

**Government of Jharkhand
Department of Mines and Geology
Directorate of Mines**

Ref.: PR190899 Mines and Geology (18-19)-D

CORRIGENDUM #2 (After Bidders Queries)

Pursuant to deliberations on queries received from various bidders on the subject Expression of Interest for Empanelment of Vendors to Enlist Vehicle Tracking Devices for Mineral Transporting Vehicles in the State of Jharkhand, following amendments / modifications are proposed in the EoI document, DMG/EOI/01/2018-19 Dated 31.07.2018. Annexure can be downloaded from official website:- <http://www.jharkhand.gov.in/mines-geology> and <http://www.jharkhandminerals.gov.in/>

#	Clause No.	Page No.	Clause	Modification /Amendment
1	2.4.2	5	-	Clause k) inserted: The Empaneled Vendor shall ensure availability of the spare parts in the State after initial period of 3 year warranty.
2	Section 7: Minimum Technical Specifications	16-23	Section 7: Minimum Technical Specifications	Section 7: Minimum Technical Specifications shall be read as the Revised Section enclosed as an Annexure A to this corrigendum.

3	Annexure 5: List of Submissions	44	<p>(a) 6: Details of Applicant's authorized dealers/ Sales & Service centers who will sell its enlisted VTDs in Jharkhand</p> <p>(b) 5: Two samples of each of the models of VTD applied for enlistment.</p>	<p>(a) 6: Details of Applicant's authorized Dealers/ Sales & Service centers who will sell its enlisted VTDs in Jharkhand or a letter of undertaking to appoint authorized Dealers/Sales & Service centers within 30 days from date of letter of acceptance. {In case applicant has submitted letter of undertaking, he shall submit the details of authorized Dealers/ Sales & Service centers with 30 days of letter of acceptance.}</p> <p>(b) 5: One sample of each of the models of VTD applied for enlistment.</p>																																							
4	5.6: Timeline	11	<table border="1" data-bbox="734 751 1361 1246"> <thead> <tr> <th>S No</th> <th>Description</th> <th>Timeline</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Publication of Document</td> <td>T_o</td> </tr> <tr> <td>2.</td> <td>Submission of Queries and Resolution</td> <td>T_o + 10</td> </tr> <tr> <td>3.</td> <td>Start of Submission of Applications</td> <td>T_o + 20</td> </tr> <tr> <td>4.</td> <td>Last date by which the Application can be submitted</td> <td>T_o + 25</td> </tr> <tr> <td>5.</td> <td>List of Empaneled Vendors and enlisted VTDs ct).</td> <td>T_o+ 30</td> </tr> </tbody> </table>	S No	Description	Timeline	1.	Publication of Document	T _o	2.	Submission of Queries and Resolution	T _o + 10	3.	Start of Submission of Applications	T _o + 20	4.	Last date by which the Application can be submitted	T _o + 25	5.	List of Empaneled Vendors and enlisted VTDs ct).	T _o + 30	<table border="1" data-bbox="1393 699 2058 1262"> <thead> <tr> <th>S No</th> <th>Description</th> <th>Timeline</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Publication of Document</td> <td>31.07.2018</td> </tr> <tr> <td>2.</td> <td>Submission of Queries and Resolution</td> <td>10.08.2018</td> </tr> <tr> <td>3.</td> <td>Issue of Corrigendum #2 (after bidders queries)</td> <td>26.11.2018</td> </tr> <tr> <td>4.</td> <td>Start of Submission of Applications</td> <td>14.12.2018</td> </tr> <tr> <td>5.</td> <td>Last date by which the Application can be submitted</td> <td>19.12.2018</td> </tr> <tr> <td>6.</td> <td>List of Empaneled Vendors and enlisted VTDs</td> <td>27.12.2018</td> </tr> </tbody> </table>	S No	Description	Timeline	1.	Publication of Document	31.07.2018	2.	Submission of Queries and Resolution	10.08.2018	3.	Issue of Corrigendum #2 (after bidders queries)	26.11.2018	4.	Start of Submission of Applications	14.12.2018	5.	Last date by which the Application can be submitted	19.12.2018	6.	List of Empaneled Vendors and enlisted VTDs	27.12.2018
S No	Description	Timeline																																									
1.	Publication of Document	T _o																																									
2.	Submission of Queries and Resolution	T _o + 10																																									
3.	Start of Submission of Applications	T _o + 20																																									
4.	Last date by which the Application can be submitted	T _o + 25																																									
5.	List of Empaneled Vendors and enlisted VTDs ct).	T _o + 30																																									
S No	Description	Timeline																																									
1.	Publication of Document	31.07.2018																																									
2.	Submission of Queries and Resolution	10.08.2018																																									
3.	Issue of Corrigendum #2 (after bidders queries)	26.11.2018																																									
4.	Start of Submission of Applications	14.12.2018																																									
5.	Last date by which the Application can be submitted	19.12.2018																																									
6.	List of Empaneled Vendors and enlisted VTDs	27.12.2018																																									

5.	Annexure 1, (9)	36	We represent and confirm that neither we nor any of our promoters/directors are barred by DMG or Government of Jharkhand or blacklisted by any state government or central government/ department/ agency in India from participating in bids, as on the date of submission of this Application.	We represent and confirm that neither we nor any of our promoters/directors are barred by DMG or Government of Jharkhand or blacklisted by any state or central government or their agency / department in India from participating in bids, as on the date of submission of this Application.
----	-----------------	----	--	--

Sd/-
(Zeeshan Qamer)
Director, Mines

Annexure A:

Revised Section 7 -Minimum Technical Specifications

1. Minimum Specifications of the VTDs

The VTD(s) being submitted for registration must comply with the minimum specifications of **Automotive Industry Standard 140: Intelligent Transportation Systems (ITS) (AIS-140)**. For detailed list of specifications, applicants shall refer the AIS-140 (Vehicle Tracking Device) specifications published by AUTOMOTIVE INDUSTRY STANDARDS COMMITTEE and CENTRAL MOTOR VEHICLE RULES – TECHNICAL STANDING COMMITTEE, under MINISTRY OF ROAD TRANSPORT and HIGHWAYS (DEPARTMENT OF ROAD TRANSPORT and HIGHWAYS) GOVERNMENT OF INDIA on October 2016 and its subsequent Amendments.

- a. Compliance by the Applicant against the minimum technical specification below needs to be submitted together with documentary evidence as listed against each parameter:
- b. The applicant should attach a certificate from any of the test agencies in Central Motor Vehicle Rules(CMVR) for testing related to automobiles, mentioned below covering all the points as per the requirement set out in Table 1 as applicable:
 - i. Automotive Research Association of India (ARAI)
 - ii. International Centre for Automotive Technology (ICAT)
 - iii. Central Institute of Road Technology (CIRT)
 - iv. Vehicle Research & Development Establishment (VRDE)
 - v. or any APSAC approved agency.
- c. Component datasheet/ specification sheet from component manufacturer
- d. Checklist to be submitted by Applicant from any of the authorized labs
- e. Certificate against the testing parameters below needs to be submitted by Applicant, over and above the same shall be subjected to demonstration by the Applicant and / or testing by APSAC for validation.

Table 1: Specification/Checklist Sheet

Sl. No.	Specifications of VTDs	Validation Process	Compliance (Yes / No)	AIS-140 Reference
1	General Features			
1.1	<ul style="list-style-type: none"> • GPSwith GAGAN augmentation type i.e. (Location, speed, heading, timestamp) data polling and sending frequency capability of less than or equal to 10 sec. • Device shall be capable for operating in L and/or S band and. Devices shall be compliant as per other GNSS constellation in the interim period. 	Test agency to verify based on the self- certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer.		3.1.1.1. a (Amendment 1)
1.2	Location on demand on GPRS/SMS using 2G/3G/4G wireless connectivity	Test agency to verify based on demonstration by applicant along with supporting documentary evidence.		Section 6
1.3	Non-volatile memory to store min 40,000 positional log with provision to capture data for 72 hours in case of emergency.	Test agency to verify based on demonstration by applicant along with supporting documentary evidence.		3.1.1.18 & Section 6
1.4	Configurable backup SMS facility in case of GPRS failure	Test agency to verify based on demonstration by applicant along with supporting documentary evidence.		3.1.1.18

Sl. No.	Specifications of VTDs	Validation Process	Compliance (Yes / No)	AIS-140 Reference
2	GPS Module Specifications			
2.1	Parallel GPS Receiver – 20 - Channel or more	Test agency to verify based on the self- certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer		3.1.1.17
2.2	<ul style="list-style-type: none"> • Acquisition sensitivity: minimum (-) 145 dBm with GNSS. • Tracking sensitivity minimum (-) 160 dBm with GNSS • Hot start <10s • Warm start : < 60s • Cold start < 120 s 			3.1.1.1. d 3.1.1.1. e 3.1.1.19
2.3	Accuracy of Less than 3- 6 meter Positional Accuracy, 2DRMS (on ground) or 1 mtr- 2.5 mtr CEP (on ground) with vertical accuracy +/- 5 meter	Test agency to verify based on the demonstration by applicant along with supporting documentary evidence (datasheet).		3.1.1.1
2.4	A-GPS	Test agency to verify based on self- certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component		3.1.1.24

Sl. No.	Specifications of VTDs	Validation Process	Compliance (Yes / No)	AIS-140 Reference
		manufacturer.		
2.5	Location Accuracy	Test agency to verify based on self- certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer.		Table 6A: Functional Testing
2.6	Messaging Service	Test agency to verify based on self- certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer.		4.2
3	Communication Module/ Network Specifications			
3.1	<ul style="list-style-type: none"> • In - Built Quad-band GPRS module/ Modem • Dual Slot GPRS • GPRS class 10 or above 	Test agency to verify based on the self- certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer.		3.1.1.21 (Amendment 1)
3.2	a. The device should have provision for the Dual M2M embedded SIM or additionally have support M2M Robust Plastic SIM (Primary Slot – BSNL	Test agency to verify point (a) based on the demonstration by the Applicant.		3.1.1.21 (Amendment 1)

Sl. No.	Specifications of VTDs	Validation Process	Compliance (Yes / No)	AIS-140 Reference
	<p>Secondary Slot – Any Other Network</p> <p>Only one type of SIM would be used in VTD at any given time)</p> <p>b. To Survive the automotive operational requirement such as vibration, temperature and humidity and provide Long life span with</p> <ul style="list-style-type: none"> • Cellular class 10 or above • Support Embedded SIM/UICC to cater to the operational requirement such as vibration, temperature and humidity and • provide long life span with at least 10 years life and more than 1 million read/write cycles • Cellular module & Embedded SIM/UICC shall support <ul style="list-style-type: none"> ▪ SMS, Data (Cellular, TCP/IP) and ▪ Support multiple network OTA switching (on-demand / automatic) capabilities. 	<p>Test agency to verify based on the Component data sheet/ specification sheet from component manufacturer of the SIM for point (b).</p>		

Sl. No.	Specifications of VTDs	Validation Process	Compliance (Yes / No)	AIS-140 Reference
3.3	<p>a. Should support all – SMS, Voice, Data, PRS, TCP/IP</p> <p>b. With multi network switching and OTA network update.</p>	<p>Test agency to verify based on Component data sheet/ specification sheet from component manufacturer of the SIM for point (a)</p> <p>Test agency to verify point (b) based on the demonstration by the Applicant.</p>		
3.4	<p>Devices need to support at least 2 different Network provider for GPRS connectivity. The device should try and shift between various service providers in case of GPRS failure.</p>	<p>Test agency to verify based on the Self-certification by applicant along with supporting documentary evidence with following (if applicable):</p> <ul style="list-style-type: none"> • Certificate from the any mentioned test agencies • Component datasheet/ specification sheet from component manufacturer 		
4	Power Characteristics			
4.1	<ul style="list-style-type: none"> • Power Source – Vehicle Battery Input voltage range 8 – 32 volts • Battery backup of minimum of 24 hours @ 15 seconds transmission 	<p>Test agency to test and verify</p> <ul style="list-style-type: none"> • Certificate from the any mentioned test agencies • Component datasheet/ 		

Sl. No.	Specifications of VTDs	Validation Process	Compliance (Yes / No)	AIS-140 Reference
		<p>specification sheet from component manufacturer</p>		
5	Environmental Variables Testing			
5.1	<p>Temperature range ; -10° C to 85° C</p>	<p>Testing</p> <p>High Temperature test: The test shall be carried out in accordance with Indian Standard IS: 9000 (Part 3/Sec 5). The device shall be subjected to the high temperature test conditions as per device specification of + 85°C.</p> <p>Cold Test: The test shall be carried out in accordance with Indian Standard (IS): 9000 (Part 2/Sec 4). The device shall be subjected to low temperature conditions as per device specification of (-) 10°C.</p> <p>Thermal Shock: The test shall be conducted as specified in IS: 9000 (Part XIV)- 1978† as per device specification temperature ranges (temperature ranges from -10°C /85°C)</p> <p>Salt Spray Test: The</p>		

Sl. No.	Specifications of VTDs	Validation Process	Compliance (Yes / No)	AIS-140 Reference
		<p>device shall be tested as per AIS: 012/ IS10250 as per test method in IS : 9000 (Part XI)-1983</p> <p>Dust, temperature, vibration and water resistant, Tamper proof:</p> <p>Shock Test:</p> <p>The shock test shall be performed as per IS10250/IS 9000-part 8.</p> <p>Vibration Test: The vibration test shall be performed as per IS 9000-part 8 with the severities as per IS 10250 clause 4.1.2.</p>		
5.2	EMI /EMC	The device should meet the EMI/EMC requirements as per AIS 004 (Part 3) or equivalent		
5.3	Humidity Level: 5% to 95% non-condensing	<p>To be tested by Test agency</p> <p>For humidity cycle in cl. No. 5.2 of IS:10250</p>		
5.4	IP 65 rated or better	To be tested by Test agency. The device will be tested for dust and water ingress according to IP 65 test specification.		

Sl. No.	Specifications of VTDs	Validation Process	Compliance (Yes / No)	AIS-140 Reference
6	Antennae			
6.1	Should have internal GPRS antenna	Test agency to verify based on the self- certification by applicant along with supporting documentary evidence with component datasheet / specification sheet from component manufacturer		
6.2	Should have internal GPS antenna			
7	Port/Sensors (External I/O)			
7.1	4 or more digital inputs	Test agency to verify based on the self- certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer.		
7.2	2 or more digital outputs (for relays, sirens etc.)	Test agency to verify based on the self- certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer		
		Test agency to verify based on the self-		

Sl. No.	Specifications of VTDs	Validation Process	Compliance (Yes / No)	AIS-140 Reference
7.3	1 or more analog inputs (For analog input like fuel, temperature etc.)	certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer		
7.4	Ignition Sensing	Test agency to verify based on the self-certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer		
7.5	1 no. RS232 port	Test agency to verify based on the self-certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer		
8	Other Features			
8.1	Device should be capable of sending a packet to at least 2 different IP's.	Test agency to verify based demonstration.		
8.2	Over the Air Download of firmware as well as configuration parameters.	Test agency to verify based demonstration.		

Sl. No.	Specifications of VTDs	Validation Process	Compliance (Yes / No)	AIS-140 Reference
8.3	Remote administration & firmware update over the air.	Test agency to verify based demonstration.		
8.4	Reverse Polarity Protection without Fuse	To be tested.		
8.5	Test for Wiring Harness	To be tested as per IS 2465. Electrical Properties: The wiring harness used in the device should be tested for electrical properties as per AIS 028.		

Legend:

Yes: Feature is available in the VTD model submitted for enlistment

No: Feature is not available in the VTD model submitted for enlistment

Note: Please note that the above mentioned specifications may not be tested by DMG and the Application for registration will be processed based on the representation by the Applicant. The correctness of submissions for all these specifications is solely the responsibility of the Applicant. DMG does not bear any responsibility on the authenticity of any result or correctness of specifications whatsoever.