Chapter-4

Audit Findings in respect of RJ-ON-90/1 Block

Chapter 4 - Audit Findings in respect of RJ-ON-90/1 Block

4.1 Overview

4.1.1 Introduction

4.1.1.1. The RJ-ON-90/1, an onland block is one of the pre-NELP exploration blocks awarded in Round IV of pre-NELP exploration rounds in May 1995 to Shell India Production Development (SIPD). The PSC was signed between GoI, SIPD and ONGC on 15 May 1995. Subsequently, SIPD's PI was transferred in three phases between September 1998 and June 2003 to Cairn Energy India Limited and Cairn Energy Hydrocarbons Limited (collectively termed as "Cairn Energy"). Cairn Energy India Limited (CEIL[82]) is the Operator of the Block.

4.1.1.2. The Block has 25 hydrocarbon discoveries (21 oil and 4 gas) made between July 1999 and November 2008. During the above mentioned period, three distinct Development Areas (DAs) were approved by the MC to include commercial discoveries. Under the terms of the PSC, ONGC as the designated nominee of GoI, had the right, to take a PI upto a maximum of 30 *per cent* in each of the three Development Areas *viz*. DA-1, DA-2 and DA-3. ONGC was also the licensee of the Block responsible for obtaining the PEL, Mining Lease (ML) and payment of royalty/PEL/ ML fees. The number of discoveries in each of the three Development Areas of the Block was as under:

Table 22 : Development Area wise status of discoveries

Development Area (DA)	Grant of Mining Lease	Area in sq. km.	No. of discoveries	
			Oil	**Gas**
DA-1	June 2005	1859.00	12	2
DA-2	November 2006	430.17	08	0
DA-3	November 2007	822.00	01	2
Total		**3111.17**	**21**	**4**

4.1.2 Physical and financial performance

4.1.2.1. Production of crude oil from the Block commenced from 29 August 2009. Presently, five discoveries *viz*. Mangala, Saraswati, Raageshwari and Raageshwari Deep

[82] *The holding company of Cairn India Limited (CIL), Cairn Energy PLC proposed to sell a substantial part of its shareholding in the Company to Vedanta Resources PLC and sought Government's approval in September 2010 for the sale of its shareholding to the extent of 51 to 60% in CIL to Vedanta Resources PLC. In July 2011, the GoI granted approval subject to withdrawing the Cess arbitration case and treating Royalty as cost recoverable in respect of the Block. Subsequently, the Cess arbitration case was withdrawn by Cairn and now, the Royalty has become cost recoverable.*

(Gas) in DA-1 and Bhagyam in DA-2 are on production.

4.1.2.2. As per Article 15 of the PSC, the Parties to the contract would share profit oil from each Development Area on the basis of IM achieved by the Company at the end of the preceding year for that Development Area. The share of the GoI and the Contractor based on IM calculation is as under:

Table 23 : Share of the GoI and the Contractor based on IM calculation

IM Slabs	GoI Share in *per cent*	Contractor Share in *per cent*
<1.5	20	80
>=1.5 but <2.0	30	70
>=2.0 but less than 2.5	40	60
2.5 or more	50	50

During 2011-12 the GoI share of profit petroleum was calculated @ 20 *per cent* as based on IM of 0.68 as of March 2011.

4.1.2.3. The total expenditure incurred in the Block till March 2012 was US$ 6229.71 million. The details of production, sales, sales revenue, royalty and cess from 2009-10 to 2011-12 were as follows:

Table 24 : Cost, Production, Sales and Sales Revenue

Year	Cost (US$ million)				Production Oil (MMT)	Sales Revenue (US$ million)	GoIPP[83] (US$ million)
	Exploration	**Develop-ment**	**Produc-tion**	**Total**			
2008-09*	**616.51**	**1383.32**	**-**	**1999.83**	*	*	*
2009-10	11.22	921.54	96.46	1029.22	0.45	205.69	NIL
2010-11	-0.98	694.89	821.18	1515.09	5.15	2789.33	NIL
2011-12	-1.13	439.10	1247.60	1685.57	6.55	4840.61	449.41
Total	**625.62**	**3438.85**	**2165.24**	**6229.71**	**12.15**	**7835.63**	**449.41**

**Cumulative cost upto March 2008; Production commenced from 29 August 2009*

The Operator recovered US$ 5471.64 million from DA-1 and deferred cost recovery of US$ 413.80 million (March 2012) pending OC/MC ratification. In respect of DA-2, US$ 108.06 million was recovered with US$ 233.88 million remaining unrecovered till March 2012. The details are as below.

[83] *GOIPP= GoI's Profit Petroleum.*

Table 25 : Status of cost recovery as on March 2012

(In million US$)

Particulars	DA-1	DA-2
Total Revenue	**7718.69**	**108.06**
Total Cost incurred	5885.44	341.94
Less- cost recovery deferred	413.80	00.00
Recoverable Contract Cost	**5471.64**	**341.94**
Profit Oil/(Unrecovered cost)	**2247.05**	**(233.88)**

(Source: Format# 4 &5, EOY Statement 2012)

Table 26 : Royalty and Cess

(In crore INR)

Year	Royalty	Cess	Total
2009-10	120.79	112.80	233.59
2010-11	1842.50	1306.60	3149.10
2011-12	3556.46	1770.42	5326.88
Total	**5519.75**	**3189.82**	**8709.57**

4.1.3 Presentation of findings in this chapter

Para 4.1.4 of this chapter deals with audit sampling. The compliance, revenue and procurement issues observed during audit are contained in para 4.2, 4.3 and 4.4 respectively.

4.1.4 Sampling methodology

During the period 2008-09 to 2011-12, 199 procurement and service contracts valuing more than one million US$ were awarded by the Operator (approximately valuing US$ 2392 million) for goods and services to indigenous and foreign vendors, out of which 60 procurement cases (valuing US$ 1849 million) were reviewed.

4.2 Compliance Issues

4.2.1 Delay in finalization of minutes of MC meetings

4.2.1.1. The PSC *inter alia* provided for approval of the MC for Development Plans or

revisions or additions to such Development Plans. Further, Articles 5.10 and 5.11 of the PSC also provided for preparation of the minutes not later than 28 days after the date of the meeting and approval of the minutes by the members within 21 days from receipt of minutes. Thus, the minutes of MC meetings ought to be approved within a maximum period of 49 days.

4.2.1.2. Review of documents relating to MC meetings held during the years 2008-09 to 2011-12 revealed that 115 to 213 days were taken for finalization of minutes (against the maximum period of 49 days) in respect of 5 MC meetings held between July 2010 and September 2011 thereby delaying the approval of minutes by 66 to 164 days. The date of approval of minutes is taken as the date of approval (or disapproval) of the MC to proposals submitted to the MC. In the absence of timely finalization/approval of minutes, activities were delayed as commented at Para below.

4.2.1.3. The MoPNG replied (June 2014) that

- *ONGC representative was the Chairman of the MC and representative of the Cairn, the Operator, was the Secretary to the MC. There were delays in following up and finalization of the minutes of meeting on the part of the Secretary of MC.*
- *None of the activities were delayed for want of signing of minutes, as decisions were taken timely in the MC meeting, which only got documented subsequently in the minutes.*

4.2.1.4. The Operator in its reply (July 2014) to the MoPNG stated that *minutes of the MC meetings were drafted and circulated by the Operator within 15 days from the meeting and every effort was made to obtain the comments/acceptance of other members so that the signed minutes were issued at the earliest.*

4.2.1.5. In Audit opinion, the approval or finalization of the MC minutes was an intra-MC matter which ought to have been completed expeditiously within the period prescribed in the PSC.

4.2.2 Delay in approval of Optimization Concept

4.2.2.1. With the experience gained during the development of Mangala field, the Operator proposed (April 2010) an optimization concept for Bhagyam Field which was deliberated by the MC on 20 August 2010. MC's final approval was communicated on 13 December 2010. Thus, approval of optimization concept took 115 days from the date of MC meeting. This resulted in delayed commencement of activities.

4.2.2.2. The MoPNG replied (June 2014) that *the Bhagyam optimization concept was deliberated in the Management Committee (MC) meeting held on 19 July 2010 wherein the MC advised the Operator to formalize the concept through the Operating Committee (OC).* The OC Resolution was ultimately submitted by Operator *on 20 August 2010 which was reviewed by MC. The MC Resolution (MCR) was signed by DGH on 11 October 2010*

whereas the signing of MCR by remaining MC representatives was completed on 13 December 2010. It further stated that substantial deliberation took place after the MC meeting on the concept optimization and the minutes were signed by circulation without waiting for a physical MC meeting in order to expedite the decision making.

4.2.2.3. The Operator in its reply (July 2014) to the MoPNG stated that *it would take up this point in the MC and mutually agree on the ways and means to ensure timely approval/sign-off of MC meetings*.

4.2.2.4. The fact remains that despite deliberations on the Bhagyam concept in MC meeting on 20 August 2010, the minutes constituting approval of the MC for execution of the activities were signed only on 13 December 2010 after nearly four months, resulting in underutilization of the budget during 2010-11.

Audit Recommendation 16: All stakeholders should ensure that the minutes of MC meetings are firmed up in a timely manner to avoid delays in execution of projects.

4.2.3 Delay in submission of Work Programme and Budget

4.2.3.1. Articles 6.7 & 9.11 of the PSC provided that the WP&B related to development and production operations would be submitted by the OC to the MC for approval not later than 31 December each year in respect of the Year immediately following.

4.2.3.2. Audit observed delays in submission of WP&B (2008-09 to 2011-12) by OC to MC and subsequent approval by MC as summarized below:

Table 27 : Delays in submission of WP&B

WP&B for the Year	Due date of submission by OC to MC	Actual date of submission to MC	Delay in days	Date of approval by MC	Days taken for approval of MC
	A	B	C=A-B		D=B-C
2008-09	31 December 2007	31 March 2008	91	07 July 2008	98
2009-10	31 December2008	21 April 2009	111	30 June 2009	70
2010-11	31 December 2009	12 April 2010	102	20 August 2010	130
2011-12	31 December2010	21 April 2011	111	16 December 2011	239

4.2.3.3. The delays in submission of OC approved WP&B to MC ranged from 91 to 111 days for the years 2008-09 to 2011-12. Further, these WP&B were approved by MC taking 70 to 239 days. Thus, delayed submission and approval of annual WP&B violated the timelines prescribed in the PSC besides continuance of activities envisaged in the WP&B without approval of the MC.

4.2.3.4. The Operator stated (November 2012) that *FDPs were multi-year programs and the annual WP&B merely reflect phasing of the expenditure on year to year basis. In a typical multi-year project, what was more critical was the project sanction which existed by*

means of MC approved FDPs. Therefore, in the interest of timely project completion, the Operator continued with the project execution. The Operator in its reply (July 2014) to the MoPNG also stated that *it endeavored to adhere to the timelines specified in PSC*.

4.2.3.5. MoPNG in its reply (June 2014) stated that *PSC provides that the contractor should submit the annual work program and budget to the MC by 31 December of the previous year. Though there is no time line for grant of approval by MC, presumably the MC has three months (90 days) time for approval of the annual work program and budget before the year commences. With this background, the time taken by MC for approval of the budget is not found to be materially different and the PSC timelines were generally adhered to*.

4.2.3.6. The reply of the Operator is not acceptable as WP&B authorizes a particular activity within the approved budget. Approval of the FDP does not preclude the need to adhere to the timelines prescribed in the PSC for timely approval of WP&B. The contention of the MoPNG that PSC timelines regarding WP&B were adhered to is also not tenable as there were delays both in submission of WP&B by OC to MC and in approval of WP&B by MC.

4.2.3.7. Under the PSC, the MC generally functions on the recommendations of the OC. Therefore, the significance and relevance of a functioning OC need not be over emphasized. The instances referred to above were primarily governance issues which manifested in terms of delays with consequential impact on production and could be addressed when the OC and the MC discharge their functions working with the spirit of being collective (and not fragmented) units in their respective domains with an active (and proactive) approach.

4.2.3.8. There is a need for approval of WP&B before commencement of the year. The WP&B is the only document, which authorizes a particular activity within the approved budget. Therefore, all the stakeholders including DGH/MC should work in coordination to ensure timely approval of WP&B as PSC mandates that MC approves the development and production budgets on annual basis. (See Audit Recommendation No. 1)

4.2.4 Short payment of Profit Petroleum to GoI

4.2.4.1. Article 27.2 of PSC, *inter alia* provides that the contractor would be responsible for all costs prior to the Delivery Point[84] and the GoI or its nominee (for evacuation of crude) would be responsible for all costs beyond Delivery Point. Thus, the buyer has to incur expenditure beyond the Delivery Point. As an interim arrangement, the GoI allowed (October 2009) the Contractor to establish an interim delivery point at Kandla port for transporting the crude to the GoI nominees (HPCL and Mangalore Refineries and Petrochemicals Limited (MRPL). Costs incurred upto Kandla for transfer to GoI nominees alone would thus be cost recoverable.

[84] *As per Article 1.23 "Delivery Point" means, except as otherwise herein provided or as may be otherwise agreed between the Government and the Contractor, the point at which Petroleum reaches the outlet flange of the delivery facility and different delivery points may be established for purposes of sales to the Government and other sales.*

4.2.4.2. Audit observed that HPCL did not take any crude against allocation of 0.80 MMT and the Operator transported crude from October 2009 to June 2010to MRPL and RIL through the delivery point at Kandla (approved to be used for crude transportation to MRPL and HPCL only). Audit noticed that though the PSC stipulates that the transportation cost beyond delivery point is to be borne by the buyers, yet the Operator incurred US$ 8.87 million towards shipping of crude to MRPL and RIL beyond designated delivery point (Kandla) and adjusted it from the revenues.

4.2.4.2.1. The recovery of US$ 8.87 million had resulted in short payment of PP of GoI by US$ 1.77 million (i.e. 20 *per cent* of US$ 8.87 million).

4.2.4.2.2. The Operator stated (November 2012) that *since HPCL had expressed its inability to uplift the crude, sales to RIL (along with MRPL) were made through trucking and without sales to RIL, the production schedule would have suffered badly*. It further stated that *its request to GoI for regularization of sale to RIL through trucking was under consideration*. The Operator in its reply (July 2014) to the MoPNG stated that *the sale to RIL was an Arms-Length Sale and accordingly, the shipping costs incurred beyond delivery point were deducted from the sale price and thus, the adjustments done were as per PSC.*

4.2.4.2.3. MoPNG in its reply (June 2014) stated that *the contractor was advised by DGH on 29 August 2012 disallowing cost recovery of US $ 8.88 million, followed by a reminder on 31 January 2014*.

4.2.4.2.4. The reply of the Operator is not acceptable as the adjustment of shipping cost of US$ 8.87 million beyond the GoI designated delivery point was in contravention of PSC provisions and resulted in short payment of profit petroleum to GoI.

Audit Recommendation 17: The Operator should carry out cost recovery in accordance with PSC provisions as any deviation in this regard would impact payment of PP to the GoI.

4.3 Revenue issues

4.3.1 Delay in evacuation of crude oil due to inability of MRPL-the GoI nominee to uplift the crude from the Block

4.3.1.1. As per Article 18.2 of the PSC, the GoI or its nominee is under obligation to purchase the entire crude oil from the Contract Area. Accordingly, with the production of 100000 to 120000 BOPD envisaged from the Block from IV quarter of 2007, the GoI held discussions (July 2005) with IOCL, ONGC-MRPL, HPCL and the Operator (CEIL) for appointing GoI nominee for purchasing RJ crude. During discussions, the Operator stressed that the designated GoI nominee should commit to lift the entire production and have in readiness its midstream/pipeline infrastructure for offtake from IV quarter of 2007. Both

ONGC and HPCL confirmed their ability to process the entire crude indicating that a Pipeline[85] would be laid from Barmer upto the Mundra port for taking the crude to their existing refineries *viz*. MRPL and HPCL Mumbai/Visakh refinery.

4.3.1.2. GoI finally designated (September 2005) MRPL as the GoI nominee for the RJ crude. However, after a period of about eighteen months, MRPL informed (March 2007) GoI that the RJ crude was highly viscous with high pour point and residue and that presently, it could take only 1.0 to 1.2 million tons of crude per year as processing of the entire RJ crude would require increased allocation of Bombay High crude. There were also issues between the Operator and MRPL on price of crude, transportation cost etc.

4.3.1.3. The justification given by MRPL for its inability to take entire RJ crude primarily on account of properties of RJ crude needs to be viewed in the context of the following:

- GoI had asked (March 2005) the Oil Companies (including ONGC-MRPL) to carry out their techno-economic analysis and take a commercial decision before approaching it for designation as a GoI nominee for evacuation of RJ crude.
- The Operator had sent details of production profile, Crude Oil Assay (analysis of crude oil from block) etc. to ONGC, HPCL and IOCL in July 2005.The Crude Oil Assay carried out (August 2004) had indicated that the RJ crude was of high pour point, waxy and viscous with low sulphur and high residue.
- ONGC itself had confirmed that its refinery (MRPL) was capable of processing heavy crude like the one discovered in RJ block and, hence, offered to take the entire crude to be produced from the Block.

4.3.1.4. MRPL's expression of inability to process the RJ crude after its designation as GoI nominee resulted in following developments:

- Nomination of multiple GoI refineries as GoI nominees.
- Shifting of delivery point from Barmer to Salaya to Bhogat (Gujarat) and laying a pipeline from Barmer to Salaya to Bhogat at US$ 1108 million (March 2013).
- Failure of the GoI nominee, MRPL, to uplift the RJ crude resulted in shifting of commencement of production from IV quarter of 2007 to 2nd half of 2009

4.3.1.5. MoPNG in its reply (June 2014) stated that *MRPL had presumably acted in their best economic interest and by nominating multiple GOI refineries, MOP&NG overcame the issue of MRPL's difficulty in uplifting crude oil.*

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[85] *This pipeline was to be laid at the cost of ONGC or HPCL as Article 27.2 of Production Sharing Contract, inter-alia, provides that contractor would be responsible for all costs prior to the Delivery Point and the GoI or its nominee (for evacuation of crude) for all costs beyond Delivery Point. Initially, the Delivery point for evacuation of RJ crude was Barmer in Rajasthan which was shifted (April 2008) to Salaya after refusal of MRPL for taking RJ crude.*

4.3.1.6. The reply of the MoPNG is not acceptable as MRPL, despite being aware (July 2005) of the characteristics of RJ crude well before its designation as GoI nominee, expressed its inability in processing the entire crude (citing predominantly the nature of RJ crude) much later which adversely affected production and evacuation of crude from RJ block.

4.3.2 Deferment of Production due to delay in completion of Pipeline

4.3.2.1. In view of inability (March 2007) of MRPL to uplift the entire RJ crude, the Operator requested (April 2007) GoI for nomination of multiple refineries, shifting delivery point (from Barmer) to a location suitable for nominated refineries and laying a 580 Km pipeline from *Barmer to Salaya* in Gujarat. GoI approved (April 2008) shifting of delivery point from *Barmer to Salaya* at Gujarat Coast with a condition that the GoI may designate multiple PSU refineries as the GoI nominees. The work of laying a pipeline had already started in June 2008 when the Operator intimated (December 2008) GoI that delivery point at Salaya was not feasible on account of ecological considerations[86] and requested for shifting it to Bhogat at Gujarat Coast. This involved, laying an additional pipeline from *Salaya to Bhogat of 80 Km*, which was agreed to by the GoI in July 2009.

4.3.2.2. Audit, however, noted that the pipeline from *Barmer to Salaya* was completed in May 2010 against the scheduled completion by June 2009 after delay of about 10 months. The *Salaya to Bhogat* pipeline scheduled for completion by Q2 of 2010 was mechanically completed in June 2014 (and now under commissioning) after expiry of almost four years from targeted completion. The Operator attributed the delays in completion to delays in securing Right of Uses[87] (RoUs), in Rajasthan and Gujarat, unionization of farmers, local political agitations etc. Meanwhile, on account of these delays and other factors such as scope & designs, changes due to major equipment & packages, increase in land and ROU costs etc. the pipeline cost rose to US$ 1108 million (March 2013) against the approved cost of US$ 941 million.

4.3.2.3. The consequences of delay in completion of pipeline were as under:

- With delay of over nine months in pipeline completion, *drilling of wells had to be rescheduled* so as to align production with pipeline completion. With commencement of production from 29 August 2009, the *sale of crude took place through tankers* upto 14 June 2010 due to non-availability of pipeline and through pipeline from 15 June 2010.
- Audit observed that before commissioning of the pipeline, the average production in May 2010 was 51115 BOPD which almost doubled to 101544 BOPD in July 2010 after commissioning of the pipeline. The Operator attributed (January 2013) the

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[86] *Based on the study conducted by National Institute of Oceanography, Goa which had discovered the presence of ecologically sensitive area off the Salaya coast line in Gulf of Kutch.*

[87] *Means acquisition of land use rights.*

production ramp-up to availability of pipeline. Thus, the non-availability of the pipeline led to controlled/moderated production which consequently resulted in deferment of production.

- Until *Salaya to Bhogat* pipeline was completed and commissioned, sale of RJ crude to HPCL, MRPL and other coastal refineries would not take place.

4.3.2.4. MoPNG in its reply (June 2014) stated that *crude oil produced from RJ-ON-90/1 contained high wax, which made the crude refining a tough task. No infrastructure was available in India for transportation of the heavy crude oil. The construction of the 670 kilometer long pipeline took time after obtaining necessary environmental clearances and land acquisition assistance from State Government. Considering the complexity of the project which was done for the first time in the country, the actual completion schedule reflected satisfactory performance of the related agencies and could in no way, be termed as delayed.*

4.3.2.5. The Operator in its reply (July 2014) to the MoPNG stated that *the completion of Bhogat facilities would provide access to all coastal refineries in India and opportunity to enhance value of RJ crude through swapping in international market which would help timely lifting of entire crude oil produced.*

4.3.2.6. While Audit appreciates the complexity of the pipeline project, but the view of the MoPNG that the actual completion schedule reflected satisfactory performance is not acceptable. The project has been delayed by close to four years and the project cost has also escalated by 17 *per cent* which cannot be termed as satisfactory.

4.3.3 Non-lifting of crude oil by nominated GoI refineries

4.3.3.1. The GoI decided (February 2008) to nominate multiple GoI refineries as GoI nominees for evacuation of RJ crude. The PSU refineries, *viz*. IOCL, HPCL, BPCL and MRPL, had also indicated (October 2008) to the GoI that they could absorb 3.5 to 4.2 MMTPA against estimated production of 7.5 to 8.75 MMTPA from the Block. Consequently, the GoI nominated (March 2009) MRPL, HPCL and IOCL to offtake part of the planned production during the year 2009-10 and 2010-11.

4.3.3.2. The quantum of allocation of crude to GoI refineries and actual offtake from 2009-10 to 2011-12 was as under:

Table 28 : Allocation of Crude and Offtake

(Figures in MMT)

Year	Allocation			Actual offtake		
	MRPL	HPCL	IOCL	MRPL	HPCL	IOCL
2009-10*	0.20	0.30	0.20	0.20	-	-
2010-11*	0.40	0.50	1.50	0.07	-	0.42
2011-12	-	-	1.50	-	-	0.98
Total	**0.60**	**0.80**	**3.20**	**0.27**	**-**	**1.40**
	0.60+0.80+3.20=4.60			**0.27+1.40=1.67 (36 *per cent*)**		

* Upto 14 June 2010 the evacuation of RJ crude was through tankers

4.3.3.3. Audit, however, noted that despite expressing their willingness and ability in July 2005 and October 2008 to take and process the RJ crude, the nominated GoI refineries failed to uplift their allocated share of RJ crude on account of following:

- During the year 2010-11, MRPL did not uplift its entire share of allocated crude and discontinued lifting crude in June 2010 due to inability to process the RJ crude until the Coker unit was installed in its refinery.
- HPCL did not uplift any crude during 2009-10 and 2010-11 despite allocations stating that lifting of crude from Kandla (designated delivery point for MRPL/HPCL) was not economical for processing at its Vizag refinery.
- IOCL had confirmed to uplift the allocated crude subject to commercial viability.

4.3.3.4. Thus, the failure of the nominated GoI refineries to uplift their allocated share of RJ crude led to:

- the controlled/moderated production which resulted in shortfall of 0.41 MMT as indicated by the comparison of actual production (0.45 MMT) with forecast production (0.86 MMT) during 2009-10.
- the grant of marketing freedom (October 2009) to the Operator to sell the unallocated portion of the crude produced from the Block to domestic private refineries, which took 51.11 to 87.57 per cent of the total production from the Block from 2009-10 to 2011-12.

4.3.3.5. MoPNG in its reply (June 2014) stated that *the crude oil produced from RJ-ON-90/1 was heavy containing high wax which made the crude refining a tough task. Further, the difficulty posed by MRPL's inability to lift crude oil as planned initially was overcome by MOP&NG and delay in production was halted by nominating multiple refineries including the private refineries*.

4.3.3.6. Audit takes note of the MoPNG's views that crude oil produced from RJ-ON-90/1 was heavy containing high wax. However, the fact that the PSU refineries as nominees of GoI failed to take even the allocated share of RJ crude (the entire quantity of which was mandated for evacuation by GoI nominees only under Article 18.2 of PSC) confirmed the lack of required preparedness.

4.3.4 Underutilization of Infrastructure created for GoI refineries

4.3.4.1. GoI had approved (October 2009) installation of two spur lines (on the Barmer to Salaya pipeline) at Radhanpur and Viramgam (additional delivery points) to facilitate delivery of RJ crude to IOCL's Panipat and Koyali refinery respectively at estimated cost of US$ 64.73 million (Radhanpur: US$ 54.73 million and Viramgam US$ 10 million) with cost recovery of its capital and operation & maintenance expenditure. The delivery points at Radhanpur and Viramgam were commissioned in July 2010 and January 2012 respectively at cost of US$ 58.84 million (Radhanpur: US$ 48.99 million and Viramgam: US$ 9.85 million).

4.3.4.2. Audit noted that against the allocation of 3 MMT during 2010-11 and 2011-12, IOCL lifted only 1.40 MMT which was only 46.67 *per cent* of its allocations. As regards utilization of infrastructure, it was observed that crude transportation was only 15777 barrels of per day (BOPD) against the capacity of 40000 BOPD (39 *per cent*) (Radhanpur) and 4744 BOPD only against capacity of 60000 BOPD (Viramgam) (8 *per cent*). The Operator attributed (February 2013) it to factors like average flowing pressure in IOCL pipeline, blending ratio of RJ crude as fixed by IOCL etc.

4.3.4.3. Thus, the infrastructure created at Radhanpur and Viramgam at US$ 58.84 million remained largely underutilized due to the failure of IOCL to uplift allocated quantity of RJ crude despite installation of two dedicated spur lines for IOCL on the *Barmer to Salaya* pipeline.

4.3.4.4. MoPNG in its reply (June 2014) stated that

- *No infrastructure was available for lifting the heavy crude oil and the refineries were not equipped to process the heavy crude oil.*
- *MOP&NG nominated multiple refineries, who could optimize crude lifting by taking into consideration the technical difficulties in processing the heavy crude oil.*
- *IOC attempted to optimize to lift maximum quantity of heavy crude oil subject to technical limitations of transportation and of its plant and machinery. However, the actual uplifting from IOC depended on the capacity of the refinery to handle the heavy oil mixed with light oil. In view of this IOC has lifted lesser quantity than allocated.*
- *The spur lines (at Radhanpur and Viramgam) essentially link the IOC refineries to the main pipeline transporting the oil from Contract Area to the nearest port. The cost of the spur lines is insignificant when compared to the cost of the main pipeline amounting to more than US $ 1 billion. In the absence of such spur lines, oil is to be transported through trucks which would have been more uneconomical option.*

4.3.4.5. While Audit takes note of the MoPNG's views, the dedicated pipeline infrastructure (spur lines at Radhanpur and Viramgam) had been created for IOC, in spite of which IOC failed to uplift even allocated quantity of RJ crude. The response only confirms underutilization of the facilities created.

4.3.5 Price of crude produced from the Block

4.3.5.1 Non-fixation of price of RJ crude despite production from the contract area since August 2009

4.3.5.1.1. Article 19.2 of the PSC provides that a price for the crude oil for each calendar month or such periods as may be agreed between the Parties[88] would be determined in terms of US$ per barrel. Article 19.6 of the PSC also provided that the calculation, basis of calculation and the price determined would be supplied by the Contractor (CEIL, CEHL and ONGC) to the GoI and would be subject to agreement by the GoI before it was finally determined and pending final determination, the price determined by the Contractor would be used.

4.3.5.1.2. As the GoI nominee refineries were not lifting the allocated quantity of crude oil allocated to them, the GoI allowed (October 2009) marketing freedom to the contractor to sell the remaining quantity to domestic private refineries stipulating that the net back crude price realized by the contractor would be as per the PSC and not be less than the International price for the benchmarked crude price. The Operator informed (June 2010) the GoI that pursuant to GoI approval, the Operator had entered into Term Sheet Agreements with the domestic private refineries (RIL and EOL) and the pricing for these refineries was based on the formula agreed with GoI nominees (IOCL) with additional US$ 0.15 per barrel for pipeline sales and US$ 0.75 per barrel for coastal supplies.

4.3.5.1.3. Audit observed that

- The price formula for working out the price of crude oil is yet to be agreed to by MoPNG and the sales made to the GoI nominated refineries are based on the price agreed between the Operator and buyers which was based on the average of the daily mean values of the high & low price of Bonny Light (Nigerian) crude assessments as published in Platt's. Further an additional discount of 2.14 *per cent* was allowed off the benchmark crude (Bonny Light) on account of additional cost incurred by buyer for transferring & handling of crude oil at buyers refinery due to high pour point and high viscosity of Mangala crude.

- The international pricing expert, engaged (September 2009) for determination of crude price, had submitted the draft report to GoI in April 2010 which was shared by the GoI with the stakeholders in July 2010. *Despite subsequent discussions with the stakeholders, the decision of the Government regarding the pricing of RJ crude was not available on record (July/August 2012).* In the absence of GoI agreed price, the sales were continuing based on an agreed pricing formula between the Operator and buyers.

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[88] *'Parties' means the parties signatory to this Contract including their successors and permitted assigns under this Contract. Accordingly, at present, parties to this Contract are the GoI, ONGC Limited, Cairn Energy India Limited and Cairn Energy Hydrocarbons Limited.*

- The Term Sheet Agreements executed (June 2010) by the Operator with private refineries (RIL/EOL)[89] were based on agreed price with no provisions for revision of price with retrospective effect and the private sector refineries have expressed inability to agree to a provisional pricing arrangement with retrospective impact. The GoI while informing (15 June 2010) the Operator that the position taken by the domestic private refineries with regard to revision of price was not acceptable, advised (July 2010) that sales made to these refineries be on provisional prices until a final decision was arrived at by the GoI. GoI also asked the Operator to sell the shortfall quantities to these refineries in the year 2010-11 only if they agreed to the pricing conditions. Despite these directions from the GoI and pending finalization of pricing by the GoI, crude sales to these refineries took place during the year 2010-11 and 2011-12.

4.3.5.1.4. MoPNG in its reply (June 2014) stated that

- *Article 19 dealt with three classes of sale transactions: a) arm's length transactions, b) sale to Government/ Government nominees and c) other than arm's length transaction. As per the Contractor, all sale transactions were considered as falling under the 1st two categories.*
- *Article 19.3 dealing with arms' length transactions did not stipulate any specific method of pricing, as the price would be market determined. Whereas Article 19.4 dealing with sale to Government /Government nominees stipulated a general method of pricing linking the price to international price of crude oil.*
- *Article 19.6 stipulates that unless the Government or Government Company raised an objection to a price, the last established price would be used. As the prices have been viewed as at arm's length, Government has not objected, so far, to the prices charged by the Contractor. In the absence of discovering any discrepancy, the prices could be treated as firm for Profit Petroleum and Royalty.*
- *Audit may report on the integrity of the price charged to the refineries, particularly whether any transaction is not at arm's length.*

4.3.5.1.5. The reply of the MoPNG was not acceptable on account of following:

- MoPNG had indicated (July 2010) that the price charged was to be provisional. The PSC provisions provide that the price is *subject to agreement* of GoI. GoI (MoPNG) had communicated (July 2010) that the prices charged were to be provisional. In fact the prices charged has not yet been agreed to by GoI though such agreement is mandated in the PSC.
- In the same communication, MoPNG had categorically stated that the sales to domestic private refineries were not to be construed as Arms' Length Sales. The instant reply of the MoPNG appears to contradict this position.

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[89] *RIL-75000 Barrels/day and EOL 30000 barrels/day.*

4.3.5.1.6. In view of above and the fact that pricing belonged to the domain of the GoI, it would be difficult for Audit to comment on the integrity or otherwise of the price charged from refineries and whether any transaction was Arm's Length Sale or not till the same was approved by the GoI in terms of PSC provisions.

Audit Recommendation 18: Audit accordingly recommends that GoI should promptly finalize the price for the RJ crude so that the calculation of the PP, Royalty etc. can be made on firm basis.

4.3.5.2 COSA entered into by the Operator

4.3.5.2.1. The sale of crude from the RJ block started from October 2009 and for this purpose, the Operator had signed COSA / Term Sheet Agreements with various buyers *viz*. IOCL, RIL, and EOL etc. for sale of crude.

4.3.5.2.2. Audit, however, observed that ONGC, as JV partner refrained from signing these COSAs with the buyers on the ground that the COSAs signed between the buyers and Operator (CEIL) provided for an agreed price for sale of crude from the Block whereas the GoI had intimated to the Operator that price for these sales would be a provisional price till finalization of the price by the GoI. ONGC further stated that the delivery points for sales to the domestic private refineries (RIL and EOL) were yet to be agreed to by the GoI.

4.3.5.2.3. MoPNG in its reply (June 2014) stated that *this issue was an intra-contractor issue not affecting the Government. Further, the delivery points presently used have been approved by the Government and the prices charged at the approved delivery points have been observed to be uniform for all constituents of Contractor*.

4.3.5.2.4. The reply of the MoPNG may be viewed in light of the fact that ONGC, as JV partner had refrained from signing these COSA/Term Sheet Agreements with the buyers, which otherwise should be signed timely so as to avoid any legal or contractual issue.

4.4 Procurement issues

4.4.1 Increase in cost of infrastructure at Viramgam Terminal for delivery of crude to IOCL

4.4.1.1. Article 23.2 of the PSC provides that the Contractor would establish appropriate procedures, including tender procedures for the acquisition of goods and services. As per Clause 4.5.11 of the Operating Agreement[90] the Operator would award any contract involving expenditure of more than US$ one hundred thousand (US$ 100,000) by tender, unless the OC otherwise unanimously agrees.

[90] *Operating Agreement means the Operating Agreement entered into by the Contractors with respect to the conduct of Petroleum Operations.*

4.4.1.2. The Operator awarded (September 2010) an Engineering, Procurement and Construction contract to L&T for US$ 2.00 million with scheduled completion by 10 April 2011 for creation of infrastructure at Viramgam Terminal for delivery of crude to IOCL.

4.4.1.3. Audit however noted that the tenders for construction of infrastructure were sent to five bidders, who had been found technically qualified for the main EPC contract (for Salaya to Bhogat pipeline) finalized in August 2009. Two bids were received and the contract was awarded to L&T. The award of contract to a bidder, pre-qualified in an earlier tender (August 2009), amounted to award of contract on limited tender basis and was not proper as it did not ensure wider participation.

4.4.1.4. The Operator stated (January 2013) that *construction of spur line for Viramgam when envisaged was quantum minor work and that the nature of work was very similar to heated and insulated pipeline project done previously*. The Operator also stated in its reply (July 2014) to the MoPNG that *though there was an increase in the cost, the overall cost of the project had not increased*. The Operator also stated *that design changes/additions became necessary on account of engineering challenges/interface issues with IOC*.

4.4.1.5. The reply of the Operator is not acceptable as the tendering process in the instant project was flawed. Besides the project cost more than doubled raising doubts on the initial estimates. During the Exit Conference (July 2014), the Operator assured that ex-post facto approval of MC for the project would be taken.

4.4.2 Award of a contract for site grading on nomination basis

4.4.2.1. A contract for site grading for Bhogat Terminal of Pipeline Project was awarded (11 January 2010) to Janak Buildcon Pvt. Ltd for US$ 1.323 million (INR 5.95 crore) with scheduled completion by 12 April 2010. During execution, the contractor encountered hard rocks and the work could not be completed. After expiry of more than five months, the Operator issued (4 October 2010) a variation order for INR 1.53 crore for additional work on account of hard rocks, which raised the contract value to INR 7.48 crore. The contractor subsequently abandoned the work without completing it during late 2010. As the delay in completion of site grading work was likely to impact the work of Bhogat terminal construction, the Operator proposed (December 2011) negotiations with the main contractors for executing balance site grading work.

4.4.2.2. Audit noted that the work was awarded to Punj Lloyd Limited (PLL) in March 2012 at a cost of INR 23.38 crore. The site grading work was completed (July 2013) at a cost of INR 24.76 crore (Janak Buildcon Pvt. Ltd – INR 5.06 crore and PLL – INR 19.70 crore)

4.4.2.3. The Operator stated (January 2013) that *obstacles faced by the contractor during execution were unexpected ground conditions, obstructions from local stakeholders etc. due to which the progress remained slow and quality of work was not also acceptable. Thus, the circumstances under which the work was awarded to PLL were not comparable*

with those envisaged initially. The Operator also stated in its reply (July 2014) to the MoPNG that *the contract was awarded to Janak based on the findings of the topographic and geotechnical surveys. But rocks encountered on site were much harder to excavate requiring additional specialized equipment, not required for original scope. Thus, the scope executed by PLL was significantly more than what was envisaged in the original tender for site grading.*

4.4.2.4. The reply of the Operator is not acceptable as the work was awarded to Janak Buildcon Pvt. Ltd on the basis of topographic and geotechnical surveys of the location which ought to have foreseen the nature and gravity of rocks. This ultimately led to award of work to PLL, virtually on nomination basis without assessment of reasonability of the rates. Further, the work was completed in July 2013 against the initial scheduled completion by April 2010 after delay of about three years During Exit Conference (July 2014) the Operator assured ex-post fact approval of MC would be obtained.

4.4.2.5. Regarding the procurement cases mentioned above, the MoPNG stated (June 2014) that *the CAG may recommend in its final report the amount to be disallowed from the contract costs after considering contractors reply, if any, in order to facilitate a decision by Government on the issue.*

4.4.2.6. While we take note of the MoPNG's assurance regarding the amount to be disallowed, it might be appreciated that Audit has brought out the instances of deviation from the procurement procedure. In the absence of a proper price discovery, assessment of extra expenditure for disallowance would not be possible. No instances of affiliated transactions were noticed in these transactions.

4.5 Conclusion

The audit of the RJ block for the period 2008-12 indicated instances of scope for better monitoring to ensure adherence to the provisions of the PSC.

There were delays in finalization of minutes of the MC meetings leading to commencement of activities.

The WP&B approved by OC was not submitted to MC in time and the approval of MC was also delayed. The delayed submission and approval of annual WP&B violated the timelines prescribed in the PSC.

As per request of the Operator, GoI agreed to shift the delivery point from Barmer to Salaya with a condition that the GoI may designate multiple PSU refineries and laying of a pipeline from Barmer to Salaya and Salaya to Bhogat in Gujarat. The pipeline was delayed with a portion, Barmer to Salaya being completed after delay of about 10 months in May 2010 and the balance Salaya to Bhogat, scheduled for completion by Q2 of 2010 being mechanically complete only in June 2014 (presently under commissioning) after expiry of almost four

years from targeted completion. The delays contributed to increase in pipeline cost which rose to US$ 1108 million (March 2013) against the approved cost of US$ 941 million.

The PSC provided that the GoI or its nominee is under obligation to purchase the entire crude oil from the Contract Area. The GoI nominated refineries, however, could not uplift the RJ crude and, GoI granted marketing freedom to the Operator to sell the remaining crude to domestic private refineries. During the period of audit (2008-12), the sales to domestic private refineries from 2009-10 to 2011-12 ranged between 51.11 and 87.57 *per cent* of the total production, primarily due to the inability of the nominated GoI refineries to uplift the crude from the Block.

PSC provided that a price for the crude oil would be agreed between the Parties and would be subject to agreement by the GoI. Audit, however, observed that price of the RJ crude was yet to be finalized by the GoI in the absence of which sale of RJ crude was taking place at a provisional price agreed between the Operator and the buyers.