

### MECL response on Peer review comments from Dr P.R.GOLANI, DDG (Rtd) GSI

S No	Comments	MECL Response
1	Chapter VII Geology	
	Section 7.2.2, P. 13: Randha-Birmanian sequence is considered as the westernmost Precambrian sequence in India, while it is shown as Cambrian in the Table 7.1 at page 13. Please clarify it.	It's a typing error, correction attended
	Text Figure 7.3 of MECL at P. 20: In this figure phosphorite bands is shown to transect gray cherty limestone and dolomitic limestone which is incorrect depiction of the PLATE NO.-III. Perhaps the axial trace is shown as phosphatic band. Pl. correct it as per PLATE NO. -III of this report	Corrected
	Section 7.3.5 (P.16): Please clarify what is meant by 'complex folding'? Is it geometrically complex or superimposed folding?	Phrase as written is: due to complexity of folding owing doubly plunging anticline and syncline
	Section 7.4, Block Geology: Thickness of Birmanian basin is cited as 900m (Section 7.2.3) while it is mentioned as 536m (P.14, P.18) and as 600m in the Table 7.1 (P. 13). It is ought to be same in the report.	Corrected
	Section 7.5.2 (P.21): Cherty limestone is stated to be the oldest, but in the legend of Text Fig. 7.3 (P.20) ferruginous sandstone is shown to be oldest. The legend should be as per stratigraphic considerations in the report	Agreed and corrected legend
	Section 7.5.2 Structure within the Block (P.21): The stereogram (Fig. 7.17) indicates almost nonplunging folding, whereas the plunge is mentioned between 25° to 30° (see Section 7.6.6 at P.32). Please check it and make requisite corrections.	Corrected. The fold axis plunge either northwards or southwards with dip angles ranging from 5° to 35°. The larger folds exhibit plunge angles of 25°-30° though the plunge varies along their axes when traced in the field.
	Section 7.7 .A g. 34): Phosphate Mineralization: Sections 7.7.2 and 7.7.3 are unrelated to the Birmanian phosphate mineralization. Hence, they should be deleted from the report.	Attended
	Repetition of Figures: Fig. 7.9b (P. 25) and 7.23 (P. 36) and Fig. Pmg-1 in the Annexure X-B/1 are the same but given at three different places. Also, see Fig.7.12 (P.27) and Fig. 12.1 (P.49) are the same but given at different places. Please avoid repetition.	Attended
	Section 7.7.5 (P. 35): The diagram given at P. 35 should be referred after the original author.	Attended

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	Section 7.8.5, and ANNEXURE X-A/I Mineragraphic Studies: All the five samples show mainly iron oxide phases along with rutile./anatase. No sample shows phosphate, quarb, calcite, clny minerals etc. even in trace amount? It is baffling to see no phosphate minerals in mineragraphic studies ofthe phosphorite investigation.	Collophane is the main phosphorite mineral present in the Nimbli block, occurring as amorphous aggregates, patches and pisolites within different rock types viz. quartz wacke, limestone and shale. Mostly it is present in minor level of concentration
2	CHAPTER IX (P. 41) Aerial or Ground Geophysical or Geochemical Survey: Whether it was part of the sanctioned component or not. Ifnot then why to make the blank chapter.	Chapter are as per Part IVA of MEMC rules
3	CHAPTERXII (P.49) SAMPLING TECHNIQIJE Analytic work on core sampling, composite samples for 34 element analyses, external check samples, and resulls of X-Ray diftaction studies are shown to be awaited as on 07.01.2025. The report submitted is thus incomplete in this respect.	Results of composite, external check and XRD studies have been received and submiited in the final GR
4	CHIAPTER XV: QUALITY OF ASSAY DATA AND LABORATORY TESTS (P. 57) The Certified Referenced Material (CRM) used for phosphate analyses must be mentioned	Attended
5	CHIAPTER XVIII: BENEFICIATION STIIDIES (P. 61) Earlier studies on beneficiation caried out by GSI flrough IBM indicate that Birmania phosphorito is not amenable to enrichment. In the light of technological advancements, it would have been appropriate to carry out beneficiation studies, otlerwiso it shall remaia a constaint in auctioning and exploitation of the Birmania phosphorite deposit.	The block is explored in G-3 level during upgradation of the block beneficiation studies may be carried out.
6	CHAPTER XIX (P. 79) RESOIJRCE ESTIMATION TECHNIQUES Against 367 number of envisaged sample analyses, results of only 56 samples are used for making a histogram (Fig. 19.1 at P 64) Results of23 composite samples are stated to be awaited (see Section 19.5.1 at P. 64). If the Section of Methodolory Adopted (Section 19.7.1, Point 3 at P. 67) dip angle of bedding surface is to be used in place of foliation, as the former is a primary geological surface that controls phosphate mineralization-	Histogram was made for P2O5>5%, also included histogram of all primary sample data Composite samples analyses received and submitted in FGR Dip angle of bedding is considered, Corrected in GR
7	Reporting of resources	

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	The difference between the resources estimated by Geological Cross Section method and Level Plan method is 14% which is much higher than the permissible limit. To increase level of confidence it is suggested to estimate reserves by Longitudinal Vertical method.	Due to shallow depth of mineralization Level plan method is chosen and Correction attended and difference is 3.85% which is acceptable
	While going through the CHAPTER-VIII (P. 39 and 40), CHAPTER -X (P. 42) and CHAPTER-XX (P.70), it is not clear, in what way the present exploration work involving 32 boreholes has helped in establishing additional resources in terms of grade and tonnage, over and above the previous two exploration projects carried out in Birmania area, Jaisalmer; initially by the GSI (1968-197A, 68 no. of boreholes), and later by MECL (G-2 level, 69 boreholes) for the Union Ministry of Chemical and Fertilizers in 2022. It may also be mentioned that there is great overlap in the two exploration projects by MECL, including the present one, in terms of area and depth of drilling, subsequent to GSI's estimation of resources in late sixties. In the present era of data sharing, it is difficult to comprehend why the present report has not taken cognizance of G-2 level exploration involving 69 boreholes for comprehensive assessment of Birmania phosphorite. It will be appropriate to include a table indicating coordinates of all the three project areas, strike length, number and depth of boreholes drilled and the nature of reported resources, as it will help in auctioning of the Birmania phosphorite block.	Data of GSI and FAGMIL is integrated in preparation of GR and resource estimation in Nimbli block
8	ANNEXURE VA/1 Surface Geological Samples There is no correspondence between the remarks indicating rock type identified in the field and chemical analyses. The 17 number of samples (Sample nos. 3,7, 14, 15, 18, 19, 20,22,27,29,31, 32,34,35,37,39 and 40) identified as quartzitic sandstone analyse an average of 11.51% SiO <sub>2</sub> , the highest being 14.36%, and an average LOI of 24.44%. The quartzitic sandstone must analyse above 90% SiO <sub>2</sub> . The high LOI content indicates that the rocks were probably siliceous impure	Attended
9	Comments on plates and body of figures may be attended	Attended
10	10. Section of REFERENCES (P. 89) Work of Ilmore authors has been referred in the text of the present report but not cited in the list of References. Please add the authors in the list as indicated at P. 89.	Attended
20	Comments on the margins have been made in the report which also include Chapters II to VI. These comments may be attended while revising the report.	attended