

Report of the Comptroller and Auditor General of India

PERFORMANCE AUDIT ON ILLEGAL MINING IN RAJASTHAN



लोकहितार्थ सत्यनिष्ठा Dedicated to Truth in Public Interest

Government of Rajasthan

Report No. 8 of the year 2022 (Performance Audit)

Report of the Comptroller and Auditor General of India for the year ended 31 March 2020

Performance Audit on Illegal Mining in Rajasthan

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TABLE OF CONTENTS

	Reference to	
	Paragraph	Page
Preface		iii
Executive Summary		v
List of recommendations		vii
CHAPTER-I: Introduction		
Introduction	1.1	1
Why we selected the topic?	1.2	2
Organizational set-up	1.3	3
Chapter II : Audit Framework		
Audit objectives	2.1	7
Audit criteria	2.2	7
Audit Scope and Methodology	2.3	7
Revenue from Minerals and Illegal Cases	2.4	8
Acknowledgement	2.5	9
Chapter III : Use of Technolog	, Sy	
Non-utilisation of Satellite images to detect and prevent Illegal Mining Activities	3.1	11
Misuse of Rawannas	3.2	18
Demarcation and Allocation of leases	3.3	20
Deficient online system	3.4	23
Installation of GPS devices in the vehicles	3.5	29
Summary of findings	3.6	30
Recommendations	3.7	31
Chapter IV : Internal Control Sys	tem	
E-rawannas and weigh bridges	4.1	33
Panchnamas	4.2	49
Assessment of illegally excavated mineral	4.3	52
Summary of findings	4.4	55
Recommendations	4.5	55
Chapter V : Monitoring and Evalua	ation	
Returns	5.1	57
Inspections	5.2	59
Pending Assessments	5.3	60

	Referen	ce to			
	Paragraph	Page			
Summary of findings	5.4	61			
Recommendations	5.5	61			
Chapter VI : Environmental Issu	ies				
Plantation in lease area	6.1	63			
Assessment of damage to the land	6.2	64			
Non-compliance with the orders of Court/Tribunal	6.3	65			
Summary of findings	6.4	65			
Recommendations	6.5	66			
Chapter VII: Management of Manpow	er Resources	S			
Shortage of Manpower	7.1	67			
Working of Vigilance wing	7.2	68			
Training and use of latest technology	7.3	69			
Summary of findings	7.4	70			
Recommendations	7.5	70			
Chapter VIII: Conclusions and Recommendations					
Audit Objective I		71			
Audit Objective II		73			
Audit Objective III		74			

Preface

This Report for the year ended 31 March 2020 containing the results of the Performance Audit on Illegal Mining in Rajasthan has been prepared for submission to the Governor under Article 151 of the constitution of India.

The Performance Audit on Illegal Mining in Rajasthan is conducted under Section 16 of the Comptroller and Auditor General's (Duties, Powers and Conditions of Services) Act, 1971, as amended from time to time.

It covered the period 2015-16 to 2019-20, however, improvement in the working of the Department of Mines and Geology was test checked upto the month of October 2021. This Report contains the result of Performance Audit on Illegal Mining in Rajasthan.

The audit has been conducted in conformity with the Auditing Standards, 2017 issued by the Comptroller and Auditor General of India.

Audit Report (Performance Audit) for the year ended 31 March 2020				

Executive Summary

Executive Summary

Minerals are valuable natural resources being finite and non-renewable. Their exploitation is therefore, guided by long term goals and perspective. Rajasthan is blessed with 81 varieties of minerals out of which 57 are being commercially exploited. Rajasthan has the highest number of mining leases in the country. There were frequent reports in the media regarding rampant illegal mining of minerals. The Department itself identified 48,486 cases of illegal mining activities during the years 2015-16 to 2019-20. Illegal mining cases during the year 2019-20 increased 169 *per cent* in comparison to 2015-16. This performance Audit was conducted to assess whether the State Government is taking adequate measures to curb illegal mining and to identify /check the cases of illegal mining in the State by using Remote Sensing Data and available Geographic Information System (GIS).

(Paragraph 1.1 and 1.2)

The scope of this performance audit (PA) is to examine the mechanism in place to detect illegal mining activities and remedial action initiated by the Department of Mines and Geology. We have attempted to address the question of availability of resources with the Department to check the cases of illegal mining. Audit has used remote sensing data and GIS technology through *Google Earth Pro*. The PA which covers the period from 2015-16 to 2019-20 involved test check of records in 12 mining offices across the State, along with joint physical verification of mines/illegal mining sites. Audit conducted an independent study through records and satellite images to detect the area of illegal mining which were out of the area of mining lease in these selected offices.

(Paragraph 2.3)

The PA revealed that the Department did not leverage free of cost technologies available in the public domain, to identify and curb illegal mining activities. Audit noticed irregularities *viz.* overlapping of leases and non-allotment/auction of gap areas lying between the leases, *etc.* Inadequate inspections of mines by the concerned officials resulted in non-identifications of these irregularities.

With the use of remote sensing data and GIS technology, Audit identified illegal mining activities in 122 cases (34 *per cent* of test-checked leases) nearby sanctioned mining leases in five selected *tehsils* under five selected Divisions out of total 49 Divisions. The identified area of illegal mining was 83.25 hectare. Audit also noticed 13 mining leases where mineral was not excavated, however, 5.20 lakh MT of mineral was shown dispatched by misusing 22,854 *e-rawannas*¹.

(Paragraph 3.1 and 3.2)

Department introduced (10 October 2017) a web-based application 'DMGOMS' for effective monitoring of the mining activities. However, the Department failed to utilise the system effectively. Demands related to illegal mining activities (₹ 71.20 crore) were not shown on the demand register maintained at DMGOMS in 53 cases. Dispatch of minerals from mining leases in excess of limits prescribed in Environment Clearance Certificate/Consent to Operate were found

¹ Electronic challan used for dispatch of mineral from mining lease area, issued by Mining Department.

but there was no check in the system to prevent the dispatch of mineral in excess of permissible quantity. Penalty of ₹ 13.99 crore on excess/unauthorised quantities of minerals excavated in 38 mining leases was not imposed by the Department.

(Paragraph 3.4.1 and 3.4.2)

Royalty rates in Rajasthan are based on the weight of mineral except for some specific minerals. Working of weigh bridges revealed serious irregularities in 81.68 per cent of selected weigh bridges. In 33.28 per cent e-rawannas, the photograph of one vehicle was used many times for confirmation. It shows that vehicles for which e-rawannas were generated either did not reach at the weigh bridges or passed without weighing. These cases indicate that e-rawannas were confirmed without actual weighment of the vehicle. Department failed to monitor the working of the weigh bridges, which had a direct impact on royalty collection to the State exchequer.

(Paragraph 4.1)

The department did not have a mechanism to use printed serial numbered *Panchnamas*. *Panchnamas* were prepared by the Departmental officials by putting numbers manually. Further, 511 *Panchnamas* were not uploaded on *DMGOMS* and higher authorities also remain uninformed of illegal mining activities due to this deficient process of numbering. Further, sources/sites of illegal mining were not investigated in respect of 1,121 cases of illegal transportation of minerals.

(Paragraph 4.2.1 and 4.2.3)

We also found that the assessments of royalty were not finalized with due diligence which resulted in incorrect assessment of royalty, cost of mineral and compounding fee of ₹ 14.20 crore in 28 cases.

(Paragraph 4.3)

The prescribed monthly and annual returns by the lessees to submit the quantity of excavated and dispatched minerals were not monitored by the Department. No return was prescribed to check the dispatch of royalty paid minerals from the stock of dealers. Further, no mechanism was found in place to check the dispatch of minerals by Quarry Licence holders.

(Paragraph 5.1)

The Department had a vigilance wing to curb the illegal mining activities and to check leakage of Government revenue. During the period 2015-16 to 2019-20, vigilance offices identified 956 cases whereas division offices having jurisdiction on the same area, identified 2,434 cases of illegal mining activities besides their regular work. This indicated that performance of vigilance wing was not upto the mark and purpose of establishment of specialized wing for identification of illegal mining activities was also defeated to that extent.

(Paragraph 7.2)

In brief, Audit noticed that there was ample scope of improvement in strengthening the system to curb illegal mining activities. The use of available data and leveraging GIS technology can prove to be a powerful tool in the hands of Government in this regard.

Recommendations

List of Recommendations

The Department may consider:

- 1. utilising Remote Sensing/GIS technology such as Google Earth Pro application to identify illegal mining activities along with other modern technology such as drone survey to expedite identification of illegal mining activities:
- 2. mapping all the existing leases using Remote Sensing data and GIS technology to do away the overlapping of leases;
- 3. to fix accountability on the officials for leaving gap areas unauctioned and setting a time frame for auction of gap areas on priority basis;
- 4. providing a check in the DMGOMS to auto block the generation of e-rawannas whenever the quantity crosses the permitted limit by EC also and to expedite the recovery of the amount for the illegally mined minerals;
- 5. providing a system in the DMGOMS to generate demand notice only after uploading the demand in online demand and collection register;
- 6. mapping and uploading coordinates of all the STPs wherein mining was permitted;
- 7. using GIS technology for measuring distance between place of dispatch and destination in e-rawanna;
- 8. adopting good practices of GPS installation in vehicles and use of RFID technology as initiated by other states and proposed by the Department of Mines and Geology, Rajasthan;
- 9. developing or approving a single software to be used by weigh bridges across the State under overall control of the Department to check the malpractices;
- 10. strengthening its monitoring of weigh bridges through IT system at a centralized centre;
- 11. pursuing cases of vehicles used in illegal transportation with the Transport Department so that stringent action can be taken against vehicles owners;
- 12. optimally using the date and photos available in DMGOMS to investigate complaints on illegal mining and take stringent action against those involved in the malpractices so that is acts as a deterrent;
- 13. to adopt the good practice of processing Panchnama with printed serial numbers which is being implemented by the Transport Department of Rajasthan for transparency and accountability;
- 14. making suitable change in the system to generate report of non-filers/delayed filers of returns and for issuing automatic reminders/ notices to them;
- 15. prescribing periodic returns for dealers to monitor movement of royalty paid minerals effectively;
- 16. prescribing a test check of returns by the ME/AME in a month to get a holistic view of mining activities in their jurisdiction area;
- 17. prescribing a mandatory valid document accompanying the mineral to ascertain the source of mineral for each despatch from QL;

- 18. prescribing online detail of inspection on DMGOMS regarding inspections of leases having details of inspections with photograph of leases taken at the time of inspections. Further, selection of leases for inspection shall be done through a scientific process so as to cover all the leases of a Division within a certain period;
- 19. adopt the good practice of successful plantation initiated by lease holders of Neem ka Thana to safeguard the environment;
- 20. evolve a system to ensure strict compliance with the orders of Hon'ble Courts;
- 21. review the assignment of duties to the officers of division offices and vigilance offices to avoid duplication and ensure optimum utilisation of their abilities and take measures to strengthen functioning of the Vigilance wing and
- 22. adopt the latest technology to measure volume of minerals excavated.

CHAPTER-I

Introduction

Chapter I: Introduction

1.1 Introduction

Mineral as defined under Section 3aa of the Mines and Minerals Development and Regulation Act, 1957 (MMDR Act) includes all minerals except mineral oils. State of Rajasthan has 81 varieties of minerals out of which 57 are being commercially exploited. Mining is not only a major source of employment in the rural and tribal areas of the State but also a major source of revenue for the government, thus playing an important role in the development of the State.

Rajasthan has the highest number of mine leases (ML) in the country. There were a total of 301 major mineral¹ leases, 22,242 minor mineral² leases and 23,106 quarry licenses³ as on 01 April 2020 in the State⁴. The State earned ₹ 4,579.09 crore revenue from minerals in 2019-20 and the sector contributes 6.11 *per cent* to the State's revenue.

However, the State also faces challenges in this sector. There were numerous instances of illegal mining and several study reports have highlighted the environmental damage done in the Aravalli region due to mining. This is despite the fact that several regions of the State have been declared eco sensitive zones, where mining is prohibited.

Regulation of Mining and Illegal Mining:

The MMDR Act lays down the legal framework for the regulation of mines and development of minerals. It provides the manner and system of mining operations, conservation and systematic development of minerals and also the penalties for violation of this Act and rules made thereunder.

Section 13 of the Act provides power to Central Government to make rules in respect of minerals. Section 15 provides power to state governments to make rules in respect of minor minerals. Accordingly, the state government may, by notification in the Official Gazette, make rules for, regulating the grant of quarry licenses, mining leases or other mineral concessions in respect of minor minerals and for purposes connected therewith. Receipts from minerals mainly consist of royalty which is levied on the quantity removed or consumed from mines. The Government of Rajasthan had approved Rajasthan Minor Mineral Concession Rule, 1986 which was amended and notified as Rajasthan Minor Mineral Concession Rules, 2017 (RMMC Rules, 2017) and is applicable from 1 March 2017.

Major minerals means minerals like Asbestos, Barytes, Bauxite, Cadmium, Coal, Copper, Lead, Manganese, Nickel, Rock Phosphate, Tungsten, Wollastonite, Zinc, etc. as specified in Second Schedule appended with the Mines and Minerals (Development and Regulation) Act 1957

² 'Minor minerals' means building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes, and any other mineral which the Central Government may, by notification in the Official Gazette, declare to be a minor mineral;

³ 'Quarry Licence' means a licence granted under these rules to excavate minerals on fixed annual licence fee exclusive of royalty. Mining lease could not be granted for less than one hectare, however, quarry licence could be granted up to 0.18 hectare up to August 2018.

⁴ Source: Departmental web-site (https://mines.rajasthan.gov.in/).

According to rule 2 (xxx) of RMMC Rules, 2017 'Illegal Mining' means any prospecting or mining operations undertaken by any person in any area without holding any mineral concession, permit or any other permission granted or permitted under these rules or without any lawful authority, as the case may be. It is further explained that for the purpose of this clause:

- (a) violation of any rules, during prospecting or mining operations in any area under authority of valid mineral concession, permit or any other permission granted under these rules shall not be considered as illegal mining;
- (b) any area granted under a mineral concession, permit or any other permission granted under these rules, as the case may be, shall be considered as an area held with lawful authority by the holder of such lease, licence or permit while determining the extent of illegal mining; and
- (c) any research work or field studies carried out by teachers and students of college as a part of their field curriculum shall not be treated as illegal mining.

Further, rule 54 of RMMC Rules, 2017 provides that:

- 1. No person shall undertake any prospecting or mining operations in any area without holding any mineral concession, permit or any other permission granted or permitted under these rules, as the case may be and shall not dispatch mineral from the mines, except from the quarry licenced area or bricks, without valid *rawanna*⁵ or transit pass.
- 2. No person shall transport or store or cause to be transported or stored any mineral otherwise than in accordance with the provisions of these rules.
- 3. Whoever contravenes the provisions of sub-rule (1) and (2) shall be punished with imprisonment for a term which may extend to five years or with fine which may extend to five lakh rupees, or with both.

Provided that the competent authority may either before or after the institution of the prosecution, compound the offence committed in contravention of the rule on payment of cost of mineral and compound fee. Cost of the mineral shall be taken as ten times of royalty in lieu of rent, royalty, compensation for environmental degradation and tax chargeable on the land occupied without lawful authority, *etc.*

1.2 Why we selected the topic?

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There were frequent reports in the media regarding illegal mining of minerals in the State. According to the Mines and Geology Department, Rajasthan there were 48,486 cases of illegal mining during the years 2015-16 to 2019-20. There was an increasing trend (as given in Table 2.1 of paragraph number 2.4) in illegal mining cases during the last years except 2019-20. CAG's Audit Report for the year ended 31 March 2011 (Paragraph number 6.7.6) and Audit Report for the year ended 31 March 2014 (Paragraph number 7.4.11.1) etc.

[&]quot;Rawanna" means the rawanna or e-rawanna duly issued by the department or electronically generated from the departmental web portal and includes any other system notified by the Government for dispatch, consumption or processing of mineral or overburden from a specified area granted under any mineral concession or permit. "Transit Pass" means a pass including e-transit pass duly issued by the Department or generated online, to the lessee, stockiest, trader, dealer etc. for lawful transportation of royalty paid mineral.

depicted the quantum of illegal mining in the State. Thereafter, regular audit conducted by this office had also highlighted cases of illegal mining operations. The Rajasthan State Mineral Policy 2015 and RMMC Rules, 2017 have been promulgated by the State Government. Certain significant changes were introduced through these policy/new rules. However, use of new technology was not adopted by the Department to assess legal as well as illegal mining except drone survey of 43 leases in one district. Insufficient inspections of leases by the concerned officials were also noticed during regular audits.

The Department also introduced a new system for online generation of *rawanna*/transit pass through departmental web portal from November 2017 for dispatch of minerals with the aim to check evasion of royalty, to enhance transparency in the system and to facilitate paper less environment friendly work. A summary of illegal activities in mining before and after introduction of this system is shown in **Table 1.1** and **Table 1.2**:

Table 1.1 Illegal mining activities identified by the Department before introduction of *e-rawanna* system

Period	Illegal mining	Illegal transportation	Illegal Stock	Total
	cases	cases	cases	
2015-16	625	4,159	125	4,909
2016-17	452	4,426	105	4,983
4/2017 to 10/2017	242	2,667	40	2,949
Total cases	1,319	11,252	270	12,841
Total 12,841 cases of	f Illegal mining acti	vities were identified in 2	vears and 7 months	S.

Table 1.2

Illegal mining activities identified by the Department after introduction of online *e-rawanna* system

system						
Period	Illegal mining	Illegal transportation	Illegal Stock	Total		
	cases	cases	cases			
11/2017 to 3/2018	237	5,292	46	5,575		
2018-19	631	15,977	245	16,853		
2019-20	606	12,141	470	13,217		
Total cases	1,474	33,410	761	35,645		
Total 35 645 cases of	f Illegal mining acti	vities were identified in 2.	vears and 5 months	3		

The above tables indicate that there was significant increase in identification of illegal mining activities after introduction of *e-rawannas*. However, shortcomings were noticed during Compliance audits even after introduction of *e-rawannas*/transit passes.

Therefore, this topic was selected to check the effectiveness of the departmental monitoring system to identify illegal mining activities and use of modern technology *i.e.* remote sensing data⁶ and Geographic Information System⁷ (GIS) to check illegal excavation of minerals.

1.3 Organizational set-up

Director Mines and Geology (DMG) is overall responsible to prevent illegal mining activities in the State. Further, according to rule 33 (4) of RMMC Rules,

A Geographic Information System is a conceptualized framework that provides the ability to capture and analyse spatial and geographic data.

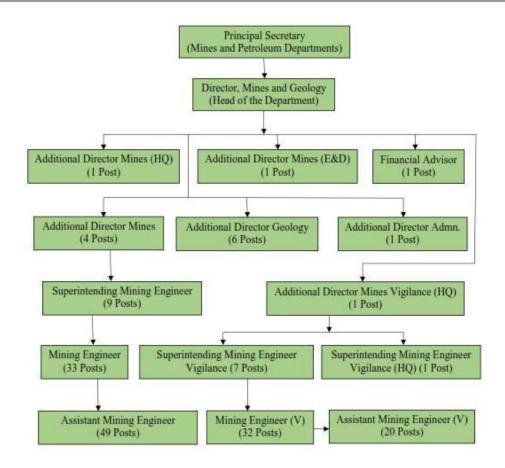
⁶ Remote sensing is the science of obtaining information from a distance wherein it can be used to assess certain features of the Earth.

2017 the forest officials shall take necessary action under forest laws against any illegal mining in forest land. The Mines and Geology Department has:

- (i) 49 Mining Engineers/Assistant Mining Engineers (MEs/AMEs) offices at divisions level
- to keep proper watch and take suitable measures to check unauthorized mining/leakage of revenue and
- to inspect check posts as well as mineral stocks of processor, manufacturer, dealer or trader or any permit holder in their jurisdiction as per provisions of the MMDR Act 1957 and the Minor Mineral Concession Rules.
 - MEs/AMEs are assisted by Mines Foremen and Surveyors.
- (ii) There were nine Superintending Mining Engineers (SME) at Circle level for supervision of MEs/AMEs and to keep watch on the unauthorised removal of minerals.
- (iii) Four Additional Directors of Mines (ADM) at zone level monitor the working of the SMEs and their subordinates.
- (iv) Further, the Department has a specialized Vigilance Wing comprising 32 MEs/ AMEs offices to
- carry out intensive checking against unauthorised mining or unauthorised excavation and removal of minerals,
- inspect the departmental check posts in his jurisdictions frequently to check leakage of Government revenue,
- ensure that proper records were maintained by the processors/manufacturers/stockists.
- (v) MEs/AMEs of vigilance wing are supervised and monitored by seven SMEs (Vigilance) at circle level and one ADM (Vigilance) at Directorate.

At the Government level, the Principal Secretary, Mines and Petroleum is responsible for administration and implementation of the related Acts and Rules.

A chart showing overall organisational set up of the Department is given hereunder:



Audit Report (Performance Audit) for the year ended 31 March 2020			

CHAPTER-II Audit Framework

Chapter II: Audit Framework

2.1 Audit objectives

Audit objectives are to ascertain whether:

- (i) Department has adequate human resources, efficient IT system and utilised latest technology and know-how to check and prevent illegal mining;
- (ii) Provisions of the Acts and Rules governing administration of mines and minerals were being implemented effectively to check and prevent illegal mining; and
- (iii) Effective controls existed to monitor mining activities so that environmental and ecological concerns were addressed properly.

2.2 Audit criteria

- Mines and Minerals (Development and Regulation) Act, 1957;
- Mineral Conservation and Development Rules, 2017;
- Mineral Concession Rules, 1960;
- Mineral Other Than Atomic and Hydrocarbon Energy Minerals Concession Rules 2016;
- Rajasthan Minor Mineral Concession Rules, 1986;
- Rajasthan Minor Mineral Concession Rules, 2017;
- Rajasthan Mineral Policy;
- Environment Protection Act, 1986;
- Rajasthan Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules, 2007;
- Consent for Establishment and Consent for operation issued by Pollution Control Board and
- Notifications and circulars *etc*. issued thereunder and directions issued by the Ministry of Mines.

2.3 Audit Scope and Methodology

The scope of this audit is to examine the mechanism in place to detect illegal mining activities of minor minerals except sand mining cases and remedial action initiated by the Department of Mining and Geology. Cases of illegal mining were identified through the use of Remote sensing data and Geographic Information System (GIS) technology using *Google Earth Pro*. Apart from collecting data on the inspections and identification of illegal mining done by the Department, a study of the mining areas as seen from the Satellite images *vis-a-vis* leases granted by the Government is attempted.

Out of 49 division offices, a sample of five divisional offices¹ was selected for scrutiny based on number of illegal mining cases and penalty imposed. Within the selected divisions, five *Tehsils*, were selected for spatial study through satellite images (one *Tehsil* from each selected division offices). Further Vigilance offices² and SME offices³ were also selected to check working of the Department. Audit test-checked 514 leases out of total 1,762 leases of selected divisions *i.e.* 29 *per cent*.

A review of the data from the files/information relating to systems in place and the cases detected by the Department was carried out for the years 2015-16 to 2019-20. Further, improvement in the working of the Department was checked up to the month of October 2021 with the help of departmental online system and incorporated in this report. Satellite images were used to identify the area of illegal mining which are outside the area of the mining leases in the selected *Tehsils*.

Further, Joint Physical Verification (JPV) of illegal mining points identified with the help of satellite images was conducted with the representatives of the Department. Audit also reviewed the system in place to prevent illegal mining, deployment of manpower for this purpose and related environmental issues.

An Entry Conference was held on 18 January 2021 with the Principal Secretary, Mines and Petroleum, wherein, objectives and methodology of performance audit were explained.

An Exit Conference was held on 28 October 2021 with the Deputy Secretary, Mines and Petroleum along with DMG and other officials of the Department wherein results of the performance audit and recommendations were discussed. The replies of the Department/Government received during the exit conference and subsequently in response to draft report (February 2022) have been appropriately included in the audit report.

2.4 Revenue from Minerals and Illegal Cases

The revenue collection during the years 2015-16 to 2019-20 is as discussed in **Table 2.1**:

Table 2.1
Trend of revenue and cases of illegal mining activities

(₹ in crore)

Year	#Total revenue raised by the State Government	#Total mining revenue of the State	Percentage of revenue to the total revenue raised	*Cases of illegal mining/transportation/storage
2015-16	53,640.79	3,782.13	7.05	4,909
2016-17	55,987.23	4,233.74	7.56	4,983
2017-18	66,339.13	4,521.52	6.81	8,524
2018-19	75,983.35	5,301.48	6.97	16,853
2019-20	74,959.14	4,579.09	6.11	13,217
Total	3,26,909.64	22,417.96	6.86	48,486

#Source: Finance Accounts of the respective years.

*Source: Web portal of Mines and Mineral Department (DMGOMS)

³ Superintendent Mining Engineer Offices: Jaipur.

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¹ Division Offices: Alwar, Kotputli, Makrana, Neem ka Thana and Sikar.

² Vigilance Offices: Alwar, Kotputli, Makrana, Neem ka Thana, Sikar and Tijara.

It can be seen from the above table that percentage of revenue to the total revenue raised was between 7.56 and 6.11 during the period of 2015-16 to 2019-20. The number of cases of illegal mining/transportation/storages has an increasing trend except the year 2019-20. This depicts that there are weaknesses in the system to prevent illegal mining activities and it needs proper attention of the Department and improvement in the system as discussed in the succeeding paragraphs.

2.5 Acknowledgement

The Indian Audit and Accounts Department acknowledges the co-operation extended by the Mines and Geology Department, its officers and staff in providing necessary information and records to Audit.

Audit Report (Performance Audit) for the year ended 31 March 2020					

CHAPTER-III Use of Technology

Chapter III: Use of Technology

Department had introduced a web-based application named Department of Mines and Geology Online Management System (*DMGOMS*) with effect from 10 October 2017, for:

- online submission of application for mineral concession,
- deposit all government dues,
- maintaining demand registers,
- lease information,
- data of permits issued,
- illegal mining cases and
- empanelment of weigh bridges, etc.

The *DMGOMS* provides facility to generate various reports for effective monitoring of the leases and others matters. Timely updating of information in the *DMGOMS* is essential for effective monitoring of the leases as well as working of the officials. Coordinates of leases were also uploaded on this application. Online generation of *rawanna/transit pass* through *DMGOMS* was made compulsory from November 2017 for dispatch of minerals with the aim to check evasion of royalty, to enhance transparency in the system and to facilitate paper less environment friendly work. The Government of India also initiated (October 2016) Mining Surveillance System (MSS) to identify illegal mining activities.

Use of the satellite-based technology *i.e.* remote sensing data and GIS technology has an immense importance to check and prevent illegal mining. It is a transparent system which has a deterrence effect as continued monitoring can be made from satellite data. It is bias-free and independent as the system is built on technology-based evidence. It has quicker response and action as the mining areas can be monitored regularly and the sensitive areas could be monitored more frequently.

Audit scrutinised records of the selected offices and information available on *DMGOMS*. Audit findings are discussed in the succeeding paragraphs.

3.1 Non-utilisation of satellite images to detect and prevent illegal mining activities

According to Paragraph 7.5.1 of Rajasthan Mineral Policy, 2015, the Department will encourage usage of high-resolution satellite data for detecting encroachments and illegal mining. As per the official website of the Department, the AME/MEs of division offices shall:

- keep proper watch and take suitable measures to check unauthorised mining and leakage of revenue and also inspect check posts as well as mineral stocks of processor, manufacturer, dealer and trader in his jurisdiction.
- keep a watch over all the mining and mineral activities in his area and shall keep higher officers well informed of the same.

Further, AME/MEs (Vigilance) were also assigned duties to:

• carry out intensive checking against unauthorised mining or unauthorised excavation:

- inspect the mining areas wherever there is any doubt about working outside the lease hold areas.
- conduct frequent checking of vehicles carrying mineral in their jurisdiction particularly, where there are possibilities of evasion of royalty.

AME/MEs are assisted by foremen and surveyors. They were assigned duties to keep watch on the mining activity in the area and whenever, any unauthorised work is detected they shall report the matter immediately to ME/AME concerned. They shall ensure that there is no leakage of revenue in their areas and shall inspect the check posts and mineral carrying vehicles. They shall also inspect mineral stocks of processor, manufacturer, dealer, trader within their jurisdiction as per provision of relevant Acts and Rules.

During review of records of selected five division offices, it was observed that the use of technology, viz. GIS technology was not being applied by the Department for keeping a watch over the mining activities in the State except in a few cases where the Government of India pointed out illegal mining sites with the help of satellite images. Audit used Google Earth Pro application¹ to detect illegal mining nearby the leases allotted by the Department. Audit identified 122 illegal mining points/areas (IMP) in selected area. All the nearby leases of these IMPs were of minor minerals *i.e.* masonry stone, soapstone, marble, felspar, quartz and silica sand. Review of records of these leases revealed that no inspection was carried out by three offices. Resultantly, the Department was unable to identify illegal mining activities either through remote sensing data/GIS technology or through physical inspections of leases. Details are given in the **Table 3.1**:

Table 3.1

Details of illegal mining points identified through *Google Earth Pro*

Sl. No.	Name of office and number of leases	Name of selected Tehsil	Total number of leases in the Tehsil	Number of leases selected (area of leases in hectare)	Number of IMPs identified	Areas of IMPs in hectare	Number of leases related to IMPs	Number of inspection by departmental officials in IMP related leases
1	2	3	4	5	6	7	8	9
1	ME Sikar (251)	Dantaramgarh	137	113 (123.44)	35	21.85	48	6
2	AME Kotputli (370)	Kotputli	249	100 (620.30)	29	32.76	44	1
3	AME Neem ka Thana (493)	Neem ka Thana	493	100 (146.41)	8	6.09	12	0
4	ME Alwar (451)	Rajgarh	147	100 (346.07)	15	7.68	21	0
5	ME Makrana (197)	Parbatsar	101	101 (112.43)	35	14.87	50	0
Total	(1762)		1,127	514 (1,348.95)	122	83.25	175	7

Google Earth Pro is a computer program that renders a 3D representation of Earth, based primarily on satellite imagery. It is a free on-line application.

The above table depicts that illegal mining activities were being done nearby 34.04 *per cent* of selected leases *i.e.* 175 out of 514 selected leases. The identified area of illegal mining was 83.25 hectare. This indicates that illegal mining was being done nearby the allotted leases and remained largely undetected. Further, inspections were also not effective as illegal mining activities nearby the leases were not mentioned in any of the field inspections reports. This indicated inadequate and in-effective inspections by the officials.

Audit analysed the changes in the area over the years through remote sensing data. The images below are taken with a gap of few years and the visualisation of illegal mining was evident in the latest images. Some illustrative images are as follows:

- Green line depicts limits of Lease area.
- Yellow line depicts illegal mined area.



Figure 1: Comparison of Satellite Imagery taken on 17.06.2011 and 19.02.2019 showed the illegal mining in 0.44 hectare of land outside the lease area (lease number 53/2000 and 31/1998, ME Sikar).



Figure 2: Analysis of Satellite Imagery taken on 11.04.2013, 26.11.2016 and 29.05.2020 revealed continuous illegal mining in 0.92 hectare adjoining the lease number 295/2005 (AME Neem ka Thana).



Figure 3: Analysis of Satellite Imagery taken on 10.10.2007, 07.01.2014 and 04.12.2018 revealed illegal mining in 0.43 hectare area adjoining lease number 380/2005 (ME Makrana).



Figure 4: Analysis of Satellite Imagery taken on 25.11.2006, 15.05.2011 and 29.05.2020 revealed continuous illegal mining in an area of 1.13 hectare adjoining lease number 33/1997 and 34/1997 (AME Kotputli).

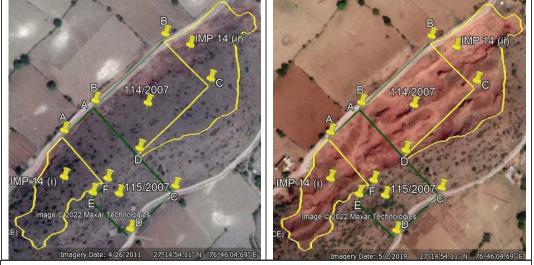


Figure 5: Analysis of Satellite Imagery taken on 26.04.2011 and 01.05.2019 revealed illegal mining in an area of 1.63 hectare adjoining lease number 114/2007 and 115/2007 (ME Alwar).

The above images illustrate how satellite imagery can be used as a powerful tool to identify illegal mining. However, no attempts were found to be made by the Department in this regard, despite a clear provision in the policy for the

same. Cases of IMPs nearby the leases revealed an alarming situation and the Department needs to tackle it on a priority basis.

Joint Physical Verification

To confirm the results of satellite images, audit carried out a Joint Physical Verification (JPV) at the sites, along with the officials of the Department. Audit selected five IMPs of each Division for JPV. Accordingly, JPV was carried out (between 22 March 2021 and 30 June 2021) at 25 IMPs in five division offices. Department used Global navigation satellite system (GNSS)² to verify the coordinates of the leases and IMPs. Depth/height of the pits of IMPs was measured with the help of Tape Measure (*Feeta*) as Division offices didn't have latest equipment to measure depth and height of the pit such as laser-based measuring technology and mapping tools. JPV confirmed illegal mining in all the IMPs checked. Results are given in the **Table 3.2**:

Table 3.2

Results of Joint Physical Verification

Sl. No.	Name of Division	Total number of IMPs identified through GIS technology	Total number of IMPs verified through JPV	Area of IMP according to Satellite images (In hectare)	Approximate depth of illegal mining pit ³	Remarks
1.	Alwar	15	1	0.61	20 to 60 meter Not taken	Illegal mining was verified in JPV, however, GNSS equipment could not connect with the satellite, therefore, area and height were not ascertained.
2.	Kotputli	29	5	5.26	22 to 70 meter	-
3	Makrana	35	1	0.72	6 to 25 meter	-
4	Neem ka Thana	8	5	4.18	6 to 20 meter	-
5.	Sikar	35	4	1.19	5 to 25 meter	
			1	0.48	-	Illegal mining of ordinary earth was found in IMP area, therefore, co-ordinates and depth were not taken.
	Total	122	25	17.21	5 to 70 Meter	

Following points were observed from the analysis of the **Table 3.2**:

Global navigation satellite system (GNSS) is a general term describing any satellite constellation that provides positioning, navigation, and timing services on a global or regional basis.

³ Maximum depth of the pit was noted during JPV.

- Illegal mining pits were found at similar locations as identified through *Google Earth Pro* images at all the places except in one case where GNSS could not be connected with satellite;
- Depth of excavation of minerals in these illegal mining pits was ranged between 5 and 70 meters.

A few images of area identified through satellite images and area verified during JPV are given below for illustration of each selected division office. The lease area is shown by green line, area identified by satellite images is by yellow line and area identified during JPV is marked by red line. Photographs taken are also given hereunder to prove the illegal mining.

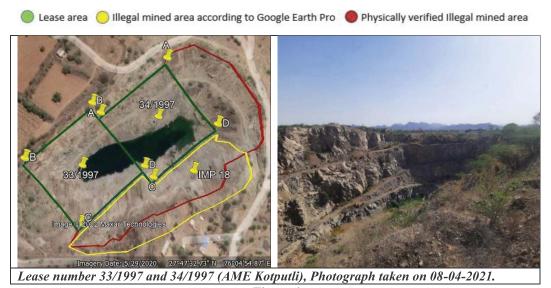


Figure 6



Figure 7

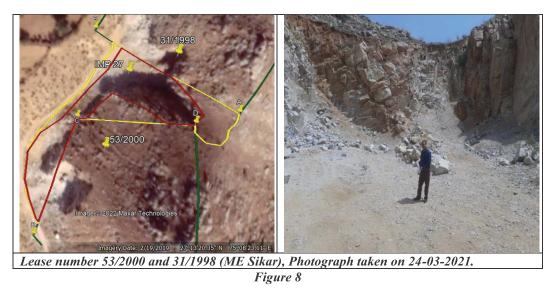




Figure 9



From the above, it is evident that satellite images could be used to identify the illegal mining activities.

Back filling of illegal mining

During JPV, audit also noticed that at two IMPs (Sikar and Neem ka Thana), huge pits of illegal excavation were being back filled with the mix of sand, dust or overburden material.

Image of back filling of illegal mining pit





Lease number B/518/2005 (AME Neem Ka Thana), Photograph taken on 06-04-2021.

Figure 11

Thus, JPV established that use of technology is helpful in identifying illegal mining activities.

The Government replied (February 2022) that drone survey was done in 59 leases of ME Gotan and ME Nagaur. Further, directions were also issued to offices for inviting tender as per availability of budget for conducting drone survey of minimum 5 *per cent* of leases selected through random sampling method. Department also issued directions to offices to identify the illegal mining site through *Google Earth Pro* application on the basis of satellite images. After the matter was reported (February 2022) to the Government, the departmental officials⁴ inspected (June and July 2022) 14 IMPs out of 25 jointly verified IMPs. Department confirmed that 13.37 lakh MT mineral masonry stone, marble, quartz, felspar and silica sand in these 14 IMPs was illegally excavated. Notices had been issued to the nearby lease holders. For the remaining IMPs it was intimated that action was being taken.

According to the royalty rates prescribed in the RMMC Rules, 2017 the cost of this illegally excavated mineral (13.37 lakh MT) was ₹111 crore. Out of this ₹ 0.50 crore was recovered by AME Neem Ka Thana. Further progress is awaited (August 2022).

The fact confirmed the audit contention that the use of technology can prove to be a powerful tool to identify illegal mining areas and can assist the Department in effective control over mining activities. However, except in few limited leases the Department did not use the technology to identify illegal

⁴ ME/AME: Alwar (2 IMPs); Kotputli (1IMP); Makarana (5 IMP); Neem ka Thana (1 IMP) and Sikar (5 IMP).

mining. Delay in identification of illegal mining areas would lead to increase in illegal mining activities and loss of revenue to the State exchequer. Thus, there is a need to expedite use of technology.

3.2 Misuse of Rawannas

Rawanna is a legal document to authorise the movement of mineral. A lessee has to generate *e-rawanna* from the *DMGOMS* before each dispatch of mineral from the lease area.

According to rule 2(xliii) of RMMC Rules 2017, "rawanna" means the rawanna or e-rawanna duly issued by the Department or electronically generated from the departmental web portal and includes any other system notified by the Government for dispatch, consumption or processing of mineral or overburden from a specified area granted under any mineral concession or permit. Further, according to rule 54 of RMMC Rules, 2017, no person shall undertake any prospecting or mining operations in any area without holding any mineral concession, permit or any other permission granted or permitted under these rules, as the case may be and shall not dispatch mineral from the mines without valid rawanna or transit pass.

Dispatch of illegally mined minerals with the support of e-rawannas is not only a threat to revenue but also leads to illegal mining activities in the State. There were 22,242 leases of minor minerals in the State out of which audit analysed 514 leases of selected divisions⁵ to observe this threat. It was observed that in 13 MLs no excavation was done by the lessees in the lease areas. However, 5.20 lakh metric ton (MT) of mineral involving cost of ₹ 16.64 crore was dispatched from these MLs using 22,854 e-rawannas till March 2020. It indicated that misuse of e-rawannas was being done on a large scale in the State and the department could not effectively prevent the illegal mining.

An illustrative satellite image is given hereunder:



Figure 12

The analysis of Satellite images revealed that there was no mining activity at ML number 121/2006 (ME Makrana) during the period July 2014 to June 2021. However, the lessee dispatched 57,568.43 MT mineral through 2,317 e-*rawanna* from this lease from 30 August 2018 to 25 November 2019.

Divisions. No such case was noticed in any of the selected 100 leases of Division Alwar.

Audit selected five Divisions and 514 leases and noticed misuse of *e-rawannas* in four

The fact indicates that *e-rawannas* were misused to transport minerals excavated from other than the allotted areas. The details of misuse of *e-rawannas* are given in the **Table 3.3**:

Table 3.3
Details of minerals dispatched by misuse of *rawannas*

S. No.	Name of Office	Selected Tehsil	No. of leases	Number of e- rawannas	Quantity of mineral dispatched (in MT)	Cost of mineral (₹ in crore)
1	ME Sikar	Dantaramgarh	2	172	5,035.26	0.18
2	AME Kotputli	Kotputli	3	2,331	52,680.63	1.84
3	AME Neem ka Thana	Neem ka Thana	5	17,459	3,26,188.76	11.45
4	ME Makrana	Parbatsar	2	2,381	58,663.41	1.64
5	ME Jaipur ⁶	-	1	511	77,834.00	1.53

In ME Jaipur, the lessee dispatched 99,464 MT of masonry stone during April 2000 to March 2020, however, mineral excavated during this period was 21,630 MT as per site inspection report (25.06.2020) of Mines Foreman. Hence, the lessee dispatched 77,834 MT (99464-21630) of masonry stone by misusing *rawanna*.

Total 13 22,854 5,20,402.06 16.64

The Government replied (February 2022) that a separate IT wing has been proposed for effective monitoring of such cases.

The fact remains that Department did not utilise the technology to check the misuse of *rawannas*. Had the Department used the satellite imagery they would be aware of the extent of mining and could correlate that with issue of *e-rawannas*.

3.3 Demarcation and Allocation of leases

Rule 7 of RMMC Rules, 1986 envisaged that the ML shall be granted after the area is first delineated and plots suitably numbered. Further, rule 12 of RMMC Rules, 2017 prescribed that the Government shall identify and demarcate the area where a mineral concession is proposed to be granted using global positioning system (GPS) or differential global positioning system (DGPS)⁷, prior to issuance of 'the notice inviting bid' with respect to mineral concession auction.

Mines Foremen and Surveyor were responsible for preparing lease area plans and maps *etc*. according to the directions of AME/ME concerned. Maps were prepared with the help of Compass and *Feeta* prior to availability of DGPS/GNSS and thereafter, with the help of DGPS/GNSS.

Thus, planning, demarcation and allotment of leases was to be done with due diligence so that irregularities such as overlapping of leases and unnecessary gap areas between the leases could be avoided.

During scrutiny of satellite images of leases, Audit observed that the demarcation of leases was not done with due diligence, which resulted in

⁶ A unit covered under Regular Audit.

Differential Global Positioning System (DGPS) is an enhancement to Global Positioning System (GPS) that provides improved positional accuracy.

overlapping of leases and gap areas between the leases. Department did not use technology to overcome these issues as discussed in the ensuing paragraphs.

3.3.1 Overlapping of leases

Scrutiny of images of selected leases on *Google Earth Pro* revealed that lease areas of 43 leases overlapped with each other. This shows that these leases were not demarcated properly. Without clear demarcation of lease area, Department could not assess the mineral excavated by the individual lessee. Further, responsibility for non-compliance with the rules and instructions in the overlapped area could also not be fixed. Cases of overlapping of leases noticed in the test checked *Tehsils* are given in the **Table 3.4:**

Table 3.4

Details of overlapping of leases

S.N.	Name of office and (Name of <i>Tehsil</i> selected)	Number of leases in selected <i>Tehsil</i>	Number of leases selected	Number of leases overlapped (percentage to number of leases selected)	Overlapped area (in hectare)
1	ME Sikar (Dantaramgarh)	137	113	7 (6)	0.25
2	AME Kotputli (Kotputli)	249	100	10 (10)	52.16
3	AME Neem ka Thana (Neem Ka Thana)	493	100	-	-
4	ME Alwar (Rajgarh)	147	100	15 (15)	2.36
5	ME Makrana (Parbatsar)	101	101	11 (11)	2.59
	Total	1127	514	43 (8)	57.36

The above table depicts that about eight *per cent* of leases were not demarcated correctly to avoid overlapping. The overlapped area of these leases (as shown in table 3.4) was 57.36 hectare. These leases were sanctioned between the years 1977 and 2017 and since then the problem has continued. An illustrative image is given below to show overlapping of leases.

Image of leases under the jurisdiction of ME Sikar



Figure 13

The Government replied (February 2022) that previously demarcation of leases was done with the help of Compass and *Feeta* (Tape measure) and maps were prepared manually by plotting lease area on master map. Use of GPS/DGPS (GNSS) equipment was made compulsory for the purposes after RMMC Rules, 2017, came into force, therefore, these errors occurred as accuracy of manual plotting differs from computerized GIS plotting.

3.3.2 Gap areas between the leases

Rule 7 of RMMC Rules, 2017 prescribes that the area surrounded by two or more mining leases or by forest boundary or any other reserved land shall be treated as gap area and such gap area shall be granted as a mining lease by way of e-auction. Further, where gap area is less than 0.5 hectare, such area shall be granted by way of e-auction among surrounding lessees and the same shall be added in the lease of successful bidder.

Scrutiny of satellite images of 514 selected leases revealed that departmental officials demarcated leases in such a way that there were 30 gap areas left between the leases. Audit noticed illegal mining in 14 gap areas as given in the **Table 3.5:**

Table 3.5
Details of gap areas

S. No.	Name of Office	Number	Number of gap areas	Area of illegal
		of gap areas	where illegal mining noticed	mining in gap area (In hectare)
		areas	noticeu	(In nectare)
1	ME Sikar	8	8	3.45
2	AME Kotputli	7	0	0.00
3	AME Neem Ka Thana	5	1	0.10
4	ME Alwar	7	2	0.76
5	ME Makrana	3	3	0.77
Total		30	14	5.08

The Department did not make efforts to allocate/auction of these gap areas. Audit is of the view that if the Department had allotted these gap areas this would have fetched additional revenue of royalty and illegal mining activities would have also got stopped. Thus, Department was deprived of the additional revenue as dead rent and royalty. Further, illegal mining also could not be prevented in these areas. An illustrative image of gap area where illegal mining was noticed is as follows:

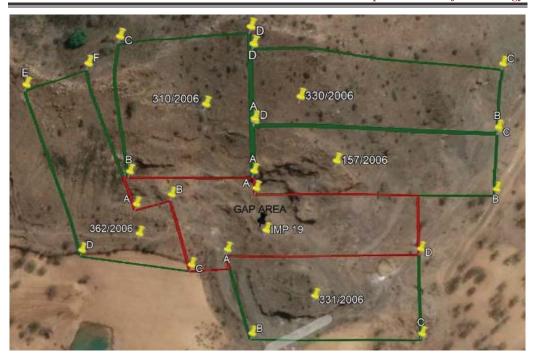


Figure 14
Image of illegal mining in gap area under the jurisdiction of ME Sikar

● Green line depicts Lease area. ● Red line depicts Gap area.

The Government replied (February 2022) that suitable gap areas would be auctioned and intimated to Audit.

Thus, deliberate failure of the Department not only encouraged illegal mining but also deprived of the additional revenue as dead rent and royalty.

3.4 Deficient online system

The Department introduced a new online system *DMGOMS* (10 October 2017) for the stakeholders. It includes key functions *e.g.* e-payment, lease information system, online demand register, *e-rawanna* and e-transit pass *etc.*

Audit noticed that the Department did not utilise the system to its full extent. Deficiencies are discussed in the succeeding paragraphs.

3.4.1 Dispatch of mineral through *rawannas* over the quantity permitted in Consent to Operate/Environment Clearance

According to rule 28(2)(iv)(b) RMMC, Rules 2017 lessee shall keep production of all the minerals within the limits of mine plan or permitted under applicable laws. Provided that:

- if the lessee has excavated mineral to the extent of ten *per cent* over and above the quantity specified in the mine plan or permitted under applicable laws, only single time royalty shall be recovered;
- quantity more than ten *per cent* but upto twenty five *per cent*, two times of royalty on entire quantity over and above specified in the mine plan or permitted under applicable laws shall be recovered and

• any quantity more than twenty five *per cent*, entire quantity over and above specified in the mine plan or permitted under applicable laws shall be treated as unauthorized excavation and lessee shall be liable to pay cost of such excess mineral which shall be computed as ten times of the royalty payable at the prevalent rate, without affecting the powers of taking action by the other departments.

Further, rule 34 of RMMC Rules, 2017 provides for environmental safeguard. Accordingly, no mining lease or quarry licence shall be granted without obtaining prior consents, approvals, permits, no-objections and the like as may be required under applicable laws for commencement of mining operations.

During scrutiny of records of selected leases and information available on *DMGOMS*, it was observed that lessees had excavated excess minerals against the permitted quantity mentioned in Consent to Operate (CTO)/Environment Clearance (EC). Details are given in the **Table 3.6**:

Table 3.6

Details of excess excavated mineral beyond permitted quantity

S. No.	Name of Division	No. of leases	Quantity excavated in excess of CTO (in Metric Ton)	Quantity excavated in excess of EC (in Metric Ton)	Quantity excavated without CTO (in Metric Ton)	Quantity excavated without EC (in Metric Ton)	Amount Recover- able (₹ in crore)
1	AME Neem ka Thana	2	23,445	17,300	-	-	0.13
	1 nana						
2	AME Kotputli	26	5,96,337	29,830	2,73,266	60,820	3.80
3	ME Alwar	2	5,619	-	=		0.07
4	ME Makrana	8	6,000	34,285	-	3,22,294	9.99
	Total	38	6,31,401	81,415	2,73,266	3,83,114	13.99

Audit test checked 514 leases of selected five division offices out of which it was noticed that 38 lessees had excavated minerals in excess of the permitted quantity in CTO/EC or without obtaining CTO/EC. Due to violation of the provisions of RMMC Rules, 2017 an amount of ₹ 13.99 crore was leviable on the lessees. However, the Department did not notice the irregularity. The above table indicates that about seven *per cent* of the test checked lessees were violating the provisions, but the Department was not vigilant in checking these activities.

The Government replied (February 2022) that auto blocking of generation of *e-rawannas* in excess of the quantity permitted by CTO had been made effective since 27 October 2018 in *DMGOMS*. Similar module has also been developed for EC. It was added that, however, it would be made effective after decision at departmental level.

Reply is not tenable as due diligence was not followed by the departmental officials to prevent generation of e-rawannas in excess of the permitted quantity. Further, delay in module to auto block generation of e-rawannas in excess of the quantity permitted by EC also leads to leakage of revenue. Absence of due diligence and non-mapping of required checks in *DMGOMS* resulted in the dispatch of mineral over the quantity permitted in CTO/EC.

3.4.2 Incomplete/incorrect information of demand and recovery on *DMGOMS*

Information of pending demand of illegal mining activities was sought (between January and July 2021) from the selected five offices. Only three offices provided information. Scrutiny of demands of illegal mining activities related to mining leases revealed that the demand was not shown in the demand register maintained on *DMGOMS* in the case of 53 leases as detailed in **Table 3.7**:

Table 3.7
Details of penalty amount not shown in *DMGOMS*

(₹ in crore)

S. No.	Name of Office	Number of leases where demand of illegal mining activities not entered in <i>DMGOMS</i>	Demand raised	Demand recovered	Pending demand
1	AME Neem ka	42	25.08	4.32	20.76
	Thana				
2	ME Alwar	4	15.89	0.79	15.10
3	AME Kotputli	7	30.23	2.99	27.24
	Total	53	71.20	8.10	63.10

Audit noticed that the pending demand as shown in above table was not uploaded by the Department on *DMGOMS*. Thus, *DMGOMS* did not depict actual pendency of demand against the lessees in respect of illegal mining activities.

In the absence of information on pending demand by the remaining two offices, it could not be checked as to whether all pending demands of the lessees were shown in the *DMGOMS* by these Divisions.

The Government replied (February 2022) that action is being taken as per rules.

Reply is not tenable as the departmental officials did not raise the demand of penalty for illegal mining activities (as shown in the above table). Further, Department did not have a system to check that every demand is entered in the online system.

3.4.3 Co-ordinates of Short Term Permits not uploaded

According to rule 51 of RMMC Rules, 2017 Short Term Permit (STP) may be granted for excavation and use of mineral masonry stone, *murram*, (ordinary earth *etc.*) to a contractor for executing works of Government, Semi-Government, Local Body, *Panchayati Raj* Institution or Organizations aided or funded by the Government. Accordingly, the Department issued 22,445 STPs⁸ for excavation of mineral or to consume royalty paid minerals.

Scrutiny of information available on *DMGOMS* disclosed that Department had not uploaded the coordinates of STPs on *DMGOMS*. In the absence of these coordinates, illegal mining nearby the STPs could not be identified by Audit.

The Government replied (February 2022) that provision for uploading the coordinates of STPs was available in the *DMGOMS* and concerned offices can upload the same.

⁸ Position of issued STPs as on 1st April 2020.

The fact remained that concerned offices had not uploaded the coordinates of the STPs and Department also did not ensure that coordinates of STPs were got uploaded.

3.4.4 Absence of GIS Mapping

GIS Mapping is the process of inputting data layers into GIS software to produce a map. These Maps present users with legible information that raw data cannot display on its own. It helps in better decision making and better geographic information record keeping *etc*. Gap areas and overlapping of leases can be identified by GIS mapping. *DMGOMS* has a provision for GIS Mapping of each lease. Illustrative image of GIS Mapping is given hereunder:



Figure 15
Illustrative image of GIS mapping of leases

Scrutiny of information available on *DMGOMS* disclosed that GIS Mapping had not been done for any of the leases of selected Division offices. In the absence of GIS Mapping, departmental officials were deprived of the necessary information to point out irregularities done by the lessees and others.

Further, it is noteworthy to mention here that the Government of India, Ministry of Mines had launched the Mining Surveillance System (MSS) in the country in October 2016 for major minerals to detect illegal mining. The Central Government had also asked the State Government to implement MSS for minor minerals by digitising all minor mineral leases by December 2016. However, Department had not digitised minor minerals leases (July 2021).

On being pointed out, AME Neem ka Thana replied (December 2020) that online software was not updated, therefore, mapping could not be done. ME Sikar and Alwar replied (December 2020) that there was no option in online software for GIS mapping. Thereafter, the Government replied (February 2022)

that *DMGOMS* had been integrated with the *Rajdharaa*⁹ and sanctioned lease areas were super imposed on *Rajdharaa* GIS system.

Test check of GIS mapping of lease areas revealed that overlapping of lease areas and gap areas between the leases could not be identified through this module. Thus, the purpose of GIS mapping could not be achieved.

3.4.5 Generation of e-rawannas

DMG instructed (18 October 2017) that till the completion of the maximum time period mentioned in *e-rawanna* for reaching the destination for a vehicle, no other *e-rawanna* can be generated for that vehicle. Each dispatch of mineral by a vehicle includes loading of mineral, generation of *e-rawanna*, parking of vehicle on weigh bridge, confirmation of *e-rawanna* by weigh bridge, reaching the vehicle at the destination and unloading of mineral and return to the mining site.

Audit, however, noticed that *e-rawannas* were generated before the completion of maximum time period mentioned on previous *e-rawanna* for the same vehicle. This indicates that above instructions issued by DMG were not mapped in *DMGOMS*. Some illustrative cases noticed are given hereunder:

- (i) Second *e-rawanna* was generated within five minutes after generation of first *e-rawanna* for the same vehicle despite the fact that the distance of destination in the first *e-rawanna* was 15 kilometres;
- (ii) Second *e-rawanna* was generated within five minutes for the same vehicle despite the fact that the distance of destination in first *e-rawanna* was 10 kilometres;
- (iii) Seven *e-rawannas* were generated within 80 minutes for the same vehicle and four *e-rawannas* generated within 15 minutes for the same vehicle. Illustrative images are given hereunder to show the irregularity.

⁹ Integrated GIS Infrastructure of the State to enable good governance, sustainable development and citizen empowerment and to maintain standardized GIS assets of the State, developed by Department of Information, Technology & Communication.

Weigh bridge Registration Number: 201711080398

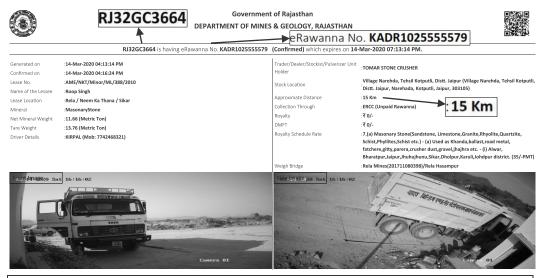


Figure 16: Two e-rawannas for vehicle number RJ32GC3664 were generated within five minutes as shown in figure 16 and 17.

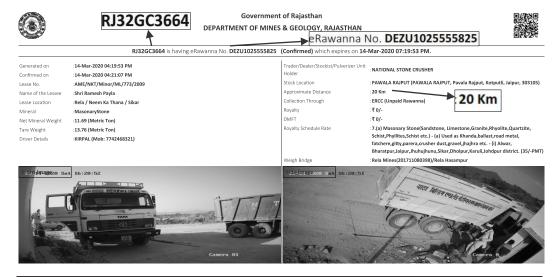


Figure 17: Two e-rawannas for vehicle number RJ32GC3664 were generated within five minutes as shown in figure 16 and 17.

• Distance of same areas within Sikar district was varied between 60 to 201 kilometres in different *e-rawannas*. This indicated that actual distances were not shown in the *e-rawannas*. Possibility of use of *e-rawannas* for multiple trips cannot be ruled out.

Illustrative images are given hereunder:

Weigh bridge Registration Number: 201711240616

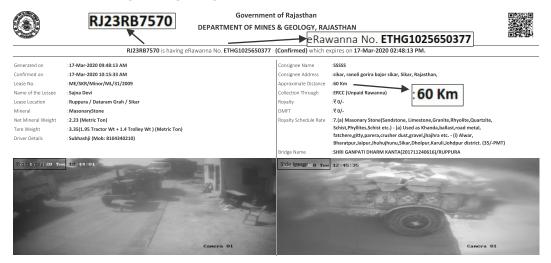


Figure 18: Distance from Ruppura to Ranoli was shown 60 kilometres (figure 18) whereas distance for the same places was shown 201 kilometres (figure 19).

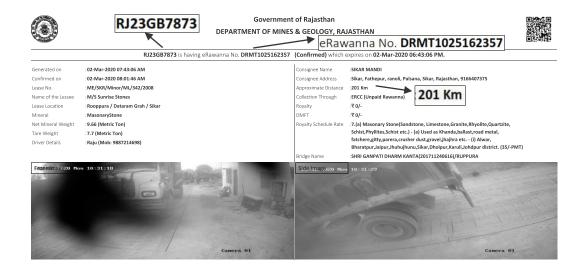


Figure 19: Distance from Ruppura to Ranoli was shown 60 kilometres (figure 18) whereas distance for the same places was shown 201 kilometres (figure 19).

Deficient online system resulted in these irregularities. Audit is of the view that if the distance in *e-rawanna* was mentioned using GIS technology, this irregularity could have been avoided.

The Government replied (February 2022) that such cases were checked by the ME/AME concerned and instructions were issued time to time in this regard.

Reply is not tenable as test check of *e-rawannas* revealed serious irregularities, which remained undetected by the concerned offices.

3.5 Installation of GPS devices in the vehicles

According to rule 44 (18) of RMMC Rules, 2017 the Government will explore the possibility of prescribing GPS tracking system in the vehicles involved in transportation of minerals.

It was observed that the State Government did not make effort to install GPS tracking system in these vehicles (July 2021). In the absence of these devices, monitoring of vehicles could not be done to check misuse of *rawannas i.e.* transportation of minerals excavated from other than the lease areas or more than one trip being done with the support of one *rawanna*.

Good Practices adopted by other States

• Installation of GPS devices in the vehicles (Goa State)

With the aim to stop illegal mining of minor minerals, proper collection of Government revenue, public safety and proper accounting of minor mineral extracted, State Government of Goa decided (29 January 2018) to regulate minor mineral transportation in Goa State. Therefore, owners of vehicles used for transportation of minor minerals within the State of Goa were directed to register their vehicles on DMG (Goa) platform upon payment of onetime registration fee of ₹ 5000 to qualify for carrying out transportation activities of mineral from 1 April 2018 after installation of GPS devices.

• Radio-frequency identification (RFID) system TAGS on the vehicles (Karnataka State)

Karnataka State introduced Integrated Lease Management System (ILMS) which involves less of manual intervention and more usage of electronic mode resulting in saving of time and hassle-free movement of mineral. To avoid manual mistake and malfunction DMG (Karnataka) introduced RFID system to be incorporated in lease premises, Check Posts and Buyer Premises to systematize mineral movement tracking and acknowledgement. In Check Posts, it facilitates fast vigilance and eliminates manual intervention to achieve transparency. Further, RFID system is tampered proof and eliminates chances of malfunction.

The Government replied (February 2022) that proposals for compulsory installation of GPS and RFID tag had been received from the Department.

3.6 Summary of findings

Department did not leverage technologies easily available in public domain to identify and curb illegal mining activities. Audit noticed irregularities *viz*. overlapping of leases and non-allotment/auction of gap areas lying between the leases, *etc*. Inadequate inspections of mines by the concerned officials resulted in non-identifications of these irregularities.

With the use of remote sensing data and GIS technology, Audit identified illegal mining activities in 122 cases (34 *per cent* of test-checked leases) nearby sanctioned mining leases in five selected *tehsils* under five selected divisions out of 49 divisions. The identified area of illegal mining was 83.25 hectare. Audit also noticed 13 mining leases where mineral was not excavated, however, 5.20 lakh MT of mineral was shown dispatched by misusing 22,854 *e-rawannas*. Departmental officials demarcated leases in such a way that there were gap areas between the leases. These gap areas encouraged illegal mining. Illegal mining was noticed in 14 gap areas out of 30

i.e. 46 per cent. Department introduced (10 October 2017) a web-based application 'DMGOMS' for effective monitoring of the mining activities. However, the Department failed to utilise the system effectively. Demands related to illegal mining activities (₹ 71.20 crore) were not shown on the demand register maintained at DMGOMS in 53 cases. Dispatch of minerals from mining leases in excess of limits prescribed in Environment Clearance Certificate/Consent to Operate were found and there was no check in the system to prevent the dispatch of mineral in excess of permissible quantity. The State Government did not initiate any such system or use of satellite images to identify illegal mining activities except carry out drone survey of 43 leases in Nagaur district.

3.7 Recommendations

The Department may consider:

- 1. utilising Remote Sensing/GIS technology such as Google Earth Pro application to identify illegal mining activities along with other modern technology such as drone survey to expedite identification of illegal mining activities;
- 2. mapping all the existing leases using Remote Sensing data and GIS technology to do away the overlapping of leases;
- 3. to fix accountability on the officials for leaving gap areas unauctioned and setting a time frame for auction of gap areas on priority basis;
- 4. providing a check in the DMGOMS to auto block the generation of e-rawannas whenever the quantity crosses the permitted limit by EC also and to expedite the recovery of the amount for the illegally mined minerals;
- 5. providing a system in the DMGOMS to generate demand notice only after uploading the demand in online demand and collection register;
- 6. mapping and uploading coordinates of all the STPs wherein mining was permitted;
- 7. using GIS technology for measuring distance between place of dispatch and destination in e-rawanna; and
- 8. adopting good practices of GPS installation in vehicles and use of RFID technology as initiated by other states and proposed by the Department of Mines and Geology, Rajasthan.

Audit Report (Performance Audit) for the year ended 31 March 2020					

CHAPTER-IV Internal Control System

Chapter IV: Internal Control System

4.1 *E-rawannas* and weigh bridges

Weigh bridges play a vital role in the collection of royalty by the Mines Department. Correct weighment of the mineral not only ensures correct collection of royalty but also provides a check on illegally transported mineral. Improper working of weigh bridges can cause huge loss to the Department. Audit analysed the *e-rawannas*, confirmed by weigh bridges, available on *DMGOMS*; the results are discussed hereunder.

According to the rule 60 (8) of RMMC Rules, 2017 the Director may authorize any electronic weigh bridges established in the State by third parties for weighment of mineral, on such conditions as may be specified. Further, the sub-rule (9) provides that the mineral concession holder or registered weigh bridge owner shall allow authorities to examine and test every weighing machine to ascertain whether the same are correct and in good condition and order and if any ambiguity is found, the same shall be rectified by the weigh bridge owner.

DMG prescribed (18 October 2017) the process for weighment of the mineral to be dispatched, and for generation and confirmation of *e-rawanna*. The important points to be followed are as under:

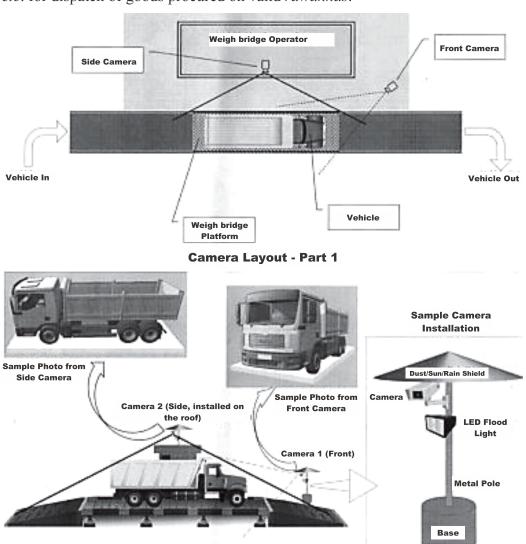
- (i) Lessee has to choose empaneled weigh bridges nearest to his lease and has to link these weigh bridges to lease on Departmental website. On any other weigh bridge that is not linked by the lessee, vehicles related to the lease shall not be weighed and *e-rawanna* shall not be confirmed.
- (ii) A lessee can generate unconfirmed *e-rawanna* through departmental website or mobile app, and in any circumstance, vehicle cannot transport the mineral outside the lease area without unconfirmed *e-rawanna* and message of unconfirmed *e-rawanna* on driver's mobile.
- (iii) Confirmed *e-rawanna* shall only be generated on weigh bridge when there is balance in the account of lessee for royalty of mineral.
- (iv) Till the completion of the maximum time period, mentioned in *e-rawanna* for reaching the destination for a vehicle, no other *e-rawanna* can be generated for that vehicle.

DMG further issued (5 October and 15 October 2018) direction for compulsory installation of cameras on empaneled weigh bridges by October 2018. The main directions were as follows:

- Minimum two cameras shall be installed on weigh bridge.
- Cameras shall be installed in such a way that vehicle and weigh bridge platform shall be clearly visible in picture.
- One camera shall be on the front side for capturing the image of the vehicle from front side showing the number plate of vehicle and weigh bridge platform and the other camera shall be put on long side of vehicle in such a way that vehicle's upper body, long body and weigh bridge platform shall be clearly visible.

Photo shall be captured by both the cameras while taking the weight from the terminal by software¹ and no separate provision shall be given in software for photo capturing.

These instructions were also applicable on the transit passes which were generated by dealers/stockiest of minerals and manufacturers of grit, marble slab etc. for dispatch of goods procured on valid rawannas.



Camera Layout - Part 2

Figure 1: Correct position of CCTV cameras to capture image of vehicle

During the audit period, there were 2,781 active empanelled weigh bridges in the State, out of which 365 weigh bridges were active in the selected divisions. It was observed that 32 weigh bridges were engaged in confirming transit passes used movement of royalty paid minerals. Audit test checked e-rawannas² confirmed by each weigh bridge during last month of working of weigh bridges upto March 2020 from the 333 (365 – 32) weigh bridges. Audit

The weigh bridge owner had to purchase the Software from the firms approved by the Department.

Audit selected ten e-rawannas of each weigh bridge, confirmed during the month of March 2020, however, if any weigh bridge did not confirm any e-rawanna during March 2020 then Audit selected e-rawannas from the previous working month of March 2020 of that weigh bridge.

scrutinised 2,966 *e-rawannas*³ in *DMGOMS* and noticed serious irregularities as discussed below:

4.1.1 Audit noticed that at 215 weigh bridges out of selected 333 weigh bridges, CCTV cameras were installed in such a way that the photographs of vehicles were not clear or did not provide the complete picture of the vehicle as per the guidelines. In the absence of a complete and clear picture of the vehicle, audit could not ascertain the actual vehicle on the weigh bridge. Further, mineral mentioned in the *e-rawanna* and its quantity as shown in confirmed *e-rawanna* could not be ascertained.

To illustrate the observation, two images are given hereunder:

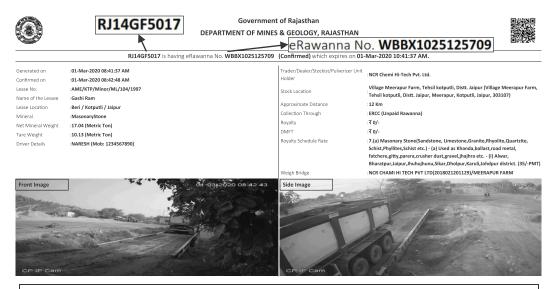


Figure 2: CCTV cameras installed in such a way that vehicle number and mineral was not visible at Weigh bridge Registration Number: 2018021201129

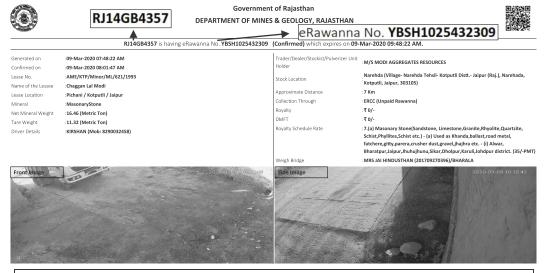


Figure 3: CCTV cameras installed in such a way that vehicle number and mineral was not visible at Weigh bridge Registration Number: 201709270396

35

³ Only 196 *e-rawannas* were confirmed by the 56 selected weigh bridges, therefore, total 2,966 (2,770 of 277 weigh bridges + 196 of 56 weigh bridges) *e-rawannas* were selected for scrutiny.

4.1.2 In 987 *e-rawannas* (33.28 *per cent* of test checked), Audit noticed that photograph of the same vehicle was used two to ten times for confirmation of different *e-rawannas for* different vehicles *i.e.* the same photograph was used to confirm *e-rawannas* of other vehicles. This shows that vehicles for which *e-rawannas* were generated actually did not get weighed at the weigh bridges. It also indicates that dummy vehicles were used for generation of *e-rawannas* for those vehicles which were not weighed at all. Thus, weigh bridges owners were in collusion with other stake holders *i.e.* lessees, transporter, *etc.* to manipulate the process of confirmation of *e-rawannas*.

It is evident that *e-rawannas* were confirmed by manipulating the process of confirmation of *e-rawannas*. A few instances are given hereunder:

(A) Weigh bridge Registration No.: 201712210804 (Same Picture along with Vehicle number RJ37GA2405 for different *rawannas*/vehicles)

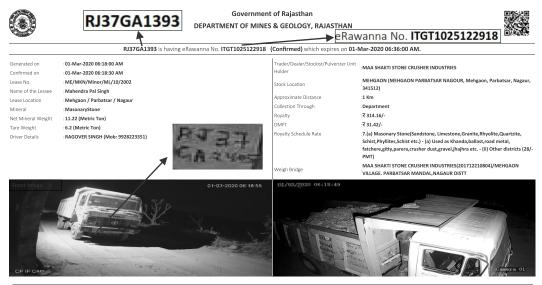


Figure 4: Vehicle Number RJ37GA2405 was used for generating e- rawanna of vehicle number RJ37GA1393

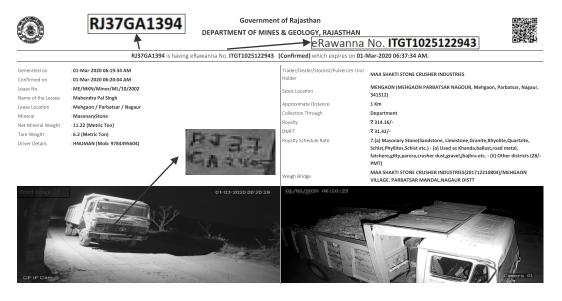


Figure 5: Vehicle number RJ37GA2405 was again used for generating e-rawanna of another vehicle number RJ37GA1394

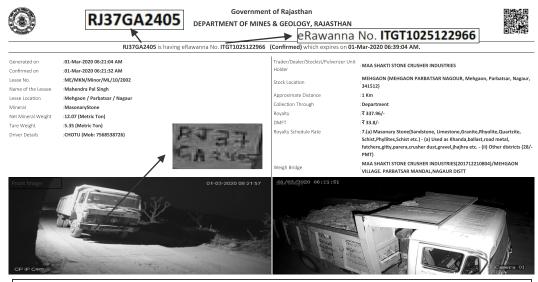


Figure 6: Correct e-rawanna generated for actual Vehicle Number RJ37GA2405 with actual Vehicle.

(B) Weigh bridge Registration Number: 201710310248 (Vehicle number tampered)

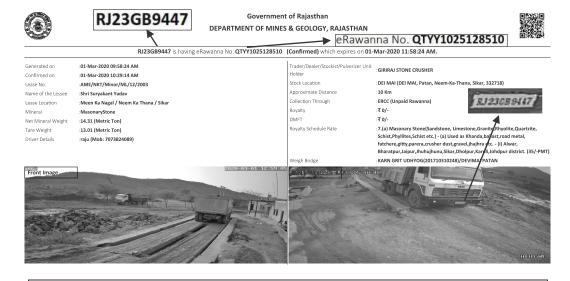


Figure 7: Vehicle shown in figure 7 and 8 is same, however, number was tampered to generate e-rawanna.

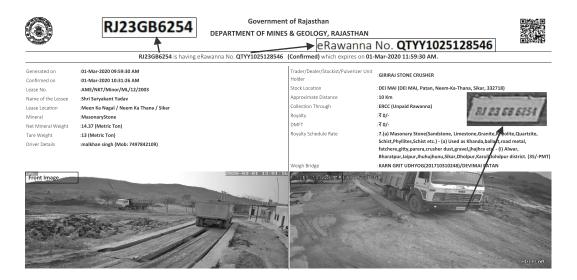


Figure 8: Vehicle shown in figure 7 and 8 is same, however, number was tampered to generate e-rawanna.

(C) Weigh bridge Registration number : 2020022602593 (Number plate of vehicle intentionally covered by a man)

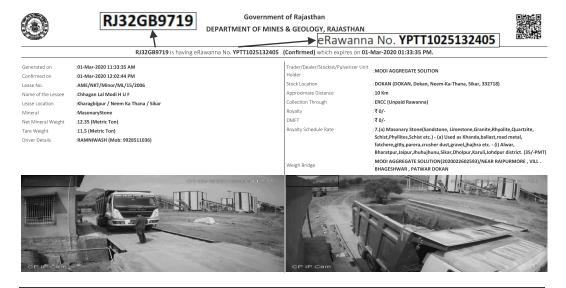


Figure 9: Cases where number plate was intentionally covered (Figure 9 and 10)

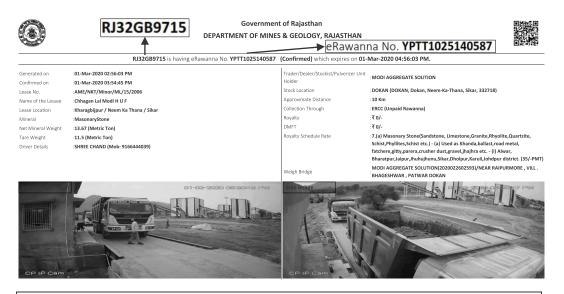


Figure 10: Cases where number plate was intentionally covered (Figure 9 and 10)

(D) Weigh bridge Registration Number: 2019031402099 (Number plate intentionally omitted after first *rawanna*)

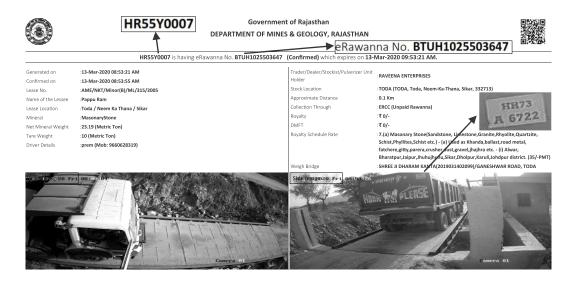


Figure 11: Vehicle Number HR73A6722 was used for generating e-rawanna of vehicle number HR55Y0007 as shown in figure 11, thereafter, number of vehicle was omitted to generate e-rawannas of vehicle number HR55V0007 and HR55Y0007 as shown in figure 12 and 13.

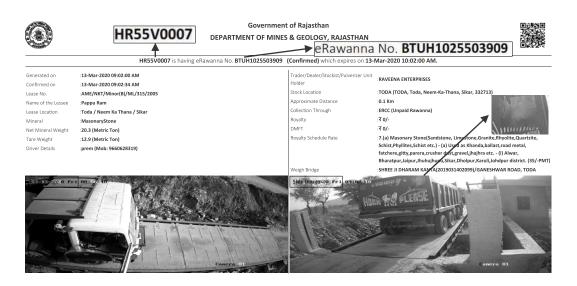


Figure 12: Vehicle Number HR73A6722 was used for generating e-rawanna of vehicle number HR55Y0007 as shown in figure 11, thereafter, number of vehicle was omitted to generate e-rawannas of vehicle number HR55V0007 and HR55Y0007 as shown in figure 12 and 13.

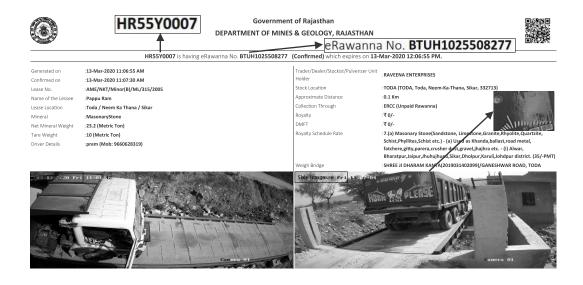


Figure 13: Vehicle Number HR73A6722 was used for generating e-rawanna of vehicle number HR55Y0007 as shown in figure 11, thereafter, number of vehicle was omitted to generate e-rawannas of vehicle number HR55V0007 and HR55Y0007 as shown in figure 12 and 13.

4.1.3 Audit further noticed that in 1,571 *e-rawannas* (52.97 *per cent* of selected *e-rawannas*) number plates of vehicles were not visible. Therefore, it could not be ensured that the vehicle for which *e-rawanna* was generated was actually on the weigh bridge. An illustrative image is given hereunder:

Government of Rajasthan RJ32GC3030 DEPARTMENT OF MINES & GEOLOGY, RAJASTHAN → eRawanna No. **FIQU1025159879** RJ32GC3030 is having eRawanna No. FIQU1025159879 (Confirmed) which expires on 02-Mar-2020 05:46:49 AM Confirmed on 02-Mar-2020 04:48:00 AM ME/ALW/Minor/ML/225/2005 VPO- BADAGANV (VPO- BADAGANV.TETSIL -BANSUR, DISTRICT -ALWAR Stock Location Name of the Lessee :Shiv Stone Com Approximate Distance :1 Km Lease Location Badagaon / Bansur / Alwa Collection Through ERCC (U Mineral MasonaryStone Royalty ₹ 0/-Net Mineral Weight :16.45 (Metric Ton) DMFT ₹ 0/-Tare Weight 11.14 (Metric Ton) RSMET ₹ 0/-: hansa (Mob: 9314415232) Driver Details 7.(a) Masonary Stone(Sandstone, Limestone, Granite, Rhyolite, Quartzite, Schist, Phyllites, Schist etc.) - (a) Used as Khanda, ballast, road metal, fatchere, gitty, parera, crusher dust, gravel, lajhar etc. - (i) Alwar, Bharatpur, Jaipur, Jhuhujihunu, Sikar, Dholpur, Karuli, Johdpur district (35/-TRIUPATI STON CRISHAR(2019010801993)/BANSUR ALWAR

Weigh bridge Registration Number: 2019010801993

Figure 14: Photo of vehicle was taken in such a way that vehicle number cannot be seen.

4.1.4 Audit further noticed that in 154 *e-rawannas* (5.19 *per cent* of selected *e-rawannas*), vehicle numbers for which the *e-rawannas* were confirmed, were different from the registration number shown on the number plate of the vehicles in the photograph captured by the CCTV cameras installed at the weigh bridges. This indicated that the *e-rawannas* were confirmed by violating guidelines issued by the Department. In such cases possibility of illegal transportation of mineral could not be ruled out.

The above findings indicated that though manipulation of *e-rawannas* could have been checked from the available data with the Department, no effective action was taken to curb such malpractices.

Weigh bridge Registration Number: 2018051801532

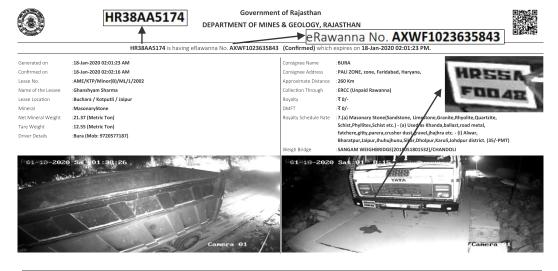


Figure 15: Vehicle number HR55AF0048 was used to confirm e-rawanna for Vehicle number HR38AA5174.

4.1.5 Audit further noticed that in 42 *e-rawannas* (1.42 *per cent* of selected *e-rawannas*), different vehicles were seen in the photographs having the same vehicle registration number mentioned in the *e-rawannas*. These *e-rawannas* were generated for 14 vehicles (one vehicle number for two or more than two *e-rawannas*). At the time of confirmation of *e-rawannas* at weigh bridges, images captured by CCTV cameras depict that vehicles were not the same for the same vehicle number every time. This indicated that either lessee or the transporter or both indulged in the malpractice.

Thus, the process put in place for confirmation of *e-rawanna* to check the evasion of royalty was ineffective.

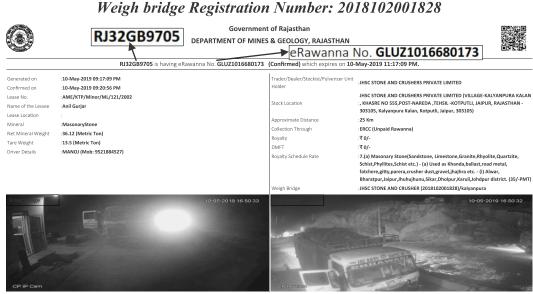


Figure 16: Figure 16 and 17 showed that vehicle number was not visible in e-rawanna, however, it can be seen that different vehicles were used to confirm e-rawanna for the same vehicle number RJ32GB9705.



Figure 17: Figure 16 and 17 showed that vehicle number was not visible in e-rawanna, however, it can be seen that different vehicles were used to confirm e-rawanna for the same vehicle number RJ32GB9705.

4.1.6 At one weigh bridge under jurisdiction of AME Kotputli, Audit noticed that *e-rawanna* was confirmed without parking of vehicle at weigh bridge. This indicated that software used in weigh bridge was not foolproof in preventing manipulation by weigh bridge operator. Illustrative image is given hereunder:

Weigh bridge Registration No.: 2019102302421

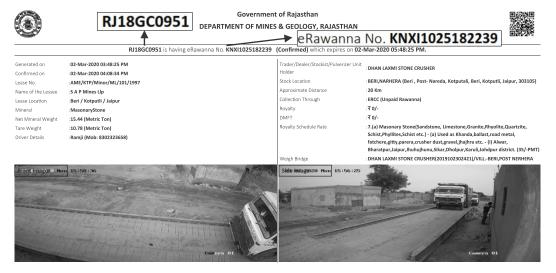


Figure 18: E-rawanna was confirmed without parking of vehicle on weigh bridge.

• In another case in the jurisdiction of ME Makrana, it was noticed that images of two vehicles, different for front image and side image, were shown in one *e-rawanna*. It indicated that application software was not properly mapped with cameras installed at weigh bridges. Thus, *e-rawannas* were confirmed by manipulating the vehicle images. Illustrative image is given hereunder:

Weigh bridge Registration No.: 2018022701247

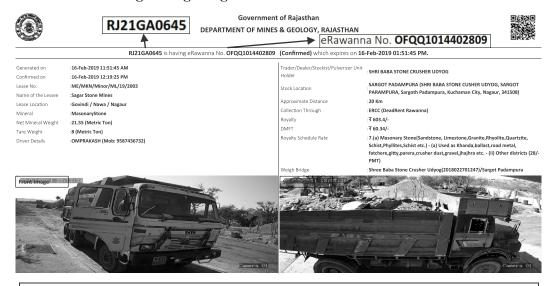


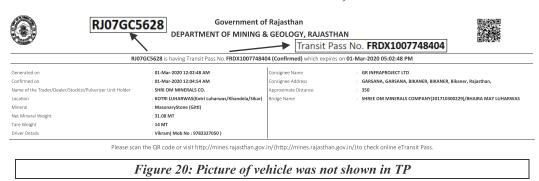
Figure 19: Different vehicles were shown for the front and side image.

Regarding Paragraph 4.1.1 to 4.1.6 the Government replied (February 2022) that a new module named 'weigh bridge e-rawanna viewer' has been made in online system for the checking of weigh bridges. Further, online system of the Department is being upgraded so that latest technologies can be used for effective

monitoring. Department also intimated that concerned ME/AME offices are taking actions as per rules in the objected cases.

4.1.7 Information available on *DMGOMS* revealed that in selected five division offices 8.27 lakh transit passes⁴ were generated for dispatch of 3.08 crore MT of mineral. Audit analysed the confirmed transit passes on *DMGOMS* and noticed that photographs of vehicles were not attached with the transit passes. Therefore, Audit could not analyse the confirmation process of transit passes. The process of confirmation of transit passes was the same as for the *e-rawannas*. Audit is of the view that, therefore, manipulation in confirmation of transit passes could not be ruled out.

Weigh bridge Registration No. 201710300229 (Picture of vehicle was not shown in Transit Pass)



The Government replied (February 2022) that due to problem of space in e- $Vault^5$, images of vehicles were not depicted in the transit passes, however, the same are now depicted.

The reply of the Government is not tenable as the very purpose of installation of CCTV cameras was defeated and irregularities in confirmation of *e-Transit* passes could not be checked.

4.1.8 Control of the Department on the software used by weigh bridges

According to the information available on *DMGOMS*, empaneled weigh bridge owners of selected division offices installed software provided by 11 firms approved by the Department for confirmation of *e-rawannas/*Transit passes. DMG allowed the empaneled weigh bridge owners to use software of any of the approved firms.

Scrutiny of information/reports available on *DMGOMS* and records of selected Division offices disclosed that Department did not have any control over the software used by the empanelled weigh bridges, thus making the software prone to manipulation. Therefore, the Department through preventive measures could not control irregularities noticed during the review as discussed in paragraphs number 4.1.1 to 4.1.7.

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⁴ According to Rule 2(lvii) of RMMC Rules, 2017, Transit Pass means a pass including e-transit pass duly issued by the Department or generated online, to the lessee, stockiest, trader, dealer *etc.* for lawful transportation of royalty paid mineral.

⁵ *e-Vault*: The term is used to describe the transfer of data by electronic means to a backup site, as opposed to the physical shipment of backup tapes or disks.

Best practice adopted by Government of Goa

Mines and Geology Department, Goa developed a software⁶ and made it compulsory for the weigh bridges to install the system. Further, calibration of weigh bridge before every year was also made compulsory. Thus, the Department had overall control over the software to prevent any malfunctioning or manipulation.

4.1.9 Certification of weigh bridges by Metrology (Weight & Measure) Division

Certification of weigh bridges by Metrology (Weight & Measure) Division, Department of Consumer affairs is essential and mandatory for all the weigh bridges. Department belatedly issued (5 August 2020) instructions to all the weigh bridge owners to get their weigh bridges certified by the Metrology Division. However, compliance with the instructions was not monitored. Audit also observed that *DMGOMS* did not provide a column for showing the status of certification by the Metrology Department.

The matter was brought to the notice of SME, Jaipur. In reply it was stated (5 April 2021) that the time for compliance had been extended till April 2021 by DMG. Reply of SME is not tenable since it was mandatory for all weigh bridges owners to get their weigh bridges certified by Metrology Division and hence needs to be done within the stipulated time. Further, delay in certification may lead to manipulation in weighment, which could cause loss to exchequer.

Deliberate inaction against persons involved in illegal mining activities

Scrutiny of records of selected division offices and SME Jaipur revealed that the Department deliberately took no action against defaulting weigh bridges, transporters and lessee. Two case studies are given as under:

Case Study 1

AME Kotputli intimated (31 January 2020) SME Jaipur that during checking (30 January 2020), one vehicle (RJ40GA2612) loaded with masonry stone was checked. On weighment it was found that actual weight of mineral was 35.09 MT whereas weight mentioned in the confirmed *e-rawanna* was 21.06 MT. The mineral was loaded from lease number 123/2002. Thus, 14.03 MT mineral was found in excess of quantity mentioned in *e-rawanna*. It was also intimated that there was a collusion between lessee, weigh bridge owner and vehicle driver. AME requested SME Jaipur to deactivate *e-rawanna* generation of the lessee, deactivate the weigh bridge and black-list the vehicle.

Simultaneously, AME issued notices to the lessee and the weigh bridge owner in this regard. In their reply, both informed that they were not involved in the matter

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Source: Brief presentation on steps taken by Government for curbing Illegal Mining in the State of Goa presented by Shri Pawan Kumar Sain (I.A.S.) Secretary (Mines) Government of Goa.

as the mineral was not overloaded by the lessee and at the time of confirmation of the *e-rawanna* the vehicle was not overloaded. Mining Foreman inquired about the matter and submitted his report wherein it was concluded that the vehicle driver was responsible for this violation as he loaded extra mineral without bringing this to the knowledge of lessee. It was also suggested in the report that instructions should be issued to the lessee to instruct the driver not to load mineral from elsewhere as otherwise it would be the responsibility of the lessee. Acting upon the report AME recommended (20 July 2020) to SME Jaipur for activation of weigh bridge. The weigh bridge was activated accordingly on the same day.

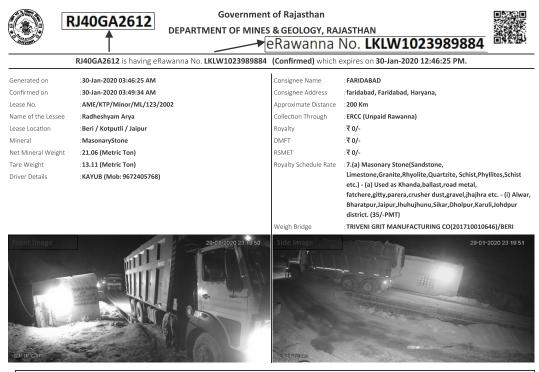


Figure 21: Vehicle was not parked at Platform of weigh bridge at the time of confirmation of e-rawanna, therefore, correct weight cannot be taken.



Figure 22: Images in figure 21 and close up image of vehicle in figure 22 showed that minerals were loaded upto the top of the vehicle. Further, loading of 14.5 MT of mineral was not possible.

Audit noticed that the investigation report was prepared overlooking the *e-rawanna* images with an intent to provide undue benefit to lessee and weigh bridge owner.

To corroborate the above audit finding, Audit further analysed all 33 *rawannas* confirmed by this weigh bridge on 30 January 2020. Following violations were noticed:

- CCTV cameras were not installed according to the instructions issued by DMG.
- Vehicles were partly parked on the platform of the weigh bridge so that vehicles were under-weighed.
- *E-rawannas* were confirmed for those vehicles which did not reach the weigh bridge for weighment.

These facts indicated inaction on the part of the Department against these defaulters by overlooking the facts available on *DMGOMS*.

Case Study 2

AME Kotputli intimated (23 January 2020) SME Jaipur that during checking (21 January 2020), one vehicle (RJ32GB4236) loaded with masonry stone was checked. On weighment it was found that actual weight of mineral was 25 MT whereas weight mentioned in the confirmed *e-rawanna* was 14.60 MT. The mineral was loaded from lease number 1/2002. Thus, 10.40 MT mineral was found in excess of quantity mentioned in *e-rawanna*. It was also intimated that there was a collusion between vehicle lessee, weigh bridge owner and vehicle driver. AME requested SME Jaipur to deactivate *e-rawanna* generation of the lessee, deactivate the weigh bridge and black-list the vehicle.

Simultaneously, AME issued notices to the lessee and the weigh bridge owner in this regard. In their reply, both told that they were not involved in the matter as the mineral was not overloaded by the lessee and at the time of confirmation of the *e-rawanna* the vehicle was not overloaded. Mining Foreman inquired the matter and submitted his report wherein it was concluded that the vehicle driver was responsible for this violation as he loaded extra mineral without bringing this action to the knowledge of lessee. It was also suggested in the report that instructions should be issued to the lessee to instruct the driver not to load mineral from elsewhere as otherwise it would be the responsibility of the lessee. Acting upon the report AME recommended (20 March 2020) to SME Jaipur for activation of weigh bridge. The weigh bridge was reactivated on 20 May 2020.

Scrutiny of the *e-rawanna* confirmed by weigh bridge during 21 January 2020 to 23 January 2020 revealed that CCTV cameras were not installed properly at the weigh bridge and mineral loaded in the vehicle could not be seen in the photographs of *e-rawanna*. Therefore, it could not be concluded that vehicle was empty or under loaded. Even after reactivation of weight bridge CCTVs were not installed properly and mineral could not be seen in the vehicle. Illustrative images are given hereunder:



Figure 23: Above image (21 January 2020) showed that CCTV cameras of weigh bridge were not installed according to the direction of the DMG on the date of Panchnama.

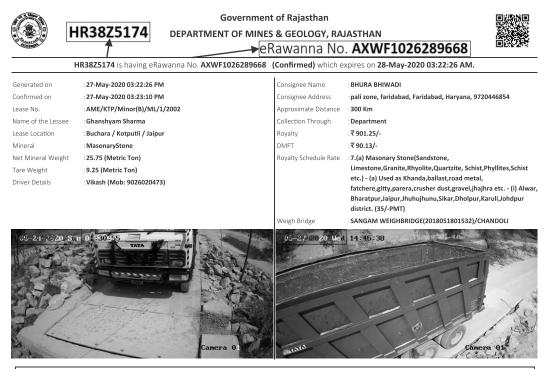


Figure 24: Above image (27 May 2020) showed that Department did not ensure installation of CCTV cameras according to the directions of the DMG before activation of the weigh bridge.

It is evident from the available facts that the weigh bridge had not worked according to the instructions. However, Department did not take stringent action against the weigh bridge owners involved in the malpractices. Further, action was also not taken against the government officials who were responsible for monitoring and supervision of these empanelled weigh bridges. Thus, rampant illegal mining activities continued which resulted in loss to the State exchequer.

The Government replied (February 2022) regarding paragraph 4.1.8 and 4.1.9 that online application were invited to make software, integrated with the departmental online system, for weighment of mineral carrying vehicles. Further, software were prepared under the directions of the Department and Rajcomp. Rajcomp has also checked these softwares.

The reply of the Government is not tenable as the irregularities discussed in the preceding paragraphs could not have occurred without shortcomings in the softwares. Thus, there is a need for departmental control for sanctity and foolproof working of the software.

4.2 Panchnamas

DMG *vide* circular dated 24 November 2017 issued instructions for preparation of *Panchnama*⁷ as and when illegal mining activity was noticed. Following instructions were issued thereunder:

- *Panchnama* should be uploaded on the *DMGOMS* within 24 hours of inspection and progress of the case should be updated online continuously. Thereafter, the time limit was extended to 72 hours.
- Source of illegal mining was to be identified in the cases of illegal transportation of minerals;
- Actions against the involved persons *i.e.* transporter, person involved in illegal mining, weigh bridge owner, lessee were to be taken simultaneously.
- Photograph of illegal mining pit was to be taken and uploaded on *DMGOMS*.
- Photograph of vehicle involved in illegal transport was to be uploaded on *DMGOMS*.
- *Panchnama* should be prepared in the prescribed format.

Information available on *DMGOMS* disclosed that 3,390 cases of illegal mining activities *i.e.* illegal mining, transportation and stock of minerals were identified by the departmental officials⁸ of selected offices during the period 2015-16 to 2019-20. Details are given in the **Table 4.1:**

Table 4.1
Cases of illegal mining activity in selected offices

Year	Illegal Mining	Illegal Transportation	Illegal Stock	Total
2015-16	90	543	17	650
2016-17	30	542	9	581
2017-18	34	443	0	477
2018-19	49	766	8	823
2019-20	60	787	12	859
Total	263	3,081	46	3,390

To check the compliance with the above instructions Audit test checked all the *Panchnamas* related to illegal mining and 100 *Panchnamas* related to illegal transportation and stock of minerals for the period 2015-16 to 2019-20. Scrutiny of these *Panchnamas* and other related records revealed following deficiencies:

Panchnama: This is an inspection report made by the official who checked the illegal mining activity.

⁸ Division offices: ME Sikar, AME Neem ka Thana, AME Kotputli, ME Alwar and ME Makrana.

Vigilance offices: ME (Vigilance) Sikar, AME (Vigilance) Neem ka Thana, AME (Vigilance) Kotputli, ME (Vigilance) Alwar, AME (Vigilance) Tijara and AME (Vigilance) Makrana.

4.2.1 Non-uploading of Panchnamas on *DMGOMS*

Scrutiny of records of SME Jaipur revealed that 4,457 *Panchnamas* were prepared during the period April 2018 to December 2018 under the jurisdiction of SME Jaipur. Only 3,897 *Panchnamas* were uploaded on the *DMGOMS*. Thus, 560 *Panchnamas* were not uploaded on *DMGOMS* up to 4 January 2019. DMG issued (January 2019) instructions to upload the pending *Panchnamas* on *DMGOMS* within two days and asked explanation for non-compliance with the instructions.

Audit checked (5 April 2021) updated position of *Panchnamas* and found that 3,946 *Panchnamas* were uploaded on *DMGOMS* for the above referenced period. Thus, 511 *Panchnamas* were not uploaded despite directions given by the DMG even after lapse of a period of 28 months. However, no further action was taken against the defaulting officials.

The Government replied (February 2022) that remaining *Panchnamas* would be uploaded. Disciplinary action would be initiated against the concerned officials if discrepancy persisted.

4.2.2 Deficiency in preparation of *Panchnamas*

Scrutiny of *Panchnama* records revealed that *Panchnamas* were prepared on photo copy/printed copy of the proforma prescribed by DMG. It was further noticed that *Panchnamas* did not have serial numbers printed on it. In the absence of such a system, it could not be assessed as to how many *Panchnamas* were actually prepared by the officials of the Department and how many were reported to higher authorities/uploaded on *DMGOMS*.

The instances shown in paragraph 4.2.1 showed that lack of system leads to non-accounting of all the *Panchnamas* which may lead to leakage of revenue.

Good practice adopted by Transport Department, Rajasthan

In Transport Department, Rajasthan books of *Panchnama*/challan proformas with machine printed numbers are being issued to the concerned offices by the head office. Each proforma have triplicate copies; one for the defaulter, second for office record and third to be returned to the store on completion of the book. The authorised officials get issued the book from store. Thereafter, on completion of the book the official returned back the book to the store with third copy of the *Panchnamas*/challans. Further, handheld online devices are the key features of this system. This system ensures that each and every *Panchnama* prepared is accounted to the Government account.

DMG may consider adopting a similar system to ensure transparency and to check the leakage of revenue if any.

The Government replied (February 2022) that issue of numbered *Panchnamas* would be reconsidered after discussion with the departmental officers.

4.2.3 Non-investigation of source of illegal mining

It was noticed that out of 1,122 cases⁹ of illegal transportations in selected divisions, sources/sites of illegal mining were not investigated except in one case.

Scrutiny of *Panchnamas* further revealed that 26 lessees¹⁰ were involved in the illegal dispatch of minerals according to the statement of vehicle drivers. However, the concerned authorities did not investigate the matter to find out the source of transported mineral.

The Government replied (February 2022) that generally wrong information about source of illegal mining was given by the accused, therefore, investigation could not be initiated at illegal mining point. It was also, replied that instruction would be issued to investigate the source as far as possible.

The reply of the Government is not tenable as the concerned officials did not investigate the matter even in those cases where illegal mining was reported from the lease areas.

The facts remained that illegal mining activities could not be prevented as the directions of DMG were not adhered by the Departmental officials.

4.2.4 Lack of coordination with Transport Department

Scrutiny of records revealed that 112 vehicles¹¹ without registration number plate were seized by the Department due to involvement in illegal transportation of minerals. However, Department did not inform Transport Department to take penal action against these defaulting vehicles.

The Government replied (October 2021 and February 2022) that involvement of the Transport Department would lead to a long process and it would be a time-consuming task. Due to shortage of staff and resources, Department gave priority to checking other illegal transportation cases instead of spending time by involving Transport Department. It was also intimated that letters had been written to Transport Department for taking action against the vehicles transporting minerals without registration number plate.

Reply is not tenable as no legal action can be taken against the owner of the vehicle without registration number plate, therefore, sharing of information with the Transport Department is necessary.

4.2.5 Deficiencies in *Panchnamas*

As per instruction issued (November 2017) by DMG, photographs of illegal mining pits and vehicles involved in illegal transportation were to be captured and uploaded on *DMGOMS*.

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AME Kotputli (98), AME (Vigilance) Kotputli (99), AME (Vigilance) Makrana (87), AME Neem ka Thana (102), AME (Vigilance) Neem ka Thana (85), AME (Vigilance) Tijara (102), ME Alwar (95), ME (Vigilance) Alwar (101), ME Makrana (198), ME Sikar (95) and ME (Vigilance) Sikar (59).

Lessees (26): AME Neem ka Thana (3), AME Kotputli (9) and ME Alwar (14).

Vehicles without registration number 112: AME Kotputli (26), ME Alwar (35), ME (Vigilance) Alwar (34) and AME (Vigilance) Tijara (17).

Test check of 1,351 out of 3,390 *Panchnama* files of selected offices and information available on *DMGOMS* revealed that photographs of the pits of illegal mining and vehicles involved in illegal transportation of mineral were not taken in any case by the concerned officers at the time of inspection/checking.

Photographs of illegal mining pits/vehicles were not even available in the files in physical form. In the absence of pictures, actual situation could not be assessed by an independent authority and it lacks transparency. Further, these photographs could be used as significant evidence of illegal mining activities.

The Government replied (October 2021) that suitable provisions would be made in *DMGOMS*. Thereafter, it was also intimated (February 2022) that it would be considered to issue numbered *panchanamas* to subordinate offices.

4.2.6 Non-auction of illegal mining prone areas

Administrative Report (2018-19) envisaged that auction of those plots which were illegal mining prone would be done on priority basis by the Department.

Scrutiny of records of selected divisions revealed that in the selected offices the Department identified 263 cases of illegal mining during the period 2015-16 to 2019-20. However, the Department did not initiate process of identifying illegal mining prone areas which could be auctioned. In the absence of this, activities of illegal mining continued, which adversely impacted the environment, employment and revenue to the State exchequer.

The Government replied (February 2022) that directions were issued to delineate plots in illegal mining prone areas for auction and where such areas falls under forest and *charagah*, process would be initiated for diversion or no-objection certificate.

Deficient process for preparation of *Panchnamas*, resulted in non-accounting of *Panchnamas* on departmental online system which leads to non-monitoring of penal action on the accused, if taken. Further, sources/sites of illegal mining were not investigated. Cases of illegal transportation, were not pursued with the Transport Department and therefore, action could not be taken by the departmental officials against the illegal miners. Thus, not only were the directions of DMG not followed, but no action was taken against the illegal miners which could have a deterrent effect on illegal mining.

4.3 Assessment of illegally excavated mineral

Rule 54(1) of RMMC Rules, 2017 stipulates that no person shall undertake any mining operations in any area without holding any mineral concession, permit or any other permission granted or permitted under these rules and shall not despatch mineral from the mine without valid *rawanna*. Rule 54(5) of the *ibid* Rules further provides that whenever any person without a lawful authority, raises any mineral from any land other than under any mineral concession or any other permission and where mineral so raised has already been despatched or consumed, the authorities shall recover cost of mineral along with the compound fee. A mining plan of a lease provides the recovery factor of mineral from ore.

During compliance audit of seven division offices¹², Audit noticed short raising of demand of ₹ 14.20 crore being cost of mineral in 28 cases of illegal mining activities. Concerned authorities while raising the demand of cost of illegally excavated mineral ignored the bulk density factor, recovery factor given in the mining plan and other irregularities. Details are given in **Table 4.2**:

Table 4.2
Details showing deficiencies in assessments

(₹ in crore)

Sl. No.	Name of Division	Number of	Site	As per final a	issessment	As per Audit		Demand short
	Division	mining leases	inspection date	Quantity assessed in MT	Royalty amount	Quantity assessed in MT	Royalty amount	raised
1	Udaipur	113	August 2018	10,327.50	0.63	13,260	0.81	0.18
				t demand was it is awaited (Mar		t the lessee. H	lowever, the le	essee had
2	Sikar	4 ¹⁴	February 2019	22,998.00	0.81	28,278.91	0.99	0.18
	nent replied ion of lease			tire amount in	three cases	had been reco	overed and in	one case
3	Churu	7 ¹⁵	July 2017 and September 2017	52,540.00	1.21	97,569.29	2.24	1.04
Government replied that demand of ₹ 2.24 crore has been raised (October 2019) of which an amou ₹ 0.72 crore has been recovered in three cases and recovery in remaining four cases has been stayed by He Rajasthan High Court, Jodhpur Bench. (November 2020).								
4	Jhunjhunu	10 ¹⁶	March 2019	98,606.17 ¹⁷	No amount shown in notices	1,01,205.19	2.91	2.91

The Department did not initiate the process of raising of the demand for the cost of illegally excavated mineral after lapse of notice period of 30 days in all the 10 cases. Further, in six cases out of 10 cases, competent authority applied incorrect bulk density and recovery factor which resulted in short quantification of 2,599.01 MT mineral.

Government replied (February 2022) that demand was raised in 10 cases. In one case, the demand amount was deposited by the lessee. However, in nine cases the lessees appealed against the demand. The Appellate Authority ordered to re-examine the cases and the same were under progress in eight cases. Regarding one case it was intimated that the matter was re-examined and it was reported by the foreman that the mining was done during the period of STP issued previously, therefore, it could not be considered as illegal mining. Reply of the Government regarding later case is not acceptable as no supporting evidence was made available.

¹² Division offices (7): Churu, Dholpur, Jaipur, Jodhpur, Jhunjhunu, Sikar and Udaipur.

¹³ 296/2008

¹⁴ 44/1998, 605/2003, 195/1997 and 291/2007.

¹⁵ 41/2001, 41/1978, 06/1997, 47/2001, 98/1996, 40/2001 and 74/1978.

¹⁶ 423/2006, 12/1995, 198/1996, 63/1995, 23/1999, 41/2001, 80/2000, 164/2003, 167/2003 and 166/2003.

¹⁷ Masonry Stone and *murram*.

Sl. No.	o. Name of Number Division of		Site	As per final a	assessment	T		Demand short
	Division	mining leases	inspection date	Quantity assessed in MT	Royalty amount	Quantity assessed in MT	Royalty amount	raised
5.	Jaipur	3 MLs and one housing project ¹⁸	June 2018 to December 2019		0.18	1,42,919.7	4.45	4.27

The Government replied (February 2022) that notices were issued in three cases and amount of ₹ 17.80 lakh was recovered. Reply regarding one case was not made available.

Department did not diligently examine the issue of illegal excavation and misuse of *rawannas* by the lessees at the time of assessment which resulted in non-raising of demand of cost of illegally excavated mineral as discussed below in Serial number 6 and 7:

6	Dholpur	1 ¹⁹	September	 0.01	1,504	 4.56
			2017			

A site inspection (September 2017) revealed misuse of rawanna by the lessee. However, departmental officials did not investigate other rawannas used by the lease. Assessment was finalised in August 2018 but the Assessing Authority failed to make a reference to illegal mining in the assessment order. Audit pointed out non-recovery of ₹ 36.09 lakh being cost of 1,504 MT mineral despatched by misusing rawannas. Thereafter, the Department carried out site inspection (July 2020) of the leased area and concluded that the lessee illegally excavated and despatched 19,015.29 MT mineral sandstone valuing ₹ 4.56 crore by misusing the rawannas.

Demand of ₹ 4.56 crore was raised. The lessee did not deposit it, therefore, action for cancellation of lease was initiated.

The Government replied (February 2022) a demand of ₹ 4.56 crore was raised and recovery under Land Revenue Act was being done.

7	Jodhpur	1 ²⁰	January	14,700	 23,625	1.06 21	1.06
			2017 and				
			February				
			2018				

Department, despite being aware that lessee indulged in illegal mining and despatching minerals by either misusing *rawanna* or without *rawanna*, failed to mention these facts in royalty assessment and ignored the bulk density factor of mineral while raising the demand, which resulted in short raising of demand of ₹ 1.06 crore.

The Government replied (July 2020 and October 2020) that demand notice has been issued (February 2020) and cancellation of mining lease is under consideration. The demand, however, was set aside by the Hon'ble Rajasthan High Court, Jodhpur (July 2020) which ordered that a fresh speaking order, after providing opportunity of being heard to the lessee, may be passed. Thereafter, it was also intimated (February 2022) that a demand was raised against the lessee, however, the Hon'ble Rajasthan High Court, Jodhpur had stayed it. Further, progress is awaited (March 2022).

Total	27 MLs			14.20
	and one			
	housing			
	project			

²⁰ 36/200

¹⁸ 217/2000, 14/1995, 105/2003 and Sun City Project Private Limited.

¹⁹ 67/1988.

²¹ Cost of 19,650 MT mineral masonry stone: 19,650 MT X ₹ 23 (Royalty rate) X 10 = ₹ 45,19,500 + cost of 22,593 MT mineral masonry stone : 22,593 MT X ₹ 28 (Royalty rate) X 10 = ₹ 63,26,040. Total ₹ 1,08,45,540. Short demand = ₹ 106.36 lakh (₹ 108.46 lakh -₹ 2.10 lakh)

4.4 Summary of findings

Weigh bridges plays a vital role in collection of royalty. Correct weighment of the mineral not only ensures correct collection of royalty but also provide enhancing a check on illegally transported mineral. Imprudent working of weigh bridges can cause huge loss to the Department. The Department got installed CCTV cameras at each weigh bridge for enhancing transparency and to check leakage of royalty.

However, scrutiny of the e-rawannas confirmed by weigh bridges revealed serious irregularities in the working of 81.68 per cent of selected weigh bridges. In 33.28 per cent e-rawannas, photograph of one vehicle was used many times for confirmation of e-rawannas. It showed that vehicles for which e-rawannas were generated either did not reach at the weigh bridges or passed without weighing. These cases indicate that e-rawannas were confirmed without actual weighment of the vehicle. Department failed to monitor the working of the weigh bridges, which had a direct impact on royalty collection. There was laxity in the system for effective monitoring on the functioning of the weigh bridges. The Department did not have a mechanism to use printed serial numbered Panchnamas. These were prepared by the Departmental officials by putting numbers manually. In the absence of such a system, it could not be assessed as to how many Panchnamas were prepared by the officials and how many were reported. Audit noticed that 511 Panchnamas were not uploaded on DMGOMS and higher authorities also remained uninformed of illegal mining activities due to this deficient process of numbering. Further, sources/sites of illegal mining were not investigated in respect of 1,121 cases of illegal transportation of minerals.

Audit also found that the assessments of royalty were not finalized with due diligence which resulted in incorrect assessment of royalty, cost of mineral and compounding fee of ₹ 14.20 crore in 28 cases.

4.5 Recommendations

The Department may consider:

- 1. developing or approving a single software to be used by weigh bridges across the State under overall control of the Department to check the malpractices;
- 2. strengthening its monitoring of weigh bridges through IT system at a centralized centre;
- 3. pursuing cases of vehicles used in illegal transportation with the Transport Department so that stringent action can be taken against vehicles owners.
- 4. optimally using the date and photos available in DMGOMS to investigate complaints on illegal mining and take stringent action against those involved in the malpractices so that is acts as a deterrent and
- 5. to adopt the good practice of processing Panchnama with printed serial numbers which is being implemented by the Transport Department of Rajasthan for transparency and accountability.

CHAPTER-V

Monitoring and Evaluation

Chapter V: Monitoring and Evaluation

Monitoring and evaluation are an essential activity of the Department to ensure compliance of the rules and regulations by adhering to the procedure in place. Without continuous monitoring, the Department cannot detect the illegal mining activities well in time to safeguard the revenue as well as adverse impact on environment. In Mines and Geology Department, various tools for monitoring have been prescribed *i.e.* returns, *e-rawannas*, assessment, regular inspection of leases, *etc.* Audit scrutinised the monitoring and evaluation system to review its effectiveness. Some weaknesses noticed in the monitoring system are discussed hereunder:

5.1 Returns

As per rules 28(2) (iv)(d) of RMMC Rules, 2017, the lessee shall furnish online monthly return in Form -15 by the 15th day of the following month and annual return in Form -16 within three months from the date of expiry of the financial year regarding excavation and dispatch of mineral from the lease area. Further, information regarding plantation in lease area and workers employed in lease area will also be furnished in these returns.

Further, if the lessee fails to submit online monthly returns or annual return within the specified time, same may be submitted on payment of late fee at the rate of ₹500 per day of delay, subject to maximum of ₹50,000.

An analysis of data of a sample of 50 MLs¹ of selected offices regarding returns submitted on *DMGOMS* revealed the following deficiencies:

5.1.1 Non-submission/delayed submission of returns by the lessees

- Out of the test checked 50 MLs, 14 lessees (28 per cent) had not submitted any return during the period April 2018 to March 2020. Further, three lessees failed to submit 12 returns for the same period. Thus, total 348 returns were not submitted by the selected lessees.
- Out of the test checked 50 MLs, 36 lessees (72 per cent) had submitted 599 returns with a delay ranging between 1 day and 1,177 days. As per provision, late fee of ₹ 2.39 crore was to be collected from these defaulting lessees. However, the same was not recovered.

No efforts were found during Audit from the concerned ME/AMEs to get online returns from these defaulting lessees. Further, alerts were given neither to lessees nor to the concerned officers regarding non-submission of returns by *DMGOMS* to take corrective action. Thus, status of filing of returns was not monitored either through online application or by the concerned officers.

In the absence of these monthly returns, the Department had no official record of lessee's activities from the lessee himself during the month *i.e.* production of mineral, use of mineral for captive purposes, dispatch of mineral, closing balance, quantity of overburden removed from the lease area, plantation done and number of workers employed *etc*.

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¹ Ten MLs have been selected from each division.

The Government replied (October 2021) that suitable provisions would be made in the *DMGOMS* in this regard. It was also intimated that blocking of generation of *e-rawannas* on non-submission of returns upto 20th of the following month would be considered. Thereafter, it was also intimated (February 2022) that instructions were issued to take action against the defaulters.

5.1.2 Dealers return

Rule 2(1)(lvii) of RMMC Rules, 2017 defines transit pass as a pass including *e-transit pass* duly issued by the Department or generated online, to the lessee, stockiest, trader, dealer *etc*. for lawful transportation of royalty paid mineral. This system was introduced to check the movement of illegally excavated minerals. To monitor this movement effectively by the Department, a periodic return was to be prescribed. However, no return was prescribed by the Department. In the absence of a mechanism monitoring of the Department was ineffective as discussed here under:

The Director of Mines and Geology issued directions (31 January 2018) for issuance of *e-transit pass*. As per these directions, all the dealers have to register themselves on departmental website for getting *e-transit* pass. After registration, dealers shall declare their opening stock and enter this stock in the online system. Dealers shall keep all the records related to royalty documents of these opening stocks for three years *i.e.* up to 31 January 2021 and shall submit this record to Department whenever sought so. Further, if any discrepancies are found in documents related to royalty paid mineral as mentioned in opening stock, dealer shall be responsible for this and action shall be taken against him.

During scrutiny of the five ME/AME offices, it was observed that 649 registered dealers² declared opening stock of 71.66 lakh MT of minerals. However, only 27 dealers (four *per cent*) of three division offices³ were verified and the departmental officials found irregularities in the stock of seven dealers. In these cases demand of \mathbb{Z} 3.14 crore was created and 7.61 lakh had been recovered. It indicated that 25 *per cent* dealers had irregularities in their stock

Thus, stock of 622 dealers was not verified which resulted in non-identification of irregularities if any in the declaration of the opening stock by the dealers and non-levy of penalty thereof. These are the results of only five test checked Division offices; overall picture of the State could be very huge.

The Government replied (October 2021 and February 2022) that instructions were being issued for verification of the stock of the dealers.

Thus, the fact remains that the MEs/AMEs did not adhere to the timeline fixed for stock verification and irregularities in stock was not identified. In this scenario, loss to the State exchequer could not be ignored.

² AME Kotputli (118), AME Neem ka Thana (194), ME Alwar (119), ME Makrana (33) and ME Sikar (185).

³ AME Kotputli (15), AME Neem ka Thana (8) and ME Alwar (4).

5.1.3 Non-monitoring of quarry licences

RMMC Rules 2017 prescribes grant of Mineral concessions *i.e.* mining leases (ML), quarry licences (QL) or any other permission by competent authority. Minimum area for ML is one hectare, whereas minimum area for QL is 0.18 hectare. Minimum area of QL was revised from 0.18 to one hectare *vide* order dated 27.08.2018. It was also prescribed that MLs shall keep accurate and faithful accounts of all minerals excavated from the mines, the quantity lying in stock at the mines, the quantity dispatched and utilised. The MLs shall not remove, dispatch or utilize the mineral from the mines without valid *rawanna* generated by the system. DMG *vide* order dated 27 October 2017 prohibited manual *rawannas* and made *e-rawannas* compulsory for all the MLs.

Scrutiny of the information available on *DMGOMS* revealed that there was no information regarding excavation and dispatch of minerals from each QL area except royalty receipts issued by royalty collection contractors or departmental check posts. At the check posts, it could not be ascertained as to whether mineral was excavated from QL area or anywhere else.

Thus, there is a need to prescribe a periodic return to monitor the production and dispatch of minerals from QLs. Further, every movement of mineral should be accompanied by a valid document such as transit pass, challan, *e-rawanna*, *etc.* to check the source of mineral.

The Government replied (October 2021 and February 2022) that provision for issuance of e-receipt for QL holders and Contractors was being made in proposed new Policy 2021.

5.2 Inspections

Director, Mines and Geology issued (April 2013) instructions, to conduct inspections of leases by competent authorities. Following norms were prescribed for the inspections:

Table 5.1
Statement showing norms for inspections of MLs

Level of officials	Number of inspections per year
DMG	36
Add. Dir. (Mines), Zone	60
SME (H.Q.) I/II/III	72
SME	72
ME	120
AME	120

Further, DMG issued (24 November 2017) a circular for inspection of leases to ascertain that the lessees were doing mining according to the rules and regulations.

In selected division offices, Audit noticed that register of inspections of leases were not maintained. AME Neem ka Thana provided a list of inspections for the period 2017-18 to 2019-20. Test check of inspection reports of concerned lease files revealed that these inspections were conducted only for verification of mining plan of the leases. The inspection report did not contain any comment on

the compliance with the rules and regulations. On being pointed out, AME Neem ka Thana replied that in future, inspections would be done according to the instructions.

For the remaining division offices, Audit could not ascertain as to whether the inspection targets were achieved or not and mining was being done as per rules and regulations as no information regarding inspections conducted was made available to audit.

In scrutiny of selected 455 MLs, Audit noticed that only 31 inspections were carried out during the years 2015-16 to 2019-20 but illegal mining nearby the MLs was not mentioned in any inspection report of the Department. However, with the use of technology, Audit noticed illegal mining in nearby area of allotted MLs as discussed in paragraph 3.1. Further, the methodology followed for the selection of leases for inspection, was not on record.

Above fact indicates that norms for inspection of MLs were not adhered to and even when inspections were carried out, the reports were deficient. Audit considers that shortfall in inspection might have been a reason for illegal mining in large scale.

The Government replied (February 2022) that instructions were being issued to conduct the inspections as per departmental norms and for maintenance of inspection register. During exit conference, the DMG intimated that instructions have been issued to conduct 10 to 20 detailed inspections by each division office and about 1200 inspections were conducted during the last few months.

5.3 Pending Assessments

According to Rule 46 of RMMC Rules, 2017:

- 1. Every lessee who has filed monthly and annual return within the prescribed time and not involved in illegal mining or transportation of mineral and where there is no dispute regarding rate or amount of royalty or dead rent of the area concerned, shall, subject to provisions of sub-rule (2), be deemed to have been assessed for that year on the basis of annual return.
- 2. Every year, a minimum of ten *per cent* returns shall be thoroughly scrutinized and assessed manually. Such returns shall be selected through online system on randomly basis.
- 3. The online acknowledgement receipt of annual return in Form -17 shall be treated as prima-facie evidence of self-assessment and no separate order shall be required to be passed except where, (i) the return came under scrutiny; and (ii) the assessing authority has sufficient reasons to believe that the online returns are incorrect.

Audit analysed the information provided by the Department and found that 8,799 assessments (51.14 *per cent* of total due) were pending as on 31 March 2020.

Department did not make efforts to expedite the finalisation of assessments. Due to non-completion of assessments in time, the Department was not in a position to verify the correctness of extraction and dispatches of minerals. As a result, possibility of leakage of revenue cannot be ruled out.

The Government replied (February 2022) that instructions were being issued to finalise the assessments within three months after completion of financial year.

5.4 Summary of findings

Monitoring and evaluation are an essential activity of the Department to ensure compliance of the rules and regulations by adhering to the procedure in place. In the Department, various tools for monitoring have been prescribed *i.e.* returns, *e-rawannas*, assessment, regular inspection of leases, *etc*.

Test check of returns disclosed that 28 per cent of lessees had not submitted any return during the period April 2018 to March 2020 and 72 per cent lessees submitted their returns with a delay up to 1,177 days. No return was prescribed to check the dispatch of royalty paid minerals from the stock of dealers. Further, no mechanism was found in place to check the dispatch of minerals by Quarry Licence holders.

Director, Mines and Geology issued instructions, to conduct inspections of leases by competent authorities. Scrutiny of records of selected leases revealed that norms for inspection of MLs were not adhered and even when inspections were carried out, the reports were deficient. Audit considers that shortfall in inspection might have been a reason for illegal mining in large scale.

Rules provide for annual assessments of leases, it was noticed that 51 *per cent* assessments were pending as on 31 March 2020 in the State. Department did not make efforts to expedite the finalisation of assessments. As a result, possibility of leakage of revenue cannot be ruled out.

5.5 Recommendations

The Department may consider:

- 1. making suitable change in the system to generate report of non-filers/delayed filers of returns and for issuing automatic reminders/ notices to them;
- 2. prescribing periodic returns for dealers to monitor movement of royalty paid minerals effectively;
- 3. prescribing a test check of returns by the ME/AME in a month to get a holistic view of mining activities in their jurisdiction area;
- 4. prescribing a mandatory valid document accompanying the mineral to ascertain the source of mineral for each despatch from QL and
- 5. prescribing online detail of inspection on DMGOMS regarding inspections of leases having details of inspections with photograph of leases taken at the time of inspections. Further, selection of leases for inspection shall be done through a scientific process so as to cover all the leases of a Division within a certain period.

Audit Report (Performance Audit) for the year ended 31 March 2020					

CHAPTER-VI

Environmental Issues

Chapter VI: Environmental Issues

6.1 Plantation in lease area

Rule 34 of RMMC Rules, 2017 envisaged environmental safeguards to be followed. Accordingly, no mining lease or quarry licence shall be granted without obtaining prior consents, approvals, permits, no-objections and the like as may be required under applicable laws for commencement of mining operations. Every mining lease or licence holder shall carry out the mining operations in such a manner so as to ensure systematic development of the mine or quarry, conserve mineral, protect the environment and ensure safety of the man and machinery.

Environmental Clearance issued in reference to the above provisions envisaged that plantation shall be raised in an area of 33 *per cent* of total area including green belt in the safety zone around the mining lease by planting native species around lease area, overburden, dumps, backfilled and reclaimed area around water body, roads, *etc.* or outside lease area in consultation with the Gram Panchayat or Forest Department.

Scrutiny of *Google Earth Pro* images of selected leases disclosed that plantation was not done according to norms prescribed in Environmental Clearance. These facts were confirmed during JPV. It was observed that out of 25 leases, plantation was done only in one lease. In that lease, only five plants survived.

On being pointed out AME Kotputli replied (February 2021) that in case of availability of mineral in the leases, plantation was done by the lessees on the land other than the lease area. However, no document in support of the reply was enclosed. ME Alwar replied that plantation was done by the lessees but due to lack of rain and water, plants did not survive. Plantation was also done outside the lease area.

The above responses were not convincing and Audit is of the view that compliance with environmental laws was not closely monitored.

The Government replied (October 2021) that letter has been written to the concerned offices to furnish compliance. During exit conference the DMG intimated that lessees of some divisions (Bikaner, Jodhpur, Rajsamand and Udaipur *etc.*) were well aware about the importance of plantation and they are doing good work in plantation. Awareness would be encouraged in other divisions also. Thereafter, the Government replied (February 2022) that instructions were issued time to time to achieve the targets of plantation.

Good Practice adopted by Division Neem ka Thana

AME Neem ka Thana replied that since mining areas were hilly and infertile, an area of 60 hectares was got allotted by the State Government in the name of *Neem ka Thana Mining and Crusher Sewa Samiti* of Neem ka Thana. About 30,000 plants were planted in the year 2016. Thereafter, plantation was being done in the area every year. There are 40,000 survived plants in the area. The *Samiti* engaged a team of 20 labourers to take care of these plants.

The review team also visited the plantation site at the time of JPV of illegal mining points and found that it is a good practice to save the environment. This good practice can be adopted by other Division offices.



Figure 6.1: Images of plantation work of Neem ka Thana Mining and Crusher Sewa Samiti.

6.2 Assessment of damage to the land

According to rule 68 of RMMC Rules, 2017, after the termination of a mining lease, the Government shall assess the damage, if any, done to the land by the prospecting or mining operations and shall determine the amount of compensation payable by the licensee or the lessee as the case may be to the occupier of the surface land. Further, every such assessment shall be made within a period of one year from the date of termination of the mining lease by an officer appointed by the Government in this behalf. However, such provisions were not made for the land which was illegally excavated and person engaged were identified.

Audit noticed that environmental impact assessment for illegally mined areas was not done in any of the selected divisions. On being asked it was replied that there was no provision in rules. ME Sikar however, replied that identification of illegal sites would be done and letter would be written to State Level Environment Impact Assessment Authority/District Level Environment Impact Assessment Authority for environmental assessment.

It is evident that illegal mining causes severe damages to the land and environment, therefore, damages to such land and environment were to be assessed by the Department for reclamation of the affected area.

The Government replied that letter has been written to the concerned offices to furnish compliance.

6.3 Non-compliance with the orders of Court/Tribunal

Hon'ble High Court of Judicature for Rajasthan, Jodhpur issued (3 September 2019) an order in D.B. Civil Writ Petition No.4239/2019. According to the order in case of illegal transportation of mineral *Bajri* or Sand:

- *Bajri* should not be permitted to be taken away since it is procured on account of illegal mining, which continues to be vested in the State and
- *Bajri* is to be appropriately restored to the position from where it was mined or from where such illegal mining/extraction took place.

DMG issued order for compliance with the above order on 20 September 2019.

During scrutiny of *Panchnama* files of selected Divisions, it was noticed that in 40 cases¹, the orders of the Hon'ble High Court of Rajasthan were not complied with. In two cases, AME Kotputli wrote to the concerned Police Station to release the vehicles after unloading the *Bajri*. In 38 cases *Bajri* was handed over to the offenders after taking an undertaking to the effect that the offender would unload the *Bajri* at the place where it was excavated. In these cases, it was not ensured that *Bajri* was unloaded by the offender and therefore, misuse of illegal mineral could not be ruled out.

The intention of the order of the court that the *Bajri* should be appropriately restored to the position from where it was mined, was however, not fulfilled by the action of the concerned authorities. Thus, the loss to the environment could not be compensated due to non-compliance with the orders.

On being pointed out, no reason was furnished regarding non-compliance with the Hon'ble High Court's order.

The Government replied (October 2021) that instructions were being issued to the subordinate offices to comply with the orders of Court in letter and spirit.

6.4 Summary of findings

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Scrutiny of satellite images of selected leases disclosed that plantation was not done according to norms prescribed in Environmental clearance. Environmental impact assessment for illegally mined areas was not done in any of the selected divisions. During scrutiny of *Panchnama* files of selected Divisions, it was noticed that in 40 cases, the orders of the Hon'ble High Court of Rajasthan were not complied with.

¹ AME Kotputli (12), AME (Vigilance) Makrana (4), AME Neem ka Thana (5), AME (Vigilance) Neem ka Thana (12), ME (Vigilance) Alwar (2) and ME Makrana (5).

6.5 Recommendations

The Department may:

- 1. adopt the good practice of successful plantation initiated by lease holders of Neem ka Thana to safeguard the environment and
- 2. evolve a system to ensure strict compliance with the orders of Hon'ble Courts.

CHAPTER-VII

Management of Manpower Resources

Chapter VII: Management of Manpower Resources

7.1 Shortage of Manpower

MEs/AMEs and Foremen are the key officials of the Department to check illegal mining and prevent revenue leakage. According to the information available on departmental web-site, duties of ME/AME and Foreman are given here under:

Duties of ME/AME: He is responsible to check that the lease/license conditions are implemented properly; mineral properties are worked properly by the lessee from the point of view of eco-friendly mining, mineral conservation, safety and productivity *etc.* and shall see that mineral properties are prospected properly in case of licensed areas. Further, he shall carry out inspection of mines as per norms. He shall keep proper watch and take suitable measures to check unauthorised mining and leakage of revenue and also inspect *nakas* and check posts as well as mineral stocks of processor, manufacturer, dealer or and trader or any permit holder in his jurisdiction as per provisions.

Duties of Foreman: He shall carry out inspection of mines and quarries and shall see whether the terms of agreement are being fulfilled and shall make report of inspection to the concerned ME/AME. He shall keep watch on the mining activity in the area and whenever, any unauthorised work is detected he shall report the matter immediately to ME/AME concerned. He shall prepare lease area plans and maps etc. He shall check that there is no leakage of revenue in his area and shall inspect the nakas and check posts and mineral carrying vehicles as required. He shall also inspect mineral stocks of processor, manufacturer, dealer, trader within his jurisdiction. He shall also suggest the sites of new check posts/nakas which may be additionally required to check leakage of revenue. He shall carry out demarcation work of the lease hold area, granted, renewed or disputed areas. He shall inspect the areas and make report to the ME/AME as directed by him.

Scrutiny of information provided by the selected offices disclosed that there was shortage of manpower in the cadre which were necessary to check illegal mining and prevent revenue leakage *i.e.* ME/AME and Foreman. The position of sanctioned and working strength of concerned officials is as given in **Table 7.1**:

Table 7.1

Details of working and sanctioned strength of key officials

Year	ME/AME			Foreman			
	Sanctioned Working		Vacant	Sanctioned	Working	Vacant	
			(Percentage)			(Percentage)	
2015-16	13	11	2 (15)	17	13	4 (24)	
2016-17	13	9	4 (31)	17	10	7 (41)	
2017-18	13	8	5 (38)	17	10	7 (41)	
2018-19	13	7	6 (46)	17	8	9 (53)	
2019-20	13	10	3 (23)	17	8	9 (53)	

The above table depicts that there was acute shortage of officials ranging between 15 to 53 *per cent*.

Shortage of manpower had an adverse effect on control of illegal mining activities as discussed in Paragraph 2.4 wherein it was mentioned that percentage of revenue to the total revenue raised has a decreasing trend while number of cases of illegal mining/transportation/storage showed a significantly increasing trend.

The Government replied (February 2022) that restructuring process of the Department was under progress and after completion of the process, action for adjustment/creation of posts would be taken up.

7.2 Working of Vigilance wing

Department has an exclusive Vigilance wing to check and control illegal mining activities. There are 32 divisions since August 2013 for the purpose of vigilance. These divisions were headed by MEs/AMEs. According to information available on departmental web-site, following duties were assigned to these ME/AMEs:

- He shall carry out intensive checking against unauthorised mining or unauthorised excavation and removal of mineral/minerals.
- Inspect the Departmental check posts in his jurisdictions frequently to check leakage of Government revenue.
- Check stocks of minor minerals and ensure that proper records are maintained by the Processor/Manufacturer/stockiest as per the provisions of the Mines & Minerals (Development & Regulation) Act 1957 of Rajasthan Minor Mineral Concession Rules, 1986.
- Inspect the mining areas wherever there is any doubt about working outside the lease hold areas.
- Check demarcations, enquire into the boundary disputes between the adjoining lessees, as and when such work is assigned to him.
- Conduct frequent checking of vehicles carrying mineral in his jurisdiction particularly where there are possibilities of evasion of royalty.
- Perform any other work assigned by the competent authorities.

All these duties besides the administrative duties were also assigned to division offices having jurisdiction over the same area. Audit compared the working of MEs/AMEs of Vigilance offices and MEs/AMEs of selected Division offices having jurisdiction over same area. Results of comparison revealed that Vigilance offices registered 956 cases of illegal mining activities during the period 2015-16 to 2019-20, whereas division offices registered 2,434 cases in the same period. These are given in the table below:

Table 7.2: Comparative statement of working between division and vigilance offices

Name of	Number of Panchanamas made by division offices and vigilance offices									Per			
Office	2015	2015-16		2016-17 20		2017-18 2018		8-19 201		9-20 To		tal	cent
	Div*	Vig#	Div	Vig	Div	Vig	Div	Vig	Div	Vig	Div	Vig	(13/12 * 100)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Neem Ka Thana	46	5	18	6	20	5	35	6	58	64	177	86	48.58
Sikar	88	17	63	3	55	0	75	34	110	99	391	153	39.13
Kotputli	113	23	188	48	70	24	249	96	212	28	832	219	26.32
Alwar	150	166	159	74	164	64	178	41	146	62	797	407	51.06
Makrana	1	41	0	22	62	13	99	10	75	5	237	91	38.39
Total	398	252	428	153	371	106	636	187	601	258	2434	956	39.27

* Div: Division Office # Vig: Vigilance office

Analysis of the above table disclosed that ME/AMEs of Vigilance wing had performed their assigned duties far behind the regular Division offices except in few cases as the overall *Panchnamas* made by vigilance offices is only 39.27 *per cent* of the *Panchnamas* made by division offices.

Further, it is also pertinent to mention here that despite having an exclusive vigilance wing in the Department; trend of illegal mining activities was increasing during the same period. The creation of offices with same duties/functions without any significant difference shows that the available manpower was not utilised to its full extent.

The Government replied (February 2022) that restructuring process of the Department (including Vigilance Wing) was under progress.

7.3 Training and use of latest technology

It is a fact that training is important because it represents a good opportunity for employees to grow their knowledge base and to improve their skills to become more effective in the workplace.

7.3.1 Lack of training

Scrutiny of information provided by the selected offices revealed that training on latest technology to check illegal mining activities was given to a few officials of the Department. Position of training to the officials of the selected units is given in the **Table 7.3**:

Table 7.3
Details showing lack of training

Year	Number of training organised for latest know-how <i>i.e.</i> remote sensing data, GIS technology, drone survey <i>etc.</i>	Number of persons trained
2015-16	0	0
2016-17	1	2
2017-18	0	0
2018-19	1	1
2019-20	0	0

Out of selected 11 offices, officials of two offices only had been provided training regarding the latest technology. Further, it was noticed that the training of use of latest technology *i.e* remote sensing data, GIS technology, drone surveys was not given to any of the officials posted in the remaining selected offices.

Thus, lack of training in the latest technology resulted in non-identification of illegal mining activities in the selected Division offices with the help of technology.

The Government replied (February 2022) that action would be taken for imparting training of the departmental officials.

7.3.2 Laser-based measuring technology and mapping tools

Laser technology has an array of laser-based measurement tools that make mining tasks easier and safer. A laser-based profiling system can take accurate measurements and calculate bench heights as well as minimum and optimum burdens.

A document regarding comprehensive computerisation of mineral administration of Department of Mines and Geology, Karnataka envisaged use of LiDAR Technology (light detection and ranging technology). According to the document,

LiDAR scanning is far safer than conventional surveying methods and takes only a fraction of the time. The speed at which data is collected minimizes delays to the mining schedules and processes. The LiDAR solution is ideal for finding differences between two time periods to accurately monitor the changes in the terrain. Data from the LiDAR solution dovetails cleanly into existing data workflows to produce deliverables including engineering drawings, as-built, contours and volumes.

However, such instruments were not procured by the Department to use in field offices. During JPV it was observed that Department used manual *Feeta* (Tape measure) for measurement of length, width and height. Measurement of mineral excavated in hilly areas where benches were also not made is a difficult task and it takes a lot of time besides incorrect measurement leads to avoidable litigations.

The Government replied (October 2021) that equipment for use of modern technology *i.e.* drone, laser and GIS would be procured/outsourced. Thereafter, it was replied (February 2022) that drone survey was done to identify illegal mining in one district *i.e.* Nagaur.

7.4 Summary of findings

The Department has a vigilance wing to curb illegal mining activities and to check leakage of revenue. During the period 2015-16 to 2019-20, vigilance offices identified 956 cases whereas division offices having jurisdiction on the same area, identified 2,434 cases of illegal mining activities besides their regular work. It indicated that performance of vigilance wing was not up to the mark and purpose of establishment of specialized wing for identification of illegal mining activities was also defeated to that extent. Training of latest technology to check illegal mining activities was given to a few officials of the Department. Latest instruments were not procured by the Department for use in field offices.

7.5 Recommendations

The Department may:

- 1. review the assignment of duties to the officers of division offices and vigilance offices to avoid duplication and ensure optimum utilisation of their abilities and take measures to strengthen functioning of the Vigilance wing and
- 2. adopt the latest technology to measure volume of minerals excavated.

CHAPTER-VIII

Conclusions and Recommendations

Chapter VIII: Conclusions and Recommendations

Audit Objective I

Whether the Department has adequate human resources and efficient IT system and utilised latest technology and know-how to check and prevent illegal mining.

Use of Technology: Department did not leverage technologies easily available in public domain, to identify and curb illegal mining activities despite a clear provision in the Rajasthan Mineral Policy, 2015. Irregularities *viz.* overlapping of leases and non-allotment/auction of gap areas lying between the leases, misuse of *e-rawannas* (where mineral was not excavated but lessees dispatched the mineral by using *e-rawannas*) could not be identified by the Department. Further, the Department failed to utilise the IT system effectively. Demands related to illegal mining activities were not shown on the demand register maintained at *DMGOMS*. There was no check in the system to prevent the dispatch of mineral automatically in excess of quantity permissible in EC/CTO.

The Department may consider:

- 1. utilising Remote Sensing/GIS technology such as Google Earth Pro application to identify illegal mining activities along with other modern technology such as drone survey to expedite identification of illegal mining activities;
- 2. mapping all the existing leases using Remote Sensing data and GIS technology to do away the overlapping of leases;
- 3. to fix accountability on the officials for leaving gap areas unauctioned and setting a time frame for auction of gap areas on priority basis;
- 4. providing a check in the DMGOMS to auto block the generation of e-rawannas whenever the quantity crosses the permitted limit by EC also and to expedite the recovery of the amount for the illegally mined minerals;
- 5. providing a system in the DMGOMS to generate demand notice only after uploading the demand in online demand and collection register;
- 6. mapping and uploading coordinates of all the STPs wherein mining was permitted;
- 7. using GIS technology for measuring distance between place of dispatch and destination in e-rawanna: and
- 8. adopting good practices of GPS installation in vehicles and use of RFID technology as initiated by other states and proposed by the Department of Mines and Geology, Rajasthan.

E-rawannas and weigh bridges: Working of weigh bridges revealed serious irregularities *viz*. the photograph of one vehicle was used many times for confirmation of various *e-rawannas* which indicates that *e-rawannas* were confirmed without actual weighment of the vehicles. There was laxity in the system for effective monitoring on the functioning of the weigh bridges. The Department did not have a mechanism to use printed serial numbered *Panchnamas* which resulted in non-reporting of illegal mining activities to higher authorities. Further, sources/sites of illegal mining were not investigated in cases of illegal transportation of minerals. Government revenue from mining royalty can be multiplied if loopholes are plugged and violations of rules prevented.

The Department may consider:

- 1. developing or approving a single software to be used by weigh bridges across the State under overall control of the Department to check the malpractices;
- 2. strengthening its monitoring of weigh bridges through IT system at a centralized centre;
- 3. pursuing cases of vehicles used in illegal transportation with the Transport Department so that stringent action can be taken against vehicles owners.
- 4. optimally using the date and photos available in DMGOMS to investigate complaints on illegal mining and take stringent action against those involved in the malpractices so that is acts as a deterrent and
- 5. to adopt the good practice of processing Panchnama with printed serial numbers which is being implemented by the Transport Department of Rajasthan for transparency and accountability.

Management of Manpower Resources: There was shortage of technical manpower which were necessary to check illegal mining and prevent revenue leakage *i.e.* ME/AME and Foreman. Training of latest technology to check illegal mining activities was given only to a few officials of the Department. Latest instruments were not procured by the Department to use in field offices.

The Department had a vigilance wing to curb illegal mining activities and to check leakage of Government revenue. During the period 2015-16 to 2019-20, Vigilance offices identified 956 cases whereas division offices having jurisdiction on the same area, identified 2,434 cases of illegal mining activities besides their regular work. It indicated that performance of Vigilance wing was not up to the mark and purpose of establishment of specialized wing for identification of illegal mining activities was also defeated to that extent.

The Department may consider:

- 1. review the assignment of duties to the officers of division offices and vigilance offices to avoid duplication and ensure optimum utilisation of their abilities and take measures to strengthen functioning of the Vigilance wing
- 2. adopt the latest technology to measure volume of minerals excavated.

Audit Objective II

Whether provisions of the Acts and Rules governing administration of mines and minerals were being implemented effectively to check and prevent illegal mining.

Monitoring and Evaluation: Monitoring and evaluation are an essential activity of the Department to ensure compliance with the rules and regulations by adhering to the procedure in place. In the Department, various tools for monitoring have been prescribed *i.e.* returns, *e-rawannas*, assessment, regular inspection of leases, *etc*.

Test check of returns disclosed that 28 *per cent* of lessees had not submitted any return during the period April 2018 to March 2020 and 72 *per cent* lessees submitted their returns with a delay up to 1,177 days. No return was prescribed to check the dispatch of royalty paid minerals from the stock of dealers. Further, no mechanism was found in place to check the dispatch of minerals by Quarry Licence holders.

Director, Mines & Geology issued instructions to conduct inspection of leases by competent authorities. Scrutiny of records of selected leases revealed that norms for inspection of MLs were also not adhered to and even when inspections were carried out, the reports were deficient. Audit considers that shortfall in inspection might have been a reason for illegal mining in large scale. Rules provide for annual assessments of leases. However, 51 *per cent* assessments were pending as on 31 March 2020 in the State. Department did not make efforts to expedite the finalisation of assessments. As a result, possibility of leakage of revenue cannot be ruled out.

The Department may consider:

- 1. making suitable change in the system to generate report of non-filers/delayed filers of returns and for issuing automatic reminders/ notices to them;
- 2. prescribing periodic returns for dealers to monitor movement of royalty paid minerals effectively;
- 3. prescribing a test check of returns by the ME/AME in a month to get a holistic view of mining activities in their jurisdiction area;

- 4. prescribing a mandatory valid document accompanying the mineral to ascertain the source of mineral for each despatch from QL and
- 5. prescribing online detail of inspection on DMGOMS regarding inspections of leases having details of inspections with photograph of leases taken at the time of inspections. Further, selection of leases for inspection shall be done through a scientific process so as to cover all the leases of a Division within a certain period.

Audit Objective III

Effective controls existed to monitor mining activities so that environmental and ecological concerns were addressed properly.

Scrutiny of satellite images of selected leases disclosed that plantation was not done according to norms prescribed in Environmental clearance. Environmental impact assessment for illegally mined areas was not done in any of the selected divisions.

Hon'ble High Court of Rajasthan ordered restoration of *Bajri* to the position from where it was illegally excavated. Scrutiny of *Panchnama* files of selected divisions revealed that in 40 cases, the orders of the Hon'ble High Court of Rajasthan were not complied.

The Department may consider:

- 1. adopt the good practice of successful plantation initiated by lease holders of Neem ka Thana to safeguard the environment and
- 2. evolve a system to ensure strict compliance with the orders of Hon'ble Courts.

To conclude, we found that Department was unable to utilize the technology to curb illegal mining effectively. The resources deployed for this purpose remained at sub optimal level and the effectiveness of monitoring was found deficient. Therefore, the Department requires to review its monitoring processes and use of technologies in it.

JAIPUR The 25th October 2022 (ATOORVA SINHA) Accountant General (Audit-II), Rajasthan

Countersigned

NEW DELHI The 27th October 2022 (GIRISH CHANDRA MURMU)
Comptroller and Auditor General of India

Audit Report (Performance Audit) for the year ended 31 March 2020					

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