517	27	NSRU
Marble (Crushed & Broken)	14291	519	**6	NSRU
Marble (Dimension)	14113	516	54	NSRU
Marble (Dimension)	14113	533	7	NSRU
Marble (Dimension)	14113	576	**6	NSRU
Mercury	10920	72	59	SRU
Metal Ores, NEC	10990	4	3	SRU
Metal Ores, NEC	10990	28	32	SRU
Mica	14994	550	33	NSRU
Mica	14994	551	13	NSRU
Mica	14994	554	18	NSRU
Molybdenum	10615	621	390	SRU
Molybdenum	10615	633	445	SRU
Nonmetallic Minerals, NEC	14990	10	70	SRU
Nonmetallic Minerals, NEC	14990	14	18	NSRU
Nonmetallic Minerals, NEC	14990	22	534	SRU
Nonmetallic Minerals, NEC	14990	30	11	NSRU
Nonmetallic Minerals, NEC	14990	32	141	NSRU
Nonmetallic Minerals, NEC	14990	41	62	NSRU
Nonmetallic Minerals, NEC	14990	42	117	SRU
Nonmetallic Minerals, NEC	14990	50	94	NSRU
Nonmetallic Minerals, NEC	14990	51	94	NSRU
Nonmetallic Minerals, NEC	14990	73	40	NSRU
Nonmetallic Minerals, NEC	14990	74	112	SRU
Nonmetallic Minerals, NEC	14990	102	28	NSRU
Nonmetallic Minerals, NEC	14990	105	6	NSRU
Nonmetallic Minerals, NEC	14990	124	67	NSRU
Nonmetallic Minerals, NEC	14990	151	75	SRU
Nonmetallic Minerals, NEC	14990	152	17	NSRU
Oil Sand	13112	706	**6	SRU
Oil Shale	13111	625	155	SRU
Perlite	14996	1	11	NSRU
Perlite	14996	49	4	NSRU
Perlite	14996	88	30	SRU
Perlite	14996	94	47	SRU
Perlite	14996	95	62	SRU
Perlite	14996	98	18	SRU
Perlite	14996	116	10	NSRU
Phosphate Rock	14750	510	636	NSRU
Phosphate Rock	14750	511	477	NSRU
Phosphate Rock	14750	512	150	NSRU
Phosphate Rock	14750	513	114	NSRU
Phosphate Rock	14750	515	119	NSRU
Phosphate Rock	14750	521	89	NSRU
Phosphate Rock	14750	579	73	NSRU
Pigment Minerals	14792	587	29	SRU
Platinum Group	10993	655	372	SRU
Potash	14742	89	76	SRU
Potash	14742	90	219	SRU
Potash	14742	91	403	SRU
Potash	14742	92	322	SRU
Potash	14742	93	**6	SRU

**APPENDIX A (CONT.)**

<b>MINERAL COMMODITY*1</b>	<b>MSHA SIC*2</b>	<b>FID*3</b>	<b>NUMBER OF EMPLOYEES*4</b>	<b>SRU/NSRU*5</b>
Potash	14742	96	612	SRU
Potash	14742	97	*6	SRU
Potash	14742	133	80	SRU
Pumice	14997	612	20	NSRU
Pumice	14997	619	27	NSRU
Pumice	14997	661	5	NSRU
Pyrites	14793	508	13	SRU
Rare Earths	10994	20	218	SRU
Salt (Evaporated)	28991	47	207	SRU
Salt (Evaporated)	28991	48	123	SRU
Salt (Rock)	14760	53	*6	NSRU
Salt (Rock)	14760	55	252	SRU
Salt (Rock)	14760	56	290	SRU
Salt (Rock)	14760	101	269	NSRU
Salt (Rock)	14760	111	185	NSRU
Salt (Rock)	14760	131	205	SRU
Sand and Gravel	14410	602	12	NSRU
Sand and Gravel	14410	605	15	NSRU
Sand and Gravel	14410	607	12	NSRU
Sand and Gravel	14410	609	5	NSRU
Sand and Gravel	14410	613	23	NSRU
Sand and Gravel	14410	614	43	NSRU
Sand and Gravel	14410	615	8	NSRU
Sand and Gravel	14410	616	28	NSRU
Sand and Gravel	14410	617	14	NSRU
Sand and Gravel	14410	626	5	NSRU
Sand and Gravel	14410	630	19	NSRU
Sand and Gravel	14410	639	20	NSRU
Sand and Gravel	14110	641	*6	NSRU
Sand and Gravel	14410	643	1	NSRU
Sand and Gravel	14410	644	36	NSRU
Sand and Gravel	14410	649	22	NSRU
Sand and Gravel	14410	658	9	NSRU
Sand and Gravel	14410	659	48	NSRU
Sand and Gravel	14410	663	9	NSRU
Sand and Gravel	14410	667	56	NSRU
Sand and Gravel	14410	671	16	NSRU
Sand and Gravel	14410	673	18	NSRU
Sand and Gravel	14410	678	3	NSRU
Sand and Gravel	14410	683	31	NSRU
Sand and Gravel	14410	686	*6	NSRU
Sand and Gravel	14410	690	12	NSRU
Sand and Gravel	14410	693	17	NSRU
Sand and Gravel	14410	701	21	NSRU
Sand and Gravel	14410	702	12	NSRU
Sand and Gravel	14410	707	*6	NSRU
Sandstone (Crushed & Broken)	14292	11	45	NSRU
Sandstone (Crushed & Broken)	14292	12	7	NSRU
Sandstone (Crushed & Broken)	14292	13	21	NSRU
Sandstone (Crushed & Broken)	14292	18	69	NSRU
Sandstone (Crushed & Broken)	14292	29	64	NSRU
Sandstone (Crushed & Broken)	14292	37	150	SRU
Sandstone (Crushed & Broken)	14292	38	41	NSRU
Sandstone (Crushed & Broken)	14292	39	94	NSRU
Sandstone (Crushed & Broken)	14292	40	19	NSRU
Sandstone (Crushed & Broken)	14292	59	69	NSRU



**APPENDIX A (CONT.)**

<b>MINERAL COMMODITY*1</b>	<b>MSHA SIC*2</b>	<b>FID*3</b>	<b>NUMBER OF EMPLOYEES*4</b>	<b>SRU/NSRU*5</b>
Sandstone (Crushed & Broken)	14292	60	4	NSRU
Sandstone (Crushed & Broken)	14292	61	47	NSRU
Sandstone (Crushed & Broken)	14292	68	49	NSRU
Sandstone (Crushed & Broken)	14292	109	72	NSRU
Sandstone (Crushed & Broken)	14292	110	19	NSRU
Sandstone (Crushed & Broken)	14292	114	14	NSRU
Sandstone (Crushed & Broken)	14292	115	127	SRU
Sandstone (Crushed & Broken)	14292	122	64	NSRU
Sandstone (Crushed & Broken)	14292	129	43	NSRU
Sandstone (Crushed & Broken)	14292	130	39	NSRU
Sandstone (Crushed & Broken)	14292	132	**	NSRU
Sandstone (Crushed & Broken)	14292	153	168	SRU
Sandstone (Crushed & Broken)	14292	154	**	NSRU
Sandstone (Crushed & Broken)	14292	155	5	NSRU
Sandstone (Dimension)	14114	505	13	NSRU
Sandstone (Dimension)	14114	555	75	NSRU
Sandstone (Dimension)	14114	558	68	NSRU
Shale (Common)	14596	627	39	NSRU
Shale (Common)	14596	664	40	NSRU
Shale (Common)	14596	672	14	NSRU
Shale (Common)	14596	685	67	NSRU
Shale (Common)	14596	700	45	NSRU
Silver	10440	2	6	NSRU
Silver	10440	26	115	NSRU
Silver	10440	33	260	SRU
Silver	10440	34	607	SRU
Silver	10440	35	187	SRU
Silver	10440	36	152	NSRU
Silver	10440	63	355	SRU
Silver	10440	80	48	NSRU
Silver	10440	85	100	NSRU
Silver	10440	139	125	NSRU
Silver	10440	140	248	SRU
Slate (Crushed & Broken)	14293	204	18	SRU
Slate (Crushed & Broken)	14293	206	30	SRU
Slate (Crushed & Broken)	14293	212	14	SRU
Slate (Crushed & Broken)	14293	222	57	SRU
Slate (Crushed & Broken)	14293	276	73	SRU
Slate (Crushed & Broken)	14293	279	**	SRU
Slate (Crushed & Broken)	14293	283	14	SRU
Slate (Dimension)	14115	282	31	NSRU
Slate (Dimension)	14115	300	13	NSRU
Slate (Dimension)	14115	302	**	NSRU
Slate (Dimension)	14115	305	142	NSRU
Sodium Compounds	14744	156	1096	SRU
Sodium Compounds	14744	157	513	SRU
Sodium Compounds	14744	159	356	SRU
Sodium Compounds	14744	160	291	SRU
Stone, Crushed & Broken, NEC	14290	207	20	NSRU
Stone, Crushed & Broken, NEC	14290	208	44	NSRU
Stone, Crushed & Broken, NEC	14290	210	8	NSRU
Stone, Crushed & Broken, NEC	14290	211	131	SRU
Stone, Crushed & Broken, NEC	14290	213	3	NSRU
Stone, Crushed & Broken, NEC	14290	215	11	NSRU
Stone, Crushed & Broken, NEC	14290	251	12	NSRU
Stone, Crushed & Broken, NEC	14290	253	14	NSRU

**APPENDIX A (CONT.)**

<b>MINERAL COMMODITY<sup>*1</sup></b>	<b>MSHA SIC<sup>*2</sup></b>	<b>FID<sup>*3</sup></b>	<b>NUMBER OF EMPLOYEES<sup>*4</sup></b>	<b>SRU/NSRU<sup>*5</sup></b>
Stone, Crushed & Broken, NEC	14290	262	7	NSRU
Stone, Crushed & Broken, NEC	14290	264	48	NSRU
Stone, Crushed & Broken, NEC	14290	265	43	NSRU
Stone, Crushed & Broken, NEC	14290	267	134	SRU
Stone, Crushed & Broken, NEC	14290	268	14	NSRU
Stone, Crushed & Broken, NEC	14290	270	**	NSRU
Stone, Crushed & Broken, NEC	14290	281	20	NSRU
Stone, Crushed & Broken, NEC	14290	289	25	NSRU
Stone, Crushed & Broken, NEC	14290	303	18	NSRU
Stone, Crushed & Broken, NEC	14290	313	67	NSRU
Stone, Crushed & Broken, NEC	14290	314	21	NSRU
Stone, Dimension, NEC	14110	216	18	NSRU
Stone, Dimension, NEC	14110	254	9	NSRU
Stone, Dimension, NEC	14110	298	**	NSRU
Talc, Soapstone & Pyrophyllite	14960	507	3	NSRU
Talc, Soapstone & Pyrophyllite	14960	538	112	NSRU
Talc, Soapstone & Pyrophyllite	14960	539	51	NSRU
Talc, Soapstone & Pyrophyllite	14960	540	5	NSRU
Talc, Soapstone & Pyrophyllite	14960	547	143	NSRU
Talc, Soapstone & Pyrophyllite	14960	553	9	NSRU
Talc, Soapstone & Pyrophyllite	14960	580	16	NSRU
Titanium	10996	628	245	SRU
Titanium	10996	629	129	SRU
Traprock (Crushed & Broken)	14294	530	127	NSRU
Traprock (Crushed & Broken)	14294	531	75	NSRU
Traprock (Crushed & Broken)	14294	532	**	NSRU
Traprock (Crushed & Broken)	14294	542	19	NSRU
Traprock (Crushed & Broken)	14294	545	17	NSRU
Traprock (Crushed & Broken)	14294	546	**	NSRU
Traprock (Crushed & Broken)	14294	548	33	NSRU
Traprock (Crushed & Broken)	14294	560	30	NSRU
Traprock (Crushed & Broken)	14294	561	12	NSRU
Traprock (Crushed & Broken)	14294	565	70	NSRU
Traprock (Crushed & Broken)	14294	567	145	NSRU
Traprock (Crushed & Broken)	14294	581	80	NSRU
Traprock (Crushed & Broken)	14294	584	43	NSRU
Traprock (Crushed & Broken)	14294	590	18	NSRU
Traprock (Crushed & Broken)	14294	591	128	NSRU
Traprock (Crushed & Broken)	14294	593	43	NSRU
Traprock (Dimension)	14116	528	**	SRU
Traprock (Dimension)	14116	568	**	SRU
Trona	14743	158	749	SRU
Uranium	10941	622	51	NSRU
Uranium	10941	662	181	NSRU
Uranium	10941	687	66	NSRU
Uranium	10941	688	52	NSRU
Uranium	10941	694	65	NSRU
Uranium	10941	698	**	NSRU
Uranium	10941	705	**	NSRU
Uranium - Vanadium Ores	10940	623	**	SRU
Uranium - Vanadium Ores	10940	624	22	SRU
Uranium - Vanadium Ores	10940	689	23	SRU
Uranium - Vanadium Ores	10940	695	**	SRU
Uranium - Vanadium Ores	10940	697	**	SRU
Uranium - Vanadium Ores	10940	704	**	SRU
Vanadium	10942	608	229	SRU

**APPENDIX A (CONT.)**

<b>MINERAL COMMODITY**1</b>	<b>MSHA SIC**2</b>	<b>FID**3</b>	<b>NUMBER OF EMPLOYEES**4</b>	<b>SRU/NSRU**5</b>
Vermiculite	14998	62	133	SRU
Vermiculite	14998	117	18	SRU
Vermiculite	14998	118	51	SRU
Vermiculite	14998	119	21	SRU
Vermiculite	14998	120	11	SRU
Vermiculite	14998	121	11	SRU
Vermiculite	14998	149	32	SRU
Zircon	10997	543	29	SRU

**APPENDIX B  
PART I - QUESTIONNAIRE**

**Question**

1. Card Code 1
2. Revision Code 010  
Surveyor ID \_\_\_\_\_
3. Date Survey Started  $\frac{\quad}{M} \frac{\quad}{M} \frac{\quad}{D} \frac{\quad}{D} \frac{\quad}{Y} \frac{\quad}{Y}$  (mo/day/yr)
4. Facility Identification Number \_\_\_\_\_

**GENERAL FACILITY INFORMATION**

**Question**

5. Rank the commodities produced at this facility from highest production to lowest production based on the number of tons mined or processed per year.

Commodity Rank	Commodity Name	SIC Code
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____
6	_____	_____
7	_____	_____
8	_____	_____

**Question**

6. Identify the most advanced processing state for each commodity that is shipped from the facility by its state of processing, according to the following system:

	Commodity Rank	Processing State	Specify Other
A Raw Ore (no milling or preparation)	1	_____	_____
B Crushed	2	_____	_____
C Ground	3	_____	_____
D Concentrated (cleaned)	4	_____	_____
E Roasted	5	_____	_____
F Other	6	_____	_____
	7	_____	_____
	8	_____	_____

**APPENDIX B (CONT.)**

**Question**

7. Approximately how many years has this facility been involved in any mining or milling activity?

\_\_\_ Years (If "unknown" code "998")

**Question**

8. Record the approximate number of workers currently employed in each of the following types of subunits, by shift, divided by production and maintenance.

Subunit Name	PRODUCTION (SHIFTS)				MAINTENANCE (SHIFTS)			
	1	2	3	4	1	2	3	4
Underground mining	---	---	---	---	---	---	---	---
Underground shop	---	---	---	---	---	---	---	---
Underground mill	---	---	---	---	---	---	---	---
Open pit	---	---	---	---	---	---	---	---
Surface shop operation	---	---	---	---	---	---	---	---
Surface crushing operation	---	---	---	---	---	---	---	---
Surface grinding operation	---	---	---	---	---	---	---	---
Surface flotation and reagents	---	---	---	---	---	---	---	---
Surface miscellaneous	---	---	---	---	---	---	---	---
Surface mill operation	---	---	---	---	---	---	---	---
Coal preparation plant	---	---	---	---	---	---	---	---

**Question**

9. How many people are on your payroll for all shifts at the present time? Include all production, maintenance, and administrative workers.

Males      \_\_\_\_\_

Females    \_\_\_\_\_

Total      \_\_\_\_\_

**Question**

10. Has this facility any formal agreement with the employees concerning occupational health?

- 1 Yes
- 2 No

**APPENDIX B (CONT.)  
MEDICAL SERVICES**

**Question**

11. Is there a formally established health unit at this facility?

- 1 Yes, physician in charge
- 2 Yes, registered nurse in charge
- 3 Yes, licensed practical nurse in charge
- 4 Yes, other in charge
- 5 No

**Question**

12. Do you have on your payroll one or more on-site physicians to give your employees medical care?

- 1 Yes, full-time
- 2 Yes, part-time
- 3 No

**Question**

13. Do you have a formal arrangement with any outside source (physicians or clinics) to give your employees access to the care of a physician for health-related problems (as opposed to care for traumatic injury)?

- 1 Yes, physician will travel to this facility on call
- 2 Yes, at clinic (not at this facility)
- 3 Yes, physician is based at this facility either full or part-time
- 4 No

**Question**

14. Estimate the average number of physician hours that are devoted to the care of employees at your facility per week.

\_\_\_ hours per week (If "unknown" code "998")

**Question**

15. Does this facility have one or more nurses on the payroll to provide care for employees?

- 1 Yes
- 2 No (Code a "0" in the blank for N/A in question 16)

**Question**

16. How many registered nurses and licensed practical nurses are on the payroll at this facility, and who provide direct care for your employees?

N/A \_\_\_\_\_  
RN \_\_\_\_\_  
LPN \_\_\_\_\_

**APPENDIX B (CONT.)**

**Question**

17. Estimate the average number of nursing hours that are devoted to the employees of your facility per week.

\_\_\_ hours (If "unknown" code "998")

**Question**

18. Do you provide the following examinations or tests to all or to selected groups of employees on a periodic basis?

	No	Yes, All	Yes, All Exec. & Mgmt Only	Yes, All Production Workers Only	Yes, for Selected Mgmt and or Production Workers
Ophthalmology	1	2	3	4	5
Audiometric	1	2	3	4	5
Blood tests	1	2	3	4	5
Urine tests	1	2	3	4	5
Pulmonary function	1	2	3	4	5
Chest X-rays	1	2	3	4	5
Allergy/Sensitization	1	2	3	4	5
Immunizations (flu, etc.)	1	2	3	4	5

**Question**

19. Before new employees are hired or placed, are they required to take a medical examination?

1      2      3      4      5

**Question**

20. Do you record health information about a new employee on some regular form?

1      2      3      4      5

**Question**

21. Do you require medical examinations of your employees who return to work after an illness?

1      2      3      4      5

## APPENDIX B (CONT.)

### Question

22. Do you require medical examinations of your employees when their employment is terminated? (Exit examination)

1            2            3            4            5

### Question

23. How long are medical records and other health information records retained?

— — — Years            (If "forever" code "999")  
                                  (If "unknown" code "998")

## INDUSTRIAL HYGIENE PRACTICES

### Question

24. Has your facility received industrial hygiene services on a consulting basis during the past 12 months?

- 1 Yes, from government sources
- 2 Yes, from non-government sources
- 3 Yes, from both government and non-government sources
- 4 No

### Question

25. Do you employ full-time individuals at this facility whose major responsibilities are in the area of prevention of illnesses?

- 1 Yes, but not a certified industrial hygienist.
- 2 Yes, a certified industrial hygienist.
- 3 Yes, both certified and non-certified industrial hygienists.
- 4 No (Code a "0" in the blank for N/A in question 26)



**APPENDIX B (CONT.)**

**Question**

26. How many full-time occupational health specialists are employed at this facility?

\_\_ Total

\_\_ N/A

For each of those individuals, please write in the appropriate activity number from the activity clusters listed below:

		<b>CLUSTER NO.</b>
Individual #1	_____	A: Administers (directs, manages) plans and develops programs, advises top level management.
Individual #2	_____	
Individual #3	_____	B: Inspects work place to identify hazards, investigates to determine the cause of illnesses.
Individual #4	_____	
Individual #5	_____	C: Analyzes plans or specs. to identify hazards, develops operating procedures to control hazards.
Individual #6	_____	
Individual #7	_____	D: Provides education and training.
Individual #8	_____	E: Performs and analyzes tests to monitor for the presence of dusts, gases, etc.
Individual #9	_____	
Individual #10	_____	F: Performs engineering design to control hazards.
Individual #11	_____	
Individual #12	_____	

**Question**

27. Do you have a program under which you regularly or periodically monitor the presence of physical agents such as heat, vibration, radiation, noise, or other types of physical agents?

1 Yes (Circle "1" or "2" for each physical agent listed below:)

	Yes	No
1. Heat	1	2
2. Vibration	1	2
3. Radiation	1	2
4. Noise	1	2
5. Other	1	2

2 No (Code a "0" in the blank for N/A in question 28)

## APPENDIX B (CONT.)

### Question

28. How long do you retain the records of the monitoring program?

- \_\_ Years (If "forever" code "99")  
(If "unknown" code "98")  
\_\_\_ N/A

### Question

29. Do you have a program under which you regularly or periodically monitor the health-related presence of fumes, gases, mists, dusts, or vapors?

1 Yes, we have a monitoring program (circle 1 or 2 for each agent listed below)

	Yes	No
1. Fumes	1	2
2. Gases	1	2
3. Mists	1	2
4. Dusts	1	2
5. Vapors	1	2

2 No (Code a "0" in the blank for N/A in question 30, 31, and 32)

### Question

30. How is this monitoring conducted?

N/A \_\_\_\_\_

- 1 Sample collection with laboratory analysis (Code a "0" in the blank for N/A in question 31)  
2 Direct-reading instruments  
3 Both

### Question

31. Which types of direct-reading instruments are used in the monitoring program? Circle "1" or "2" for each type listed below:

N/A \_\_\_\_\_

	Yes	No
1. Direct mass measurement tests	1	2
2. Fibrous aerosol monitors	1	2
3. Detector tubes	1	2
4. Infrared (I.R.) gas monitors	1	2
5. Ultraviolet (U.V.) gas monitors	1	2
6. Gas chromatograph monitors	1	2
7. Electrochemical monitors	1	2
8. Other "wet" chemical methods	1	2

**APPENDIX B (CONT.)**

**Question**

32. How long do you retain the records of the monitoring program?

NOTE: DO NOT ASK THIS QUESTION IN COAL MINES.

N/A \_\_\_\_\_

\_\_ Years (If "forever" code "99")  
(If "unknown" code "98")

**Question**

33. Are there areas in this facility in which personal protective health devices or equipment are required or recommended?

- 1 Yes, required
- 2 Yes, recommended
- 3 Yes, both
- 4 No (Code a "0" in the blank for N/A in questions 34, 35, 36, and 37)

**Question**

34. Who has been designated to see to it that personal protective health devices and equipment are serviced and maintained?

N/A \_\_\_\_\_

- 1 individual employees
- 2 employer representative
- 3 both
- 4 no one
- 5 other, specify \_\_\_\_\_

**Question**

35. In those instances where employees refuse to wear protective health devices or fail to wear them properly, are corrective measures taken?

N/A \_\_\_\_\_

- 1 Yes
- 2 No (Code a "0" in the blank for N/A in Questions 36 and 37)

**Question**

36. Do those corrective measures involve economic penalties?

N/A \_\_\_\_\_

- 1 Yes
- 2 No (Code a "0" in the blank for N/A in Questions 37)

**APPENDIX B (CONT.)**

**Question**

37. Have any economic penalties been assessed in the past 12 months?

N/A \_\_\_\_\_

- 1 Yes
- 2 No, we know of no instances where violations of company policy have occurred within the last 12 months.
- 3 No, although we know that there was at least one violation of company policy within the last 12 months.

**GENERAL RECORDKEEPING AND MISCELLANEOUS INFORMATION**

**Question**

38. How long are personnel records on terminated employees retained?

\_\_\_ Years (If "forever", code "999")  
(If "unknown", code "998")

**Question**

39. Do you keep employee absenteeism records?

- 1 Yes, showing specific nature of illness where appropriate
- 2 Yes, showing only the type of absence
- 3 Yes, without showing the type of absence
- 4 No

**Question**

40. What is your rate of unscheduled absenteeism?

\_\_\_ days per employee per year (If "unknown", code "998")

**Question**

41. What is your turnover rate among permanent employees in the non-administrative areas?

\_\_\_ % per year

**Question**

42. What year was your personnel record system begun?

Year system begun \_\_\_ (If "unknown", code "998")

**APPENDIX B (CONT.)**

**Question**

43. Which of the following items are contained in that system?

- 1 Social security number
- 2 Date of birth
- 3 Date(s) of employment with this facility
- 4 Jobs held at this facility
- 5 Employment history at other facilities
- 6 Sex of worker
- 7 Worker's race
- 8 Worker's home address

**Question**

44. Who is in the best position to provide information on the amount of each chemical or trade name substance used at this facility per year? Will this person(s) be available later today or tomorrow?

The inventory contact person(s) is:

---

---

---

**Question**

45. List the names and the approximate percent composition of any minerals known to occur in the material being mined.

<b>Mineral Name</b>	<b>Percent</b>
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____
_____	____

**APPENDIX B (CONT.)**

**Question**

46. If your mine uses diesel equipment in an underground location, when were the first diesel units brought into the mine?

- 1 We use no diesels in the underground locations of this mine.
- 2 We use diesels in underground locations of this mine, and the first diesel was brought into the mine during \_ \_ \_.

(If "unknown" code "998")

**Question**

47. Does this facility have any equipment that uses PCB-containing fluids?

- 1 Yes
- 2 No
- 3 Unknown

**Question**

48. Does this facility rotate shifts, and if so how often?

- 1 Yes, this facility rotates shifts on a \_\_\_\_\_ basis.
- 2 No, this facility does not use shift rotation.

**Question**

49. Does this facility have a Labor-Management Health Committee?

- 1 Yes, we have a Labor-Management Health Committee.
- 2 No, we do not have a Labor-Management Health Committee.

**Question**

50. Could you provide me with a geologic description of the strata (or rock formation) in which this mine operates?

---

---

---

---

---

---

---

---

---

---

## APPENDIX B (CONT.)

### Question

51. If you have an assay laboratory, or if you have access to assay reports, then may I have as an example a copy of each unique type of assay report?
- 1 Yes, we have an assay laboratory at this facility, but you may not have a copy of an assay report.
  - 2 Yes, we have an assay laboratory at this facility, and you may have a copy of an assay report.
  - 3 Yes, you may have a copy of each type of assay report, but we have no assay laboratory at this facility. Our reports come from an off-facility laboratory.
  - 4 No, we have no assay laboratory at this facility.