

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO.1919
TO BE ANSWERED ON 05.12.2012

EXPORT OF HEAVY RARE EARTH MINERALS

1919. SHRI DHANANJAY SINGH:

Will the PRIME MINISTER be pleased to state:

- (a) the details of mining companies holding licenses for mining heavy metals such as monazite and ilmenite, State-wise;
- (b) the total exports of heavy rare earth minerals during 2011-2012, including thorium containing ilmenite and monazite;
- (c) whether export of thorium or thorium containing ilmenite and monazite is permitted under the Atomic Energy Act;
- (d) if so, the details thereof;
- (e) whether illegal mining and export of thorium and other heavy minerals have been reported from the coasts of Tamil Nadu and Kerala; and
- (f) if so, the details thereof including the action taken by the Government in this regard?

ANSWER

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE (SHRI V. NARAYANASAMY) :

- (a) The details of mining companies holding licenses for mining of heavy metals such as monazite and ilmenite are maintained by the Indian Bureau of Mines, of the Ministry of Mines. The information obtained from the Department of Mines in this regard is given in Annexure-I.
- (b) There is no such commercially available material with a name, description or reference as "thorium containing ilmenite". Ilmenite is a mineral which occurs naturally in combination with, and as a part of beach sand minerals. Monazite also exists as a part of the same beach sand mineral raw material. Thorium does not exist in a natural form, and is one of the products obtained through processing of Monazite. However, ilmenite after completion of processing has a possibility of containing monazite as a "contaminant" to a small percentage, for the reason that both ilmenite and monazite are extracted from the same base raw material, i.e., beach-sand. Information on the total exports of any commodity from out of the country, including heavy minerals such as ilmenite, and rare earth minerals such as monazite etc. are maintained by the Department of Commerce. The information obtained from the Department of Commerce is given in Annexure-II.
- (c)&(d) As stated earlier, there is no such commercially available material with a name, description or reference as "thorium containing ilmenite". Ilmenite is a mineral which occurs naturally. During the process of separation of ilmenite from beach-sand containing heavy minerals, there is a possibility that a small percentage of monazite gets retained with the ilmenite, the main product being produced on a commercial scale. It may also not be technically and economically viable to produce ilmenite completely (100%) free of such monazite impurity.

As per the Atomic Energy Regulatory Board directive No. 01/2010 issued in respect of "Exclusion Exemption and Clearance of Radionuclide in Solid Materials" under Rule 3,5 and 6 of Radiation Protection Rules 2000, Monazite content in ilmenite is limited to a maximum of 0.25%. Further, monazite is a naturally occurring heavy mineral present in beach sand. Processing of Monazite yields thorium as one of the products. Monazite and thorium in the form of metal, alloy, chemical compound or concentrate or any substance is considered as a "prescribed substance" under schedule of prescribed substances under the Atomic Energy Act, 1962. Sections 14, 16 and 30 of the Atomic Energy Act, 1962 prohibit acquisition, production, possession, use, disposal, export or import of any of the prescribed substance except under a license issued by Government of India.

(e)&(f) Government has not received any official report or information in the matter of illegal mining and export of thorium and other heavy minerals from the coastal regions of Tamil Nadu and Kerala. However, in the recent past, certain press reports and other communications have been received in the matter. The official process in respect of grant of mining lease for any mineral and beach sand mineral in particular is as follows: applications for grant of mining leases for beach sand minerals are received from interested parties by the respective State Governments who forward them to Ministry of Mines, Government of India for their recommendations. The Ministry of Mines, Government of India seeks "No Objection Certificate" (NOC) from the Department of Atomic Energy if the mining lease application includes mining of atomic minerals such as ilmenite, rutile, zircon, leucoxene, garnet, silimanite and monazite. Upon the Department of Atomic Energy granting the NOC, the Ministry of Mines issues recommendations to the State Governments, who in turn grant or reject the mining lease to the applicants. The Directors, Mines and Geology of respective State Governments control the mining activities in each state and ensure the compliance with relevant laws by the mining lessees. Hence the responsibility of identifying illegal mining of any mineral in a State is with the State Government Authorities. Necessary regulatory inspections of beach sand mining facilities by Atomic Energy Regulatory Board are in place, and a decision has been taken to strengthen it further, including thorough involvement of Atomic Minerals Directorate for Exploration and Research (AMD). In respect of illegal exports of monazite and thorium, the Central Excise and Customs Department is the competent authority to check illegal exports of any material. Department of Atomic Energy has confirmed that with the installation of radiation detection equipment, now under manufacture by the Electronics Corporation of India Limited (ECIL) for installation at various sea-ports in the next year, the presence of unacceptable levels of monazite in beach sand mineral export consignments will be easily detected.

Annexure-I

LIST OF MINING LEASES PRODUCING MINERAL SAND/MONAZITE/ILMENITE/RUTILE

SL.N O.	NAME OF LESSEE	VILLAGE	DISTRICT	AREA (Hect.)	DATE OF GRANT	DATE OF EXECUTION	Name of Minerals
Kerala							
1	Indian Rare Earths Ltd.	Chavara & Neendakara	Kollam	67	21/10/1998	19/04/1999	Monazite, Ilmenite & Rutile
2	Indian Rare Earths Ltd.	Chavara, Bhagam & Thekkum	Kollam	102.77	15/03/2006	11/5/2006	Mineral sand
3	Indian Rare Earths Ltd.	Panmana, Alapad & Ayanivelikkulangara	Kollam	180	8/6/2007	7/6/2011	Mineral sand
4	KERALA MINERALS & METALS LTD.	Panmana, Chavara	Kollam	203.8	11-Dec-72	9-Jul-85	Mineral sand
Odisha							
1	Indian Rare Earths Ltd.	Matikhal	Ganjam	2464.05	N.A.	27/10/2005	Ilmenite
Tamil Nadu							
1	Indian Rare Earths Ltd.	keezhmidalam	Kanniyakumari	29.78	21/09/1977	15/10/1979	Monazite, Ilmenite & Rutile
2	Indian Rare Earths Ltd.	Manavalakurichi, Lekshimpura & Colachel	Kanniyakumari	141.23	12/8/1981	27/06/1984	Monazite, Ilmenite & Rutile
3	Indian Rare Earths Ltd.	Manavalakurichi	Kanniyakumari	7.06	1/11/1968	25/05/2001(Ren ewal)	Monazite, Ilmenite & Rutile
4	V. V. Minerals	Azhagappapuram	Kanniyakumari	2.22	21/01/2004	21/02/2004	Garnet, Ilmenite & Rutile
5	V. V. Minerals	Azhagappapuram	Kanniyakumari	3.08	21/01/2004	21/02/2004	Garnet, Ilmenite & Rutile
6	V. V. Minerals	kanniyakumari	Kanniyakumari	3.07	21/01/2004	21/02/2004	Garnet, Ilmenite & Rutile
7	V. V. Minerals	keezhmidalam	Kanniyakumari	2.42	31/01/2006	17/03/2008	Garnet, Ilmenite & Rutile
8	V. V. Minerals	Midalam	Kanniyakumari	0.7	31/01/2006	17/03/2008	Garnet, Ilmenite & Rutile
9	V. V. Minerals	Midalam	Kanniyakumari	3.63	10/3/2004	18/03/2004	Garnet, Ilmenite & Rutile
10	V. V. Minerals	Vaipar	Thoothukudi	4.18	18/04/2006	3/5/2006	Garnet, Ilmenite & Rutile
11	Beach Mineral Sand Company (India) Ltd.	Manappadu	Thoothukudi	5	1/8/2001	6/2/2002	Garnet, Ilmenite & Rutile
12	Indian Garnet Sands Co. (P) Ltd.	Padukkpathu	Thoothukudi	16.93	N.A.	7/2/1994	Garnet, Ilmenite & Rutile
13	Industrial Minerals India (P) Ltd.	Vembar & Periyasampuram	Thoothukudi	36.66	27/09/2011	4/10/2011	Garnet, Ilmenite & Rutile
14	V. V. MINERALS	CHETTIKULAM	Tirunelveli	2.19	20-Oct-05	15-Jul-06	Garnet, Ilmenite & Rutile
15	V. V. MINERALS	CHETTIKULAM	Tirunelveli	4	19-Jan-10	10-May-10	Garnet, Ilmenite & Rutile
16	V. V. MINERALS	IRUKKANTHURAI	Tirunelveli	9	10-May-95	22-Jun-95	Garnet, Ilmenite & Rutile
17	V. V. MINERALS	IRUKKANTHURAI (EAST)	Tirunelveli	5	17-Mar-04	11-Apr-05	Garnet, Ilmenite & Rutile
18	V. V. MINERALS	IRUKKANTHURAI (WEST)	Tirunelveli	5	5-Jun-02	11-Apr-05	Garnet, Ilmenite & Rutile
19	V. V. MINERALS	K. PUDUR	Tirunelveli	0.82	5-Jun-90	30-Jul-90	Garnet, Ilmenite & Rutile

20	M. RAMESH, TUTICORIN	KARAICHITHU PUDUR	Tirunelveli	1.13	22-Jan-90	17-Jul-90	Garnet, Ilmenite & Rutile
21	V. V. MINERALS	KARAICHITHU PUDUR	Tirunelveli	4.77	20-Oct-05	13-Jul-06	Garnet, Ilmenite & Rutile
22	V. V. MINERALS	KARAICHITHU PUDUR	Tirunelveli	3.01	14-Jan-03	13-Jul-06	Garnet, Ilmenite & Rutile
23	V. V. MINERALS	KARAICHITHU PUDUR	Tirunelveli	2.47	15-Jun-02	9-Apr-05	Garnet, Ilmenite & Rutile
24	V. V. MINERALS	KARAICHITHU PUDUR	Tirunelveli	3.47	20-Oct-05	12-Dec-05	Garnet, Ilmenite & Rutile
25	V. V. MINERALS	KARAICHITHU PUDUR	Tirunelveli	2.08	19-Jan-10	4-May-10	Garnet, Ilmenite & Rutile
26	K. THANGARAJ	KARAICHITHU PUDUR	Tirunelveli	1.91	24-May-01	11-Oct-01	Garnet, Ilmenite & Rutile
27	V. V. MINERALS	KARAICHITHU PUDUR	Tirunelveli	2.49	5-May-95	7-Jun-95	Garnet, Ilmenite & Rutile
28	V. V. MINERALS	KARAICHITHU PUDUR	Tirunelveli	2.29	5-Jun-02	12-Apr-05	Garnet, Ilmenite & Rutile
29	V. V. MINERALS	KARAICHITHU PUDUR	Tirunelveli	7.87	5-May-95	7-Jun-95	Garnet, Ilmenite & Rutile
30	V. V. MINERALS	KARAICHITHU PUDUR	Tirunelveli	36.34	19-Jul-94	12-Nov-94	Garnet, Ilmenite & Rutile
31	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	10.11	12-Dec-96	3-Apr-97	Garnet, Ilmenite & Rutile
32	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	2.38	9-Jul-01	23-Oct-01	Garnet, Ilmenite & Rutile
33	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	4.43	9-Jul-01	23-Oct-01	Garnet, Ilmenite & Rutile
34	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	2.53	30-Sep-97	22-Oct-97	Garnet, Ilmenite & Rutile
35	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	4.85	9-Jul-01	22-Oct-01	Garnet, Ilmenite & Rutile
36	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	1.01	17-Jul-01	23-Oct-01	Garnet, Ilmenite & Rutile
37	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	1.17	9-Jul-01	23-Oct-01	Garnet, Ilmenite & Rutile
38	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	0.88	9-Jul-01	23-Oct-01	Garnet, Ilmenite & Rutile
39	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	3.37	25-Sep-97	22-Oct-97	Garnet, Ilmenite & Rutile
40	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	0.36	9-Jul-01	22-Oct-01	Garnet, Ilmenite & Rutile
41	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	0.89	9-Jul-01	23-Oct-01	Garnet, Ilmenite & Rutile
42	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	0.51	9-Jul-01	23-Oct-01	Garnet, Ilmenite & Rutile
43	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	1.6	9-Jul-01	23-Oct-01	Garnet, Ilmenite & Rutile
44	TRANSWORLD GARNET PVT. LTD., CHENNAI	KARAICHITHU UVARI	Tirunelveli	1.03	9-Jul-01	23-Oct-01	Garnet, Ilmenite & Rutile

45	V. V. MINERALS	KUNDANKULAM	Tirunelveli	2.47	20-Oct-05	12-Dec-05	Garnet, Ilmenite & Rutile
46	BEACH MINERALS SAND CO.	KUTTAM	Tirunelveli	4.64	12-Jul-95	17-Mar-95	Garnet, Ilmenite & Rutile
47	BEACH MINERALS SAND CO.	KUTTAM	Tirunelveli	2.87	16-Feb-01	12-Sep-01	Garnet, Ilmenite & Rutile
48	BEACH MINERALS SAND CO.	KUTTAM	Tirunelveli	4.43	1-Mar-04	5-Aug-04	Garnet, Ilmenite & Rutile
49	BEACH MINERALS SAND CO.	KUTTAM	Tirunelveli	4.76	31-Jan-01	11-Sep-01	Garnet, Ilmenite & Rutile
50	BEACH MINERALS SAND CO.	KUTTAM	Tirunelveli	4.9	31-Jan-01	11-Sep-01	Garnet, Ilmenite & Rutile
51	BEACH MINERALS SAND CO.	KUTTAM	Tirunelveli	2.6	31-Jan-01	12-Sep-01	Garnet, Ilmenite & Rutile
52	BEACH MINERALS SAND CO.	KUTTAM	Tirunelveli	4.73	18-Jan-01	19-Feb-01	Garnet, Ilmenite & Rutile
53	BEACH MINERALS SAND CO.	KUTTAM	Tirunelveli	4.15	18-Jan-01	12-Sep-01	Garnet, Ilmenite & Rutile
54	TAMIL NADU MINERALS LTD.	KUTTAM	Tirunelveli	4.36	10-Jul-97	20-Jul-98	Garnet, Ilmenite & Rutile
55	BEACH MINERALS SAND CO.	KUTTAM	Tirunelveli	2.47	18-Jan-01	19-Feb-01	Garnet, Ilmenite & Rutile
56	V. V. MINERALS	LIVINJIPURAM	Tirunelveli	0.96	15-Sep-04	11-Apr-05	Garnet, Ilmenite & Rutile
57	V. V. MINERALS	LIVINJIPURAM	Tirunelveli	4.1	17-Mar-04	11-Apr-05	Garnet, Ilmenite & Rutile
58	V. V. MINERALS	LIVINJIPURAM	Tirunelveli	3.79	23-Aug-04	11-Apr-05	Garnet, Ilmenite & Rutile
59	V. V. MINERALS	LIVINJIPURAM	Tirunelveli	3.36	23-Aug-04	11-Apr-05	Garnet, Ilmenite & Rutile
60	V. V. MINERALS	THIRUVAMBALAPURAM	Tirunelveli	3.38	9-Mar-01	17-Aug-01	Garnet, Ilmenite & Rutile
61	V. V. MINERALS	THIRUVAMBALAPURAM	Tirunelveli	2.03	18-Apr-04	23-May-06	Garnet, Ilmenite & Rutile
62	V. V. MINERALS	THIRUVAMBALAPURAM	Tirunelveli	4.06	18-Apr-06	25-May-06	Garnet, Ilmenite & Rutile
63	V. V. MINERALS	VIJAYAPATHI	Tirunelveli	4.8	9-Mar-01	17-Aug-01	Garnet, Ilmenite & Rutile
64	V. V. MINERALS	VIJAYAPATHI	Tirunelveli	4.51	9-Mar-01	17-Aug-01	Garnet, Ilmenite & Rutile
65	V. V. MINERALS	VIJAYAPATHI	Tirunelveli	5.03	6-Sep-00	28-Sep-00	Garnet, Ilmenite & Rutile
66	INDIAN RARE EARTHS LTD.	MANAVALAKURICHI	Kanyakumari	13.24	28-Oct-78	28-Jan-79	Monazite, Ilmenite & Rutile
67	INDIAN RARE EARTHS LTD.	CHAVARA	Kanyakumari	67	21-Oct-98	19-Apr-99	Monazite, Ilmenite & Rutile
68	V. V. MINERALS	Gopalapuram	Madurai	3.16	31-Jan-06	28-Feb-06	Garnet, Ilmenite & Rutile
69	V. V. Minerals	Muruganeri	Madurai	3.46	31-Jan-06	28-Feb-06	Garnet, Ilmenite & Rutile

India's Export of Rare-Earth Minerals for the year 2011-12

ITC HS	Item Description	Qty(KGS)
25085032	SILLIMANTE FINES (INCLDNG SILLIMANTE SAND)	8835484
25132030	NATURAL GARNET	428719479
25132090	OTHER NATURAL ABRASIVES	45891711
25309040	ORES & CNCRTS OF RARE ESRTHMTLS	24000
26122000	THORIUM ORES & CONCENTRATES (Source IREL)	4000
26140010	ILMENITE UN PROCESSED	824185630
	ILMENITE,UPGRADED(BENEFICIATED ILMENITE	
26140020	INCLUDING ILMENITE GROUND)	55337211
26140031	RARE EARTH OXIDES INCLUDING RUTILE SAND	6695931
26140039	OTHER RUTILE	4012
26140090	OTHER TITANIUM ORES & CONCENTRATES	26757940
26151000	ZIRCONIUM ORES & CONCENTRATES	43533383
26159010	VANADIUM ORES & CONCENTRATES	1250000
26159020	NIObIUM OR TANTALUM ORES & CONCENTRARES	522657

