

I/288831/2025

**GOVERNMENT OF TELANGANA  
FOREST DEPARTMENT**

From  
**Sri. R.M.Dobriyal, IFS,**  
Principal Chief Conservator of Forests  
& Head of Forest Force  
Telangana State, "Aranya Bhavan",  
Saifabad, **Hyderabad - 500004.**

To  
**The Principal Secretary to Government,**  
EFS&T Department,  
Telangana State,  
Saifabad, **Hyderabad - 500004.**

**Ref.No. FC4/FC30/17/2023 Dated:11/03/2025**

**Sir,**

**Sub:** TGFD – V(SES)A, 1980 – Diversion of 2.81 Ha of Forest Land for construction of testing facility in Gajulpet RF of Mahabubnagar Forest Division in favour of M/s HBL Power Systems Ltd., Hyderabad –EDS raised by State Government-  
**Submission of replies-** Regarding.

**Ref:** 1. Proposal no.FP/TG/IND/32903/2018 submitted online in parivesh 1.0  
2. Govt Memo No.1360/For.I(1)/2019 dt.01.06.2024.  
3. PCCF Rc.No.FC4/FC30/17/2023 Dt. 08.06.2024.  
4. DFO, Mahabubnagar Rc.No. 340/2017/S4 Dt. 10.02.2025.

Kind attention is invited to the references cited.

It is submitted that in the G.M. 2nd cited, the Government has informed that a committee is constituted with members of TGPCB, EPTRI, DRDO, DFO Mahabubnagar and the Addl collector, Mahabubnagar to visit the proposed area for giving remarks on the following points with a joint inspection report:

1. Why Forest land is indispensable for the testing field.
2. What are the details/ nature of testing & impact on forest Eco-system
3. The firm is said to have purchased 144 Ac. Land (in the Pvt. Lands) in the Vicinity
4. Precautions and other approvals required for the unit if agreed to be establish in the forest area.

Accordingly, vide reference 4<sup>th</sup> cited, the DFO, Mahabubnagar has informed that the committee have inspected the proposed site and after thorough verification and made some observations and incorporated in the Joint inspection report. (copy enclosed).

In view of the above, as instructed by the Government, the District Forest Officer, Mahabubnagar has submitted the joint inspection report of the committee and it is requested to forward this report and EDS reply submitted to the Government

I/288831/2025

on 25.04.2024 to the IRO, Sub office, Hyderabad.

Yours faithfully,

Encl: As above.

Prl. Chief Conservator of Forests.  
(Head of Forest Force)

**Copy to**

The Conservator of Forests, Jogulamba, Mahabubnagar and the District Forest Officer, Mahabubnagar.

The Dy. General Manager, M/s HBL Power Systems Ltd., D.No.8-2-616, Plot No.4, Behind Minerva Grand Hotel, Road No.11, Banjara Hills, Hyderabad-500 034.

PCCF & HoFF  
T.S. PFSHI  
11 FEB 2025

GOVERNMENT OF TELANGANA  
FOREST DEPARTMENT

From  
Sri S. Satyanarayana, Dy.CF.,  
District Forest Officer,  
Mahabubnagar

To  
The Prl. Chief Conservator of  
Forests  
Head of Forest Force  
Telangana State  
Hyderabad

**Rc. No. 340/2017/S4, Dated : 10.02.2025.**

Sir

Sub: F(C)Act 1980- Diversion of 2.81 Ha of Forest Land in Gajulapet Reserve Forest of Mahabubnagar Division for Construction of Testing Facility in Gajulapet RF of Mahabubnagar Forest Division in favour of M/s. HBL Power Systems Ltd., Hyderabad - EDS raised by State government for submission of joint committee report - submitted- Regarding.

- Ref: 1. Govt. Memo No.1360/For.I(1)/2019 dt.01.06.2024  
2. PCCF (HoFF) TG Hyd. Rc. No. FC4/FC30/17/2023, dt.08.06.2024  
3. Joint Committee inspection Report.

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In compliance to the instructions issued in the references 2<sup>nd</sup> cited above it is submitted that the, the undersigned as a member of the Joint committee constituted through reference 1<sup>st</sup> cited, the undersigned has presented the details of files to the Committee and the Joint committee have inspected the site and after thorough verification, the committee has made observations. The Joint committee report is submitted herewith for kind perusal.

This is submitted for favour of kind information and necessary action.

Encl: As above

Yours faithfully,  
Sd/-  
District Forest Officer  
Mahabubnagar

Copy to M/s HBL Power Systems Limited, H.No.8-2-601, Road No.10, Banjara Hills, Hyderabad-500034.

//t.c.b.o.//

Technical Officer



**Report of the committee constituted to examine the diversion of the 2.81Ha of forest land in Mahabubnagar division in favour of M/s.HBL Power Systems Limited for the construction of testing facility**

The Principal Secretary EFS&T, Govt. of Telangana through Memo No.1360/For.I (1)/2019, dated: 01.06.2024 constituted a committee with the following officials to visit the proposed site of forest land adjacent to the unit and provide certain remarks after inspection.

1. Additional Collector, Mahabubnagar
2. DFO, Mahabubnagar
3. Dr. D. Prasad, SES, TSPCB
4. Dr. N.Raveendhar, Tech consultant, EPTRI
5. Mr. Raisuddin, AQME, EPTRI
6. Sri. S.Rambabu, Scientist 'H'(outstanding), Nomination ARDE, DRDO
7. Dy. I.O., Mahabubnagar.

The scope of the work and remarks sought are as follows:

- Why forest land is indispensable for the testing field
- What are the details /nature of testing & impacts on forest ecosystem
- The firm is said to have purchased the 144 acres of land in the vicinity
- Precaution and other approvals required for the unit if agreed to be established in the forest area

The committee perused the following documents:

1. TGPCB CFO order dated 06.07.2024 which is valid up to 31.05.2029.
2. EIA Report for the proposed project
3. RoFR issued by the District Collector, Mahabubnagar compt. no.7738/2018 dated:10/09/2018
4. STEC Pamphlet No. 01 Quantity Distance Regulations For Military Explosives 2011 Issued by Storage & Transport of Explosives Committee Centre for Fire, Explosive & Environment Safety Brig S K Mazumdar Road, Delhi – 110054
5. The Tahsildhar, Moosapet Mandal Lr.No.B/2018, dated:26.07.2018 regarding submission of detailed report
6. The RDO, Mahabubnagar Lr.No.E/3755/2018, dated 10.08.2018 regarding submission of detailed report
7. The DFO, Mahabubnagar Rc.No.340/2017/S4, Dated 28.05.2018 sanction of RoFR Certificate to Collector & District Magistrate, Mahabubnagar
8. Forest Department, Govt. of Telangana Rc.No. 8620/2014/FCA2, dated 11-04-2018 regarding proposal of diversion of 2.81 Ha of Forest Land for construction of testing facility in Kolikonda RF, Gajulapet beat of Mahabubnagar Forest Division in favour of M/s.HBL Power Systems Ltd., Hyderabad.
9. The District Forest Officer, Mahabubnagar Rc.No.340/2017/S4, Dt. 01.05.2018 regarding proposal of diversion of 2.81 Ha of Forest Land for construction of testing facility in Kolikonda RF, Gajulapet beat of Mahabubnagar Forest Division in favour of M/s.HBL Power Systems Ltd., Hyderabad.
10. The Prl. Chief Conservator of Forests & (Head of Forest Force), Hyderabad Rc.No.8620/2017-FCA2, Dated 02.04.2019.
11. Proc No.A/849/2017, dated 20.05.2017 ROR Change of Patta issued by Tashsildhar, Moosapet,

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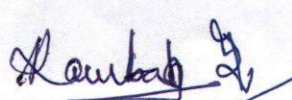
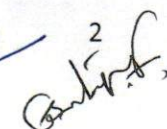


The committee team members consisting of Dr.D.Prasad, SES, TGPCB, Sanathnagar, Dr.N.Raveendhar, Consultant (Tech) EPTRI, Mr. Raisuddin, Air Quality Monitoring Expert, EPTRI and Mr. S. Satyanarayana, DFO, Mahabubnagar had a field visit to M/s HBL Power Systems Limited, Janampet (Village) Moosapet (Mandal), Mahabubnagar District along with Dy.GM of HBL Power System Limited on 03-08-2024. Sri S.Rambabu, scientist from DRDO joined virtually through Video call.

The observations based on the field visit, testing carried out and the documents examined and the inference drawn as per the scope are as follows:

#### I. Observations:

1. The project was established in Sy. No. 72 to 81 & 84 to 88, (NALA certificates issued by Revenue Department, Janampet Village, Moospeta Mandal, Mahabubnagar District, Telangana-509382. The total extent of the land is Ac. 144.
2. The plant is surrounded by Gajulapet Reserve Forest on North Side, Janampet-Laxampally Road on south side and Private Lands on East & West Sides. The National Highway is approximately 1.5 KM from the site. The nearest dwelling houses/habitation is Kanakapur Thanda towards Westside approx. 500 meters from the industry.
3. The company was issued with CFO of Telangana Pollution Control Board for assembly of electronic fuses – 50,000 Nos./month and assembly of grenades – 10,000 nos./month. The CFO is valid upto 31.05.2029.
4. It is understood from the representatives of the industry that,
  - a. All development activities require multiple levels of testing and iterations (static & amp; dynamic firing) at various stages of the projects to achieve/meet the desired performance criteria.
  - b. 40MM HEAP Grenades developed by M/s HBL has been qualified by MHA and production orders being placed.
  - c. To cater the requirements of MHA (User), HBL needs to establish the proof range/test facility at its manufacturing facility for LOT Acceptance Tests(LAT). The above testing is only for electronic fuses. The same is feasible, when a dedicated proof test facility is available at the manufacturing facility.
5. The no. of tests (LAT) that are to be conducted are 3 to 4 days per month. The no. of fuzes tested will be 32 per day and will take approx. 3 to 4 hours for testing.
6. The testing facility consists of the development of 3x3 mtr. concrete flooring, site should be protected by boundary wall, indication by siren before commencement of testing, and movement of fuzes through authorized persons and transport boxes.
7. To be a part of Atma Nirbhar Bharat and to complete the projects in a fast track manner, the developing agencies need to have their own proof range/test facilities at their Manufacturing / development centers.
8. **STEC criteria** requirements are as follows:
  - a. Storage area comprising mainly of explosives magazines and storehouses should be sited at a minimum distance of 275 mts from the process area & explosives testing area. The inter distance between the explosive buildings to be maintained considering the Traverse around the building.
  - b. The dwelling houses, places of assembly, hospitals, National Highways etc. should not be within 275 mts from any of the potential explosion site.



- c. Burning ground for disposal of bulk explosive / Burning pit for disposal of small arms ammunition by burning, subject to a minimum separation of 275 mts.
- d. To Public Traffic routes is 180 meters-NH-44 to Chakrapur & Laxmipally Road
- e. To have 275mtrs safety distance
  - From one process area to storage and testing area.
  - Dwelling houses, places of assembly, Hospitals and National Highways
9. The recommendations of the DFO through letter Rc.No.340/2017/S4, dt: 22.01.2018 are as follows:
  - The proposed area for diversion is 2.80 ha in which eucalyptus plantation was raised in the year 2013. The trees are enumerated and marked with serial number with red paint.
  - The total trees are 1371 numbers volume is 9.876 m<sup>3</sup>, besides eucalyptus trees there are some other varied miscellaneous species which are totally in number 312, volume are 2.905 m<sup>3</sup>.
  - SMC works like continuous contour trenches, mini percolation tanks have also been taken up in the said area. The continuous contour trenches, mini percolation tanks (4 nos.) in the year 2002 to 2003. The continuous contour trenches is about 254 m length and the volume is 367.283m<sup>3</sup>.
  - Gajulapeta RF is notified under Section 19 of the Hyderabad Forest Act as per the Champion and Seths Classification. This RF Falls under tropical dry deciduous Thorny Scrub Forest.
  - The forest type with a density of vegetation of 0.3
  - No unique species like flora and fauna of the subject area of the said RF.
  - No protection archaeology / Heritage / defence establishments and any monument located in and around the said area except eucalyptus plantation.
  - The impact of the HBL Power System and adjoining flora and fauna is insignificant.
  - The user agency has already identified an area of 7.45 acres of agricultural dry land situated in Sy.No.99/1, Janampet Village of Moosapet mandal in Mahabubnagar district of Telangana for compensatory afforestation area, which is suitable for raising a plantation and other forestry operations.
  - In view of the above reasons mentioned by the user agency are adjustable as it is the matter of National interest of defence and it is recommended with the by the FRO, Mahabubnagar with subject to the following conditions for diversion of forest land for testing facility of HBL Power Systems Limited.
  - RCC Pillars to be constructed to avoid further encroachment so as to stand firm within the allotted limit as per the specifications of the Forest Department at user agency cost.
  - The District Forest Officer, Mahabubnagar has also endorsed the same.
10. The Industry has purchased Non-Forest land of extent 2.83 Ha in Sy.No.99 in Janampet Village for Compensatory Afforestation (CA).
11. Form-II: Compt.No.7738/2018, dt: 10.09.2018 issued by the o/o the District Collector, Mahabubnagar regarding completion of Recognition of Forest Rights (RoFR).
12. PCCF Lr. Rc.No.8620/2017-FCA2, dt: 02.04.2019 addressing to the Spl. CS, EFS&T Dept., Govt. of Telangana communicating the details of the proposals, recommendations of the DFO, Conservator of Forests, information on the RoFR Act, information on CA lands with due recommendations in Part-IV for onward submission to Regional Officer, MoEF&CC, Chennai for according necessary approval for the project.
13. DFO, Mahabubnagar Lr.Rc.No.340/2017/S4, dt: 13.03.2024 addressed to Chief Conservator of Forests submitting that there is no alternate non-forest land

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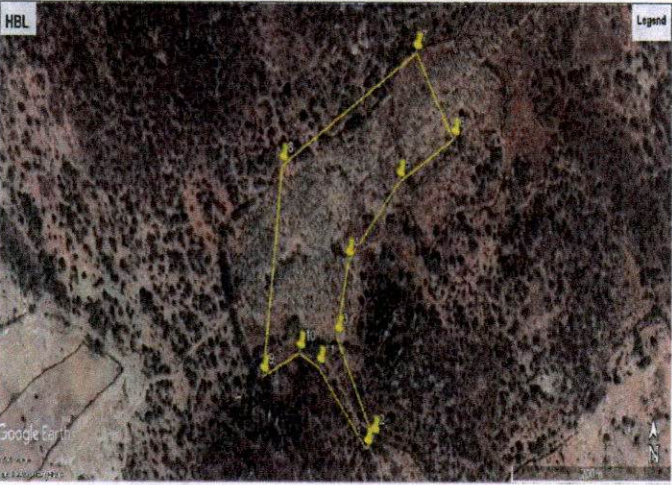
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available. The request of the user agency to an extent of 2.81 Ha. of forest area to be considered.

1. Why forest land is indispensable for the testing field?

M/s.HBL has requested an extent of 2.81 Ha. of forest area which is adjacent to their Ac 144 of land located in Sy.No.72 to 81 & 84-88 of Janampet (V), Moosapet (M), Mahabobnagar district, which is adjacent to RF Gajulapeta block. The latitudes and longitudes of the proposed forest land plotted on the google maps is as follows:

S.No.	Latitude	Longitude	
1.	16°38'23.50"N	77°57'41.98"E	
2.	16°38'23.78"N	77°57'42.26"E	
3.	16°38'26.38"N	77°57'40.72"E	
4.	16°38'28.28"N	77°57'41.15"E	
5.	16°38'30.30"N	77°57'43.20"E	
6.	16°38'31.38"N	77°57'45.40"E	
7.	16°38'33.50"N	77°57'43.81"E	
8.	16°38'30.66"N	77°57'38.41"E	
9.	16°38'25.33"N	77°57'37.69"E	
10.	16°38'25.94"N	77°57'39.17"E	
11.	16°38'25.58"N	77°57'40.00"E	

HBL has acquired 144 Ac of Land and constructed process buildings, storage magazines and other facilities as per below mentioned details

The following facilities/constructions are established as per the STEC guidelines.

- a. Ammunition Assembly building
- b. Storage Magazine for electronic fuses and Grenades
- c. Storage Magazine for detonators
- d. Storage Magazine for explosives
- e. Utility buildings -2Nos.
- f. Change room buildings
- g. Security office

It may be observed that the utilized area is much less due to restriction on distance criteria as per the STEC guidelines wherein each test facility has to be constructed duly maintaining a safety distance of 275 mtrs., from other explosive storage, manufacturing facilities and habitants.

As per the information recorded in the DFO Lr dated: 13.03.2024, M/s.HBL Power Systems has verified 8 land parcels within the land acquired as well as other private lands for the project by the user agency and none of them are meeting the STEC guidelines.

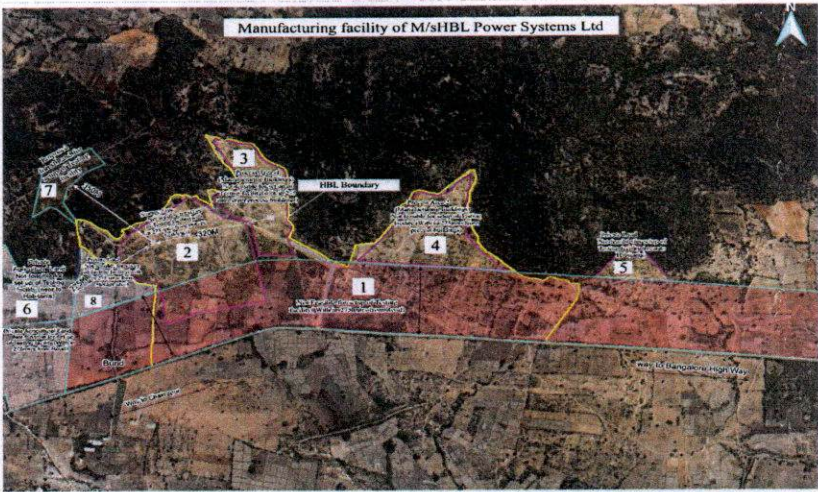
The DGPS map of the HBL facility with the proposed site for diversion of the land as provided by M/s.HBL is as follows:

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Following points to be noted from the map w.r.t. above safety distances guidelines:

S. No.	Area on the Map for proposed test facility	Feasibility of Test Facility	Remarks/Notes
1	Area-1	Not Feasible	Within 275Mtrs from the Road
2	Area-2	Not Feasible	Within 275Mtrs from the Storage Area
3	Area-3	Not Feasible	Within 275Mtrs from Manufacturing
4	Area-4	Not Feasible	Within 275Mtrs from Manufacturing
5	Area-5 (Adj. Private Lands)	Not Feasible	Near to Habitants
6	Area-6 (Adj. Private Lands)	Not Feasible	Near to Habitants
7	Area-7 (Proposed Forest Land	Feasible	Meets all requirements
8	Area-8 (Adj. Private Lands)	Not Feasible	Within 275Mtrs from the Storage Area

To cater the requirements of MHA (User), HBL needs to establish the proof range/test facility at its manufacturing facility. The above testing is only feasible, when a dedicated proof test facility is available at the manufacturing facility. The forest area identified is at a distance of 370 mts., from the nearest magazine storage area and it is surrounded by hillocks in North West and North East directions.

Hence, as there is no alternate non-forest land available in the vicinity and being a National Project under Atma Nirbhar Bharat, the diversion of 2.80 Ha., of forest land adjacent to the M/s.HBL Janampet site, being a suitable location to accomplish the testing facility was recommended by the authorities.

2. What are the details / nature of testing & impacts on forest ecosystem

a) Details / nature of testing:

M/s.HBL intends to manufacture various types of Electronic Fuzes for Artillery Shells, Mortars, Rockets, Mines, Grenades and similar munitions of war. Electronic Fuze consists of an explosive train comprising of detonators with/without booster pellet based on the application.

1. The Proposed facility is intended for testing of firing train up to lead charge. The quantity of explosive used for testing is only in “milligrams (mg) level in each fuze” and Type of explosive used are Lead Azide, Lead Styphanate and HMX type.
2. It was informed that, as the quantity of Explosives in the Fuze is less than one gram.
3. The no. of tests that are to be conducted are 3 to 4 days per month. The no. of fuzes tested will be 32 per day and will take approx. 3 to 4 hours for testing.
4. The testing facility consists of the development of 3x3 mtr. concrete flooring, site should be protected by boundary wall, indication by siren before commencement of testing, and movement of fuzes through authorized persons and transport boxes.

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**b) Impacts on forest eco system:**

EPTRI carried out a detailed study (Annex-1) on Ground Vibrations and Noise generated in testing of Electronic Fuzes. The gist is as follows:

**i. Details of Electronic Fuzes tested:**

Electronic Fuzes pertaining to the following applications have been evaluated for Ground Vibrations and Noise levels.

- 1) Electronic Fuzes for Artillery Gun Systems
- 2) Electronic Fuzes for Recoilless Gun (Shoulder Mounted Gun)
- 3) Electronic Fuzes for 40MM Grenades
- 4) Electronic Fuzes for Rocket Systems
- 5) Electronic Fuzes for Drone Drop/Air Drop Munitions
- 6) Electronic Fuzes for Naval Gun Systems
- 7) Electronic Fuzes for Hand Grenades.

**ii. Experimental test carried out & results:**

3 Nos. NOMIS Make Mini Super graphs (20602, 11875, 11876) and 2 Nos. Lutron Sound level meters (SLM 1, SLM 2) were used. The test firing was conducted on 2<sup>nd</sup> November 2024 in the Proposed Test Facility.

*The limitation of the study is with regards to absence of concrete surface.*

**iii. Method of testing**

Total 7 trials were carried out, with all the instruments kept in a straight line as below.

**iv. Summary of results:**

- a) **Noise:** The maximum noise level recorded during testing was 48.9 dB(A) at a distance of 110 meter (forest boundary to the testing source). When compared to the maximum ambient noise levels recorded in the forest, which fluctuate between 38.1 dB and 69.5 dB.
- b) **Vibrations:** All generated vibrations (only one Fuze out of seven Fuzes has generated 0.381mm/sec at 1.0 mtr. distance from source of blasting, as against the stipulated value of 5.0 mm/s) are well within the safe limits established for sensitive/historical structures, as outlined in the DGMS Technical Circular No. 7 of 1997 of Mines Act 1952. The intensity of these vibrations diminishes with distance, reaching negligible levels since the forest boundary is 110 mtrs. away from the source of test bench. Ground vibration limits in India are regulated by the Director General of Mines Safety, as outlined in Circular Number 7 of 1997.

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Further, as noted from the DFO, Mahabubnagar report and EIA, No unique species like flora and fauna of the subject area of the said RF and no protection archaeology / Heritage / defence establishments and any monument located in and around the said area except eucalyptus plantation. The impact of the M/s.HBL Power System and adjoining flora and fauna is insignificant.

The noise and vibration test results as carried out by EPTRI indicate minimal or no impact due to the tests. Also, as noted from the Environmental Impact Assessment (EIA) prepared by M/s.Pridhv Envirotech (P) Limited, an accredited agency to study the environmental impacts along with Uttam Blastech (P) Limited to study the levels of ground vibrations and noise, the proposed test blasting indicate minimal or no affect.

**3. The firm is said to have purchased the 144 acres of land in the vicinity**

The firm is established in 144 ac of land and the total area of the land as per the records are detailed below:

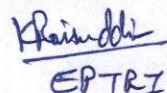
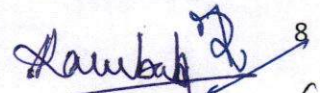
S.No.	Regd Sale Deed No.	Date	Sy. No.	Extent	
1	4183/2010	05-08-2010	88/a	2	15
2	4184/2010	05-08-2010	87/a	2	26
3	4185/2010	05-08-2010	88/a	2	15
4	6012/2010	27-10-2010	88	3	20
			87/a	2	26
			87/e	2	26
5	1539/2011	29-03-2011	79	0	11
			79	0	11
			78/aa	0	38
			78/a	2	31
			78/e	3	30
			78/aa	3	29
			79	16	14
			80	0	31
			81	3	25
			72	3	28
			73	7	31
			75	5	6
6	1946/2011	21-04-2011	85	2	0

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S.No.	Regd Sale Deed No.	Date	Sy. No.	Extent	
7	2147/2011	29-04-2011	85	0	30
			86	1	29
8	2903/2011	10-06-2011	85	2	0
9	6586/2011	27-12-2011	85	0	31
			86	1	29
			85	2	0
10	6587/2011	27-12-2011	85	2	31
			86	1	29
11	6633/2011	29-12-2011	87	2	27
12	2360/2013	12-03-2013	85/a	4	9
			85	1	15
			86/aa	2	38
13	3300/2014	12-06-2014	86/a1	2	0
14	6417/2016	14-06-2016	85/u	0	31
			86/e/1	1	29
15	8196/2016	04-08-2016	75/e/2	2	24
			76/a/2	0	23
16	8197/2016	04-08-2016	75/e/1	2	23
			76/a/1	0	23
17	13124/2016	27-12-2016	86/2	2	0
18	13126/2016	31-12-2016	77/a/1	2	0
19	1962/2017	22.03.2017	74/ru	0	11
			74/u	0	11
20	1963/2017	22.03.2017	74/uu	0	11
21	1964/2017	22.03.2017	74/aa	0	11
22	9083/2017	16.10.2017	77/2	1	23
23	11112/2017	12-06-2017	76/A/A	0	26
24	11113/2017	12-06-2017	76/A/AA	0	25
25	11243/2017	12-06-2017	77/2	1	23
26	F/5614/2018	13-09-2021	72, 74, 77, 80, 81, 84 & 88	32	7
				144	22



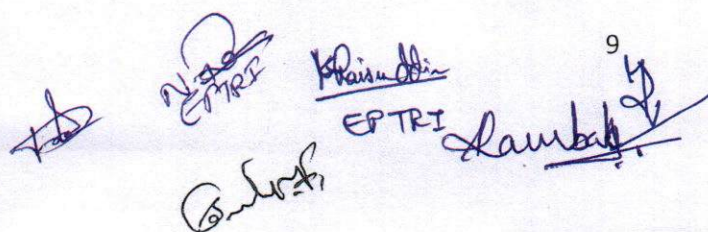






The Industry has purchased Non-Forest land of extent 2.83 Ha in Sy.No.99 in Janampet Village for Compensatory Afforestation (CA).

**4. Precaution and other approvals required for the unit if agreed to be established in the forest area**

- ❖ RCC Pillars to be constructed to avoid further encroachment, so as to stand firm within the allotted limit as per the specifications of the Forest Department at user agency cost.
- ❖ A suitable boundary wall, 10 feet in height, should be constructed for the entire test site.
- ❖ Soil testing surrounding the test area for Lead and other chemicals used in test have to be carried out at least once in a year.
- ❖ Continuously monitor noise levels by installing realtime noise monitoring instrument, periodical air quality and vibrations around the test site, to ensure all metrics stay within safe limits and to alert staff to any abnormal activity.
- ❖ Only one Fuze should be fired at a time to reduce risk.
- ❖ Firing should be avoided on cloudy and rainy days, as weather conditions can impact safety and blast control.
- ❖ Firing should also be avoided during early morning and evening hours when birds are actively seeking water and food, to minimize impact on wildlife.
- ❖ Ensure all personnel handling explosives wear appropriate PPE, including blast helmets, ear protection, gloves, and flame-resistant clothing to minimize injury.
- ❖ Restrict access to the test site, allowing only authorized personnel, and mark restricted areas to prevent unauthorized entry.
- ❖ Establish a clear communication protocol, using radios or a public address system, to coordinate the team and maintain awareness of the test schedule and potential hazards.
- ❖ Develop and maintain an emergency response plan, including first aid kits and firefighting equipment, with trained personnel available to respond to accidents.
- ❖ Install a continuous noise monitoring system to ensure the compliance of the standards.
- ❖ Install visual and audible warning systems, such as sirens or flashing lights, to alert surrounding areas before any detonation, and inform nearby residents or workers in adjacent areas of scheduled tests.
- ❖ Train all personnel involved in testing on explosive safety procedures, emergency protocols, and hazard identification to improve response and minimize risk.
- ❖ Conduct regular inspections and maintenance of all equipment, storage facilities, and the testing area to ensure compliance with safety standards and identify any potential hazards.


  
 EPTRI



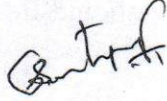
The remarks for the four points are submitted as per the records made available and the site visit.

Committee members:

1. Additional Collector, Mahabubnagar



2. DFO, Mahabubnagar

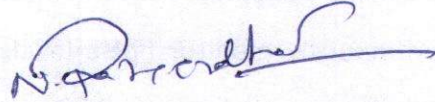


Additional Collector  
Mahabubnagar

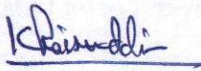
3. Dr. D. Prasad, SES, TSPCB



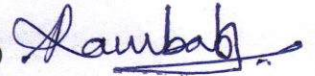
4. Dr. N.Raveendhar, Tech consultant, EPTRI



5. Mr. Raisuddin, AQME, EPTRI



6. Sri. S.Rambabu, Scientist 'H'(outstanding), Nomination ARDE, DRDO







\*\*\* END \*\*\*



Site inspection photos:

 <p>Latitude: 16.631683 Longitude: 77.973687 Accuracy: 1400.0 m Time: 03-08-2024 12:13</p>	 <p>Latitude: 16.632258 Longitude: 77.989746 Accuracy: 2900.0 m Time: 03-08-2024 12:16</p>
HBL power systems company discuss with committee members	During field visit Display of products Fuzes, MMG by HBL power systems
 <p>03.08.2024 12:51:51 16°38'26"N 77°57'41"E Gajulapet Telangana Altitude:365.4m Speed:0.7km/h</p>	 <p>03.08.2024 12:51:44 16°38'26"N 77°57'41"E Gajulapet Telangana Altitude:365.0m Speed:0.2km/h</p>
Proposed forest land	Proposed forest land
	
Rooms for product preparation	Visit to MF Building



I/224530/2024

**GOVERNMENT OF TELANGANA  
FOREST DEPARTMENT**

<p>From <b>Sri. R.M.Dobriyal, IFS,</b> Principal Chief Conservator of Forests &amp; Head of Forest Force Telangana State, "Aranya Bhavan", Saifabad, <b>Hyderabad - 500004.</b></p>	<p>To <b>The Principal Secretary to Government,</b> EFS &amp; T Department, Telangana State, Saifabad, <b>Hyderabad - 500004.</b></p>
---	---

**Ref.No. FC4/FC30/17/2023 Dated:25/04/2024**

**Madam,**

**Sub:**TSFD - F(C) Act, 1980 - Diversion of 2.81 Ha of Forest Land for construction of testing facility in Gajulpet RF of Mahabubnagar Forest Division in favour of M/s HBL Power Systems Ltd., Hyderabad -EDS raised by IRO,Hyderabad- **Reply furnished-** Reg.

**Ref:**

1. Proposal nos FP/TG/IND/32903/2018 submitted through online on Ministry's website (www.forestclearance.nic.in).
2. PCCF, Rc.No. 8620/2017/FCA2, dt. 11-04-2018.
3. CF, Mahabubnagar Lr.No.54/2018/M4, dt.30.10.2018.
4. DFO, Mahabubnagar Lr.No.340/2017/S4, dt.26.01.2019 addressed to the PCCF(HoFF), Hyderabad.
5. PCCF's, Rc.No. 8620/2017/FCA2, dt. 07-02-2019.
6. DFO, Mahabubnagar Lr.No.340/2017/S4, dt.23.02.2019 addressed to the PCCF(HoFF), Hyderabad.
7. PCCF's, Rc.No. 8620/2017/FCA2, dt. 02-04-2019.
8. Govt Memo No.1360/For.I(1)/2019, EFS&T(For.I) Dept., dt. 27-01-2020.
9. PCCF's, Rc.No. 8620/2017/FCA2, dt. 19-02-2020.
- 10.APCCF/CF(FAC), Mahabubnagar Rc.No.54/2018/M4, Dt:20-11-2020.
- 11.PCCF's, Rc.No.8620/2017/FCA2, dt.16-12-2020.
- 12.Govt Memo No.1360/For.I(1)/2019, EFS&T(For.I) Dept., dt. 28-08-2021.
- 13.PCCF's, Rc.No.8620/2017/FCA2, dt.02.11.2021.
- 14.HBL Power System Ltd Rc.No.HBL/AMN/PCS/FL/2022/01m, dt.07.02.2023.
- 15.PCCF Rc.No.FC4/FC30/17/2023, dt.04.03.2023
- 16.Govt Memo No.1360/For.I(1)/2019, EFS&T(For.I) Dept., dt. 11.05.2023.
- 17.Gol, MoEF&CC, Hyderabad F.No.4-TSB340/2023-HYD/590 dt.27.07.2023.
- 18.HBL, Power system Ltd, Ref,No.HBL/PCCF(Hoff)/Sub office of RO, Chennai/Testing Facility/JPT/2023-24 dt 27.07.2023.
- 19.PCCF Rc.No.FC4/FC30/17/2023, dt.04.03.2023
- 20.Gol, MoEF&CC, Sub office, Hyderabad F.No.4TSA113/2017-CHN/814 dt.08.11.2023.
- 21.PCCF Rc.No.FC4/FC30/17/2023 dt.10.11.2023
- 22.HBL, Power system Ltd, Ref,No.HBL/JPT/PCCF/2023-2024/01 dt.22.12.2023.
- 23.PCCF Rc.No.FC4/FC30/17/2023 dt.20.01.2024
- 24.Chief Conservator of Forests, Jogulamba circle Rc.No.54/2018/M4 dt.26.03.2024



I/224530/2024

Vide ref 20<sup>th</sup> cited, the GoI, MoEF&CC, Sub office, RO Chennai has informed that in the absence of any clear justification/grounds/examination of alternatives etc for location of the project on forest land, it falls into the category of non-site-specific and requested the state government to explore for availability of non-forest land for the said proposal. In case, there is no alternate non-forest land is found, proper justification along with a certificate indicating the non-availability of an alternate non-forest site and various alternatives examined may be submitted by the state government so as to enable further examination

Accordingly, vide ref 24<sup>th</sup> cited, the Chief Conservator of Forests, Jogulamba circle has furnished information as desired by the Government of India, MoEF & CC, Regional Office, Chennai, which are furnished as follows, with remarks:

1. The User Agency(UA) i.e., M/s HBL Power Systems Limited has proposed facility for manufacturing of indigenously designed & developed Electronic Fuzes and Grenades for supply to Indian Armed Forces and Ministry of Home Affairs, (CRPF, CAPF, BSF, NSG etc.) as part of Atmanirbhar Bharath.
2. The UA is working with DRDO & various defense organizations for development of Electronic Fuses and Allied products that are used by Indian Armed Forces and MHA and has developed 40MM HEAP Grenades in association with DRDO as Development cum production partner and has been qualified by Ministry of Home Affairs, Govt of India.
3. They have been issued ToT License by DRDO for manufacturing & supply of Grenades with Electronic fuzes to Indian Armed Forces and MHA and obtained approvals from PESO, Nagpur for construction of manufacturing facilities. The facilities have to be constructed in accordance with explosive rules and STEC guidelines.
4. Further the User Agency has submitted that the proposed product is for defense applications and it has to be qualified very stringently according to the guidelines provided by DRDO and other end users (Defence R&D Organization).
5. The UA has informed that each lot of Electronic fuses, Grenades has to be qualified by Static & Dynamic Firing before dispatch. For carrying out these tests industry has to establish the requisite test facilities & proof ranges. These test facilities have to be constructed as per the guidelines of explosive rules and STEC. According to which the test facility has to be constructed maintaining a safety distance of 275 meters from other explosive storage & manufacturing facilities, habitants.
6. M/s HBL Power Systems Limited has acquired a land to an extent of 144.00



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Acres in survey numbers 72 to 81 and 84 to 88 of Janampet village, Moosapet Mandal, Mahabubnagar District which is adjacent to RF Gajulpet Block. The User Agency has demarcated and started construction of various building/units such as manufacturing and storage facilities etc as per the explosive rules and STEC guidelines.

7. After adjusting the area for manufacturing and storage facilities as per the guidelines, it is found that it is not feasible to create testing facility within the area acquired by the User Agency.
8. The UA has verified and explore eight hand parcels within the land acquired as well as other private lands for the project by the User Agency and furnished detailed justification report in the matter. The details are as under:

Sl.No	Area on the Map for proposed test facility	Feasibility of Test Facility	Remarks/Notes
1	Area-1	Not Feasible	Within 275Mtrs from the Storage Area
2	Area-2	Not Feasible	Within 275Mtrs from the Storage Area
3	Area-3	Not Feasible	Within 275Mtrs from the Manufacturing Area
4	Area-4	Not Feasible	Within 275Mtrs from the Manufacturing Area
5	Area-5 (Adjacent Private Lands)	Not Feasible	Near to Habitants
6	Area-6 (Adjacent Private Lands)	Not Feasible	Near to Habitants
7	Area-7 (Proposed Forest Lands)	Feasible	Meet all requirements
8	Area-8 (Adjacent Private Lands)	Not Feasible	Within 275Mtrs from the Storage Area

9. After examining the end use of the product, qualification requirements & statutory guidelines for set up of testing facility it is evident that after accommodating the area for manufacturing and storage facilities as per the guidelines, M/s HBL Power Systems Limited/UA does not find any adjacent private land suitable for setup of Testing Facility/Proof Ranges and the only feasible option and the alternate land available is the proposed forest area which will meet all the requirements for set up of testing facility/proof range.
10. Further, the DFO Mahabubnagar has reported that he has also personally inspected and examined the location of the project area and found that the reasons furnished by the User Agency are facts.
11. Considering the intended use of proposed product the request of M/s HBL Power Systems Limited for diversion of Forest land for establishment of testing facility/proof ranges, the DFO Mahabubnagar has recommended to



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consider the request of the User Agency for utilization of forest land for establishment of testing facility/proof range in compt no.361, Shakrapur Reserve Forest, Gajulapet Beat & Section of Mahabubnagar range to an extent of 2.81 ha, as no alternate non-forest land available.

In view of the above, stating all the above facts, the Government is requested to forward the information to the IRO, Hyderabad for further consideration of this proposal.

Yours faithfully,

Encl: As above.

Prl. Chief Conservator of Forests.  
(Head of Forest Force)

**Copy to**

The Chief Conservator of Forests/Conservator of Forests, Jogulamba and the District Forest Officer, Mahabubnagar.

The Dy. General Manager, M/s HBL Power Systems Ltd., D.No.8-2-616, Plot No.4, Behind Minerva Grand Hotel, Road No.11, Banjara Hills, Hyderabad-500 034



PCCF & HoFF  
T.S. PESHI

28 MAR 2024

GOVERNMENT OF TELANGANA  
FOREST DEPARTMENTC. N. B. M.  
PCCF (WL) / CFCA

From  
Smt. N.Kshitija, IFS.,  
Chief Conservator of Forests/  
Conservator of Forests,  
Jogulamba Circle,  
Mahabubnagar.

To  
The Prl. Chief Conservator of Forests,  
& Head of Forest Force,  
Telangana State,  
Aranya Bhavan, Saifabad,  
Hyderabad .

**Rc.No.54/2018/M4, Dt. 26/03/2024**

Sir,

Sub: TSFD - F (C) Act 1980- Diversion of 2.81 Ha of Forest Land in Shakapur  
- Reserve Forest of Mahabubnagar Division for Construction of Testing  
Facility in Shakrapur Reserve Forest, Gajulapet Beat & Section of  
Mahabubnagar Range and Forest Division in favour of M/s. HBL Power  
Systems Ltd., Hyderabad - EDS raised by IRO Hyderabad - Report  
submitted- Regarding.

- Ref: 1. M/s. HBL Power Systems Ltd., Hyd. Lr. No. HBL/FCA/Janampet/2017-  
18/01, Dt: 10.05.2017.  
2. Prl. CCF, TG, Hyderabad Rc.No.8620/2017/FCA2, Dt: 30.05.2017.  
3. DFO, MBNR Rc. No. 340/2017/S4, Dt: 22.01.2018.  
4. This office, Rc.No. 54/2018/M4, dt. 27.03.2018  
5. Prl. CCF, TG, Hyderabad Rc.No.8620/2017/FCA2, Dt: 11.04.2018.  
6. DFO, MBNR Rc. No. 340/2017/S4, Dt: 01.05.2018.  
7. DFO, MBNR Rc. No. 340/2017/S4, Dt: 24.09.2018.  
8. DFO, MBNR Rc. No. 340/2017/S4, Dt: 26.01.2019.  
9. Prl. CCF, TG, Hyderabad Rc.No.8620/2017/FCA2, Dt: 07.02.2019.  
10.G.M. No. 1360/For.I(i)/2019, dt. 27.01.2020 communicated by te Prl.  
CCF, TS, Hyderabad Rc.No.8620/2017/FCA2, Dated: 19.02.2020.  
11.M/s. HBL Power Systems Ltd., Hyderabad Lr. No. HBL/DFO  
MBNR/FCA/EIA/2020-21/01, Dt: 05.09.2020  
12.DFO, Mahabubnagar Rc. No. 340/2017/S4, Dt: 31.10.2020 &  
13.CCF/CF, Jogulamba Rc.No. 54/2018/M4,Date : 11.11.2020  
14.DFO, Mahabubnagar Rc. No. 340/2017/S4, Dt 16.11.2020  
15.Gol MoEF & CC Sub office, RO Chennai F.No. 4TSA113/2017- CHN/814,  
dated 08.11.2023  
16.Prl. CCF, TS, Hyderabad Rc.No.FC4/FC30/17/2023, Dated: 10.11.2023  
17.CCF/CF, Jogulamba Rc.No. 54/2018/M4,Date : 02.12.2023  
18.Prl. CCF, TS, Hyderabad Rc.No.FC4/FC30/17/2023, Dated: 20.01.2024  
19.M/s. HBL Power Systems Ltd., Hyderabad Lr. No. HBL/DFO-  
MBNR/FCA/EIA/2020-21/01, Dt: 10.02.2024



PROOF & HOFF  
12.03.24

20.DFO, Mahabubnagar Rc. No.340/2017/S4, dated 13.03.2024

\*\*\*

In compliance to the reference 16<sup>th</sup> & 18<sup>th</sup> cited above, it is submitted the District Forest Officer, Mahabubnagar vide reference 20<sup>th</sup> cited has submitted a report stating that the User Agency i.e., M/s HBL Power Systems Limited has submitted detailed justification report as desired by the GoI, MoEF & CC, Integrated regional Office, Hyderabad for setup of Testing Facility / Proof Ranges in Shakrapur Reserve Forest, Gajulapet Beat & Section of Mahabubnagar Range and Forest Division have been examined and following observations and recommendations are made:

- 1) The UA i.e., M/s HBL Power Systems Limited has proposed facility for manufacturing of indigenously designed & developed Electronic Fuzes and Grenades for supply to Indian Armed Forces and Ministry of Home Affairs, (CRPF, CAPF, BSF, NSG etc.) as part of Atmanirbhar Bharath. (The copy of the same is enclosed for kind perusal), Annexure - I (Page.No: 1 to 21)
- 2) The User Agency i.e.,M/s HBL Power Systems Limited is working with DRDO & various defense organizations for development of Electronic Fuses and Allied products that are used by Indian Armed Forces and MHA.(Copy enclosed for kind perusal), Annexure - II (Page.No: 23).
- 3) The User Agency i.e., M/s HBL Power Systems Limited has developed 40MM HEAP Grenades in association with DRDO as Development Cum production Partner and has been qualified by Ministry of Home Affairs, Govt. of India. (qualification copy enclosed ), Annexure - III (Page.No: 25).
- 4) The User Agency i.e.,M/s HBL Power Systems Limited has been issued ToT License by DRDO for manufacturing & Supply of Grenades with Electronic Fuzes to Indian Armed Forces and MHA. (Copy enclosed), Annexure IV(Page.No: 27 to 41).
- 5) The User Agency i.e.,M/s HBL Power Systems. Limited has obtained approvals from PESO, Nagpur for construction of manufacturing facilities. The facilities have to be constructed in accordance with Explosive Rules and STEC guidelines. (Copy enclosed), Annexure - V (Page.No: 43 to 57).
- 6) Further the User Agency has submitted that the proposed product is for Defense applications and it has to be qualified very stringently according to the guidelines provided by DRDO and other end users (Defence R&D Organization).
- 7) Further the User Agency submitted that, each lot of Electronic Fuses, Grenades has to be qualified by Static & Dynamic Firing before dispatch. For carrying out these tests industry has to establish the requisite test facilities & proof ranges. These test facilities have to be constructed as per the guidelines of explosive rules and STEC. According to which the test facility has to be constructed maintaining a safety distance of 275 Meters from other explosive storage & manufacturing facilities, habitants (Copy of STEC guidelines issued



by MoD, DRDO enclosed), Annexure - VI (Page.No: 59 to 139).

8) The User Agency i.e., M/s HBL Power Systems limited has acquired a land to an extent of 144.00 Acre\_s in survey numbers 72 to 81 and 84 to 88 of Janampet Village, Moosapet Mandal , Mahabubnagar District which is adjacent to RF Gajulapet Block. The User Agency has demarcated and started construction of various building/ units such as manufacturing and storage facilities etc as per the Explosive Rules and STEC guidelines.

9) After adjusting the area for manufacturing and Storage facilities as per the guidelines, it is found that it is not feasible to create testing facility within the area acquired by the User Agency.

10) Further the User Agency i.e., M/s HBL Power Systems has verified and explored eight land parcels within the land acquired as well as other private lands for the project by the User Agency and furnished detailed justification report in the matter. The details are as under:

**Annexure-VII (Page.No: 141 to 151).**

Sl. No	Area on the Map for proposed test facility	Feasibility of Test Facility	Remarks/Notes
1	Area-1	Not Feasible	Within 275Mtrs from the Storage Area
2	Area-2	Not Feasible	Within 275Mtrs from the Storage Area
3	Area-3	Not Feasible	Within 275Mtrs from the Manufacturing Area
4	Area-4	Not Feasible	Within 275Mtrs from the Manufacturing Area
5	Area-5 (Adjacent Private Lands)	Not Feasible	Near to Habitants
6	Area-6 (Adjacent Private Lands)	Not Feasible	Near to Habitants
7	Area-7 (Proposed Forest Land)	Feasible	Meets all requirements
8	Area-8 (Adjacent Private Lands)	Not Feasible	Within 275Mtrs from the Storage Area

11.After examining the end use of the product, qualification requirements & statutory guidelines for set up of testing facility it is evident that after accommodating the area for manufacturing and storage facilities as per the guidelines, M/s HBL Power Systems Limited/UA does not find any adjacent private land suitable for setup of Testing Facility/Proof Ranges.

12.As per the User Agency the only feasible option and the alternate land available is the proposed forest area which will meet all the requirements for set up of Testing Facility/Proof Range.



Further, the DFO Mahabubnagar has reported that he has also personally inspected and examined the location of the project area and found that the reasons furnished by the User Agency are facts.

Considering the intended use of proposed product the request of M/s HBL Power Systems Limited, H.No.8-2-601, Road No.10, Banjara Hills, Hyderabad-500034, for diversion of Forest Land for establishment of testing facility/Proof ranges the DFO Mahabubnagar has recommended to consider the request of the User Agency for utilization of forest land for establishment of testing facility/ proof range in compt No:361, Shakrapur Reserve Forest, Gajulapet Beat & Section of Mahabubnagar Range to an extent of 2.81 Ha, as no alternate non-forest land available. Copy of the report submitted by the District Forest Officer, Mahabubnagar along with enclosures are submitted herewith for favour of kind perusal.

In view of the above, and based on the recommendation of the District Forest Officer, Mahabunagar, the request of the User Agency for utilization of forest land for establishment of testing facility/ proof range in compt No:361, Shakrapur Reserve Forest, Gajulapet Beat & Section of Mahabubnagar Range and Forest Division to an extent of 2.81 Ha as proposed by the User Agency i.e., M/s HBL Power Systems Limited may be considered as per the rules in vogue

This is submitted for favour of kind information and necessary action.

Yours faithfully,

NAKIREKANTI KSHITIJ, CF(NK)-JOGULAMBA  
CIRCLE,MBNR, Conservator of Forests-  
Jogulamba Circle,Mahabubnagar

26/03/2024

Chief Conservator of Forests/  
Conservator of Forests,  
Jogulamba Circle, Mahabubnagar .

Copy to the District Forest Officer, Mahabubnagar for information and necessary action

// T.C.B.O.//

Administrative Officer

26/03/24



**Regd. Office :**

Road No.10, Banjara Hills, Hyderabad - 500 034, T.S. INDIA,  
Phone : +91-40-23355575, 23355085, Fax : +91-40-23355048  
Email : contact@hbl.in, website : www.hbl.in

22 DEC 2023

**HBL****HBL Power Systems Ltd.**

HBL/JPT/PCCF/2023-2024/01

Date : 22.12.2023

To,

The Principal Chief Conservator of Forests (HoFF),  
Forest Department/Nodal Officer (FCA), Govt. of Telangana,  
Aranya Bhavan, Saifabad, Hyderabad-500 004.

Dear Sir,

Kind Attention: Sri.R.M.Dubriyal, I,F.S.

Sub: Diversion of 2.81 Ha of Forest Land for Construction of testing  
facility in Gajulapet RF of Mahabubnagar Forest Division in favour  
of M/s HBL Power Systems Ltd., Hyderabad – EDS raised by IRO,  
Hyderabad-Reg.

Ref: Letter from your esteemed office vide FC4/FC30/17/2023, dated  
10/11/2023.

With reference to the above we hereby enclosed our detailed justification as  
Annexure -I for the concerns raised in your letter

1. Justification on the need of test facility in the manufacturing premises
2. Evaluation of Feasible options for setup of the proposed testing facility.

We request you to kindly consider and do the needful for diversion of Forest  
Land to establish testing facility.

Yours truly

For HBL Power Systems Limited

*T. Abdul Kalam*  
T Abdul Kalam

Authorized Signatory



Enclosures

1. Annexure-I: Project Justification
2. Appendix-I: Map – Evaluation of feasible options for proposed test facility
3. Letter Issued by ARDE, DRDO, Pune
4. Letter Issued by TBRL, DRDO, Chandigarh

Copy to : The District Forest Officer, Mahabubnagar.



## Annexure-I Project Justification

### **Project Background:**

M/s HBL Power Systems Limited is establishing its green field manufacturing facility in 120 Acres located at Sy No 72 to 81 and 84 to 88 of Janampet Village, Moospeta Mandal, Mahabubnagar District, and Telangana State - 509382 for manufacturing of Electronic Fuzes, Grenades and its explosives for Indian Armed Forces and Ministry of Home Affairs (MHA) forces

Above mentioned products involve manufacturing, assembly, inspection, static testing and dynamic firing.

HBL Power Systems Limited has indigenously designed, developed Electronic Fuzes and Grenades in association with Armament Research and Development Establishment (ARDE) Laboratory, DRDO as a Development Cum Production Partner.

ARDE, DRDO has successfully completed the User trials with the representatives of MHA Forces (CRPF, BSF & NSG) and have issued a license for manufacturing & supply of Grenades to Indian Armed Forces, MHA and Government Agencies (Central & State).

HBL needs to establish manufacturing and testing facilities to cater the requirements of Indian Armed Forces and MHA Forces.

The project needs to be implemented in accordance with the guidelines of Explosive Rules 2008 issued by Chief Controller of Explosives and "Storage & Transport of Explosives Committee (STEC), Centre for Fire, Explosive & Environment Safety", Ministry of Defense.

Adhering to the above guidelines HBL can accommodate Manufacturing and Storage buildings with the available land bank but falling short for the Test Facility.

To establish the test facility HBL has made an application for diversion of 2.81 Ha of forest land in the compartment no.360 of Mahabubnagar forest division against providing compensatory land of 2.83 Ha in sy.no.99, Janampet village, Moosapet madal, Mahabubnagar district.



**Proof Range/Test Facility is required at Manufacturing Premises because of the following:****For Production:**

- HBL is the production agency for supply of Grenades with Electronic Fuzes to the Ministry of Home Affairs (MHA) Forces. Procurement Agencies of MHA have already started floating tenders for supply of the products.
- Anticipated requirement of MHA Forces is around 1.0 Lakh per Annum and approximately 10,000 Number per month.
- During production every lot will undergo predispatch inspection in which the safety & functional reliability of grenades with electronic fuzes will be evaluated by performing static and dynamic firings.
- Initially the lot sizes will be around 1200 Numbers and gradually increased to bigger lot sizes up to 5000 Numbers. This means on an average every month 4 to 8 production lots will need to be inspected, tested and cleared.
- The above is feasible only when a dedicated proof test facility is available at the manufacturing facility.
- To cater the requirements of MHA (User), HBL needs to establish the proof range/test facility at its manufacturing facility. The same has been informed to us by ARDE, DRDO and the User (copy enclosed).

**For Development Projects:**

- HBL is also developing various types of Electronic Fuzes for Artillery Gun Systems, 84MM ET Fuze for RCL Gun, Extended Range Anti-Submarine Rocket Fuze, Aircraft dropped Bomb Fuze, Multi-Mode Hand Grenades in association with DRDO.
- HBL Power Systems is in the process of obtaining Technology Transfer from Terminal Ballistics Research Laboratory (TBRL), DRDO for Multi-Mode Hand Grenade Fuze and Mortar Fuzes.
- All development activities require multiple levels of testing and iterations (static & dynamic firing) at various stages of the projects to achieve/meet the desired performance criteria.



- To be part of Atmanirbhar Bharat and to complete the projects in a fast track manner, the developing agencies need to have their own proof range/test facilities at their Manufacturing/R&D development centers.
- One of qualifying & evaluation criteria for Transfer of Technology (ToT) from the respective DRDO laboratory transfer is the availability of Proof Range/Test facilities. The same has been informed to us by TBRL, DRDO (Copy enclosed).
- All these Grenades & Electronic Fuzes should meet certain safety criteria as detailed below before they are qualified and approved for transport, storage and handling.

#	Test Description	Acceptance Criteria
1	Jolt Test(MIL-STD-331C, as per Para A1.2.1 of Test A1 of MIL STD 331C)	a) Fuze Shall be Safe for transportation storage and handling. b) No Explosive components shall have initiated c)The Fuzes does not have to be operable
2	Jumble Test(MIL STD 331 C, as para A2.2.2 of Test A2.1)	a) Fuze Shall be Safe for transportation storage and handling. b) No Explosive components shall have initiated c)The Fuzes does not have to be operable
3	Transport Vibration Test(MIL STD 331C, Test B1.1)	a) Fuze Shall be Safe for transportation storage and handling. b) No Explosive components shall have initiated <b>c)The Fuzes shall be operable</b>
4	Drop Test(Drop Test MIL STD 331C, Test A4.1)	a) Fuze Shall be Safe for transportation storage and handling. b) No Explosive components shall have initiated c)The Fuzes does not have to be operable

- The operability of the Fuze/Grenade can be evaluated only by performing static/dynamic firing.
- As a development agency, to declare the product is fit for use the above tests have to be conducted mandatorily and hence the test facility/proof range is required at the manufacturing facility.



- HBL, being a developing agency and an approved production agency by DRDO needs to establish the test facility/proof range at our manufacturing facility.
- It may be also noted that because of the above DRDO requirement, Ordnance Factories are also having their own test ranges in their manufacturing plants/development labs.

**Guidelines need to be followed for establishing test facilities/proof ranges**

According to the STEC, Ministry of Defense guidelines, certain minimum safety distances need to be employed from testing facility as per below table

#	From	To	Distance to be Maintained
1	Testing Facility	Process Building (Explosive Manufacturing, Explosive Filling, Laboratory etc)	275 Mtr
2	Testing Facility	Storage Building (Explosive Raw Materials, Finished Goods)	275 Mtr
3	Testing Facility	Non Explosive Area, Places of Assembly, Public Roads, National Highways, Hospitals	275 Mtr

**Evaluation of Feasible Land for Setup of Test Facility:**

HBL has acquired 120 Acres of Land; the land is divided in to two parcels separated by forest in between. The land is surrounded by forest, private land and Road. The proposed manufacturing areas & storage areas has been surrounded by forest on three sides and road on one side.

HBL needs to accommodate three facilities (Manufacturing Area, Storage Area and Testing Area) adhering to the above guidelines.

With the available land bank HBL is able to accommodate manufacturing & storage buildings, however falling short for Test facility.

A map showing HBL boundary, manufacturing area, storage area, proposed test facility, forest area and road is enclosed as Appendix-1.

Following points to be noted from the map w.r.t above safety distances guidelines:



#	Area on the Map for proposed test facility	Feasibility of Test Facility	Remarks/Notes
1	Area-1	Not Feasible	Within 275Mtrs from the Road
2	Area-2	Not Feasible	Within 275Mtrs from the Storage Area
3	Area-3	Not Feasible	Within 275Mtrs from the Manufacturing Area
4	Area-4	Not Feasible	Within 275Mtrs from the Manufacturing Area
5	Area-5(Adjacent Private Lands)	Not Feasible	Near to Habitants
6	Area-6(Adjacent Private Lands)	Not Feasible	Near to Habitants
7	Area-7(Proposed Forest Land	Feasible	Meets all requirements
8	Area-8(Adjacent Private Lands)	Not Feasible	Within 275Mtrs from the Storage Area

**Conclusion:**

Proposed SI.No.7 Forest Land is the only feasible option available with HBL meeting the required guidelines.



आयुध अनुसंधान एवं विकास संस्थापन  
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स्वासेवासेवा  
Service to Services

Government of India, Ministry of Defence  
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Armament Post, Pashan,  
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Website: www.drdo.gov.in

ARDE/46/1/86 – Tech

dtd.: 3<sup>rd</sup> Aug 2023

To

The Chairman & MD  
HBL Power Systems  
Hyderabad.

**HEAP Grenade with Electronic PDSD Fuze for 40mm UBGL / MGL**

ARDE has designed and developed a HE Grenade with Self Destruction for 40mm Grenade successfully in association with M/s HBL Power Systems. All the technical trial and evaluation activities have been completed for the said development and performance of PDSD Fuze & Grenade has been successfully demonstrated to CAPF successfully.

This Grenade is 100% indigenously developed system having Self Destruction feature in addition to primary mode of Point detonation mode of functioning and hardware for the same during development has been realised through M/s HBL Power Systems, Hyderabad as Development Cum Production Partner. Very few countries world over have developed this type of Grenade with Self Destruction capability. The performance of Grenade with a maximum range of 400 metres, performance for reliability & consistency has been demonstrated successfully where in, CRPF, BSF and NSG representatives have participated.

As you are aware, ARDE-DRDO has identified your firm as the Production Agency and granted non-exclusive license for manufacturing & supply of Grenades with Electronic Fuzes to Indian Armed Forces, MHA and Govt. Agencies (Central & State) as part of Atmanirbhar Bharath vide Licensing Agreement for Transfer of Technology (LAToT) for 40mm High Explosive Anti-Personal (HEAP) Grenade for UBGL.



FAX

13 Nov 2023 23:44

P001/001

**चण्डीगढ़ / Chandigarh**

दूरभाष / Telephone : 0172-2657674, 2657659  
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भारत सरकार / GOVERNMENT OF INDIA  
रक्षा मंत्रालय / MINISTRY OF DEFENCE  
रक्षा अनुसंधान तथा विकास संगठन  
DEFENCE RESEARCH & DEVELOPMENT ORGANISATION  
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TERMINAL BALLISTICS RESEARCH LABORATORY  
सेक्टर-30, चण्डीगढ़ - 160030  
SECTOR-30, CHANDIGARH-160 030

संदर्भ सं. / Ref. No. : TBRL/TAC/Mechatronicfuze/05

दिनांक / Date : 10-11-2023

To

M.S.S Srinath

HBP Power Systems Limited

FAX: 040 2335 3189

Mail id:

**Subject: Transfer of Technology (ToT) for Mechatronic Fuze for Grenade**

**Ref: Your letter No HBL/TBRL/TOI/2023/01 dtd: 31/10/2023**

This is with reference to your interest shown in taking the ToT of Mechatronic Fuze for Grenade. The following information regarding ToT of Mechatronic fuze for Grenade is hereby forwarded which will be necessary during the ToT absorption, production and qualification of Mechatronic fuze for grenade at your firm in addition to the requirements as per ToT guidelines. The information is required to be furnished by the firm at the earliest by 16/11/2023.

1. This ToT pertains to Mechatronic fuze only and not for whole grenade. Grenade consist of Fuze and lower body having main charge. Hence, additional component i.e. lower body of grenade along with main charge will be required to complete one unit of Grenade. ToT of Multimode hand grenade (MMHG) having pyro-based delay was already done to M/s EEL Nagpur and Ordnance factory, Khamaria and is under production. The firm seeking ToT of Mechatronic Fuze should have tie up with either of the above two firm for lower body along with main charge.
2. Electric detonator used in the Mechatronic fuze was developed and qualified by M/s EEL Nagpur as per TBRL specification. Hence, the firm seeking ToT shall have to contract with M/s EEL Nagpur for the procuring the electric detonator (as COTS item) or the firm can develop the electric detonator on its own. In case of own development, all the qualification has to be taken care by the developing firm
3. In addition to the requirements as per ToT guidelines available on DRDO website, the firm should have testing facilities in its own premises or willing to establish the same with 6 months of signing of LA ToT.

Details can be forwarded either in hard copy or on mail at [asaini.tbri@gov.in](mailto:asaini.tbri@gov.in) positively by 16/11/2023 in the absence of same your request will not be considered.

Thanks and Regards

Dr. Ashish Saini

Secy, TBRL

For Director



# Manufacturing facility of M/sHBL Power Systems Ltd

