MINUTES OF THE 14TH MEETING OF INDIA- NEPAL JOINT TEAM OF EXPERTS ON SAPTA KOSI HIGH DAM MULTIPURPOSE PROJECT AND SUN KOSI STORAGE-CUM-DIVERSION SCHEME HELD ON 29-30 JANUARY, 2015 IN DELHI

The fourteenth meeting of the Joint Team of Experts (JTE) between India and Nepal was held on 29-30 January, 2015 in Delhi. The Indian Team was led by Mr. Narendra Kumar, Member (River Management), Central Water Commission (CWC), Government of India (GoI) and the Nepalese Team was led by Mr. Dinesh Kumar Ghimire, Director General, Department of Electricity Development, Government of Nepal (GoN). The composition of the Indian and Nepalese delegation is at Annex-I.

Mr. Narendra Kumar, the leader of the Indian Team, extended a warm welcome to the Nepalese Team and wished that their stay at New Delhi would be pleasant and comfortable. He mentioned the importance of Sapta Kosi High Dam Multipurpose Project and Sun Kosi Storage-cum-Diversion Scheme for the people of Nepal and India, in terms of irrigation, power generation, flood control etc. He further expressed that it was necessary that the meetings of JTE are held regularly; at least every six month for monitoring the progress to complete works in a time bound manner and for guiding JPO-SKSKI in its works. He stated that such interactions would facilitate investigations and help in completing the Detailed Project Report (DPR). He showed his satisfaction on resumption of various field activities including drilling at Sapta Kosi High Dam Multipurpose Project and Sun Kosi Storage-cum-Diversion Scheme. The Indian Team Leader sought to work in the spirit of Sabka Sath Sabka Vikash as propagated by Hon’ble Indian Prime Minister Shri Narendra Modi ji.

Mr. Dinesh Kumar Ghimire, Team Leader JTE(N) expressed sincere thanks to the Indian Team Leader for the warm welcome and hospitality extended to the Nepalese delegation and also for excellent arrangements made for the meeting. He appreciated his Indian counterpart for the importance given to the multipurpose projects and put forward his assessment that despite various difficulties, investigations are making encouraging progress in the last few months. He stressed that there is a need to expedite the pending field works with priority.

Thereafter, the agenda of the 14th meeting of JTE was proposed and adopted (Annex-ii). Subsequently, agenda items were taken up for detailed discussion as under:

14.1 Status of follow up action on various items of 13th meeting of JTE

Both side expressed their satisfaction on the follow up action on the decisions of 13th meeting of JTE.

Further, JTE expressed its concern over considerable delay in resumption of drilling activities, however, found the pace of drilling work at present satisfactory. JTE also deliberated the issues raised by local people. Nepalese side assured that efforts
shall be made to achieve conducive environment for the investigation of the Project and carrying out the field activities uninterrupted.

14.2 Review of progress of field works and various studies related to Sapta Kosi High Dam Multipurpose Project and Sun Kosi Storage cum Diversion Scheme

JTE noted the progress of field works and various studies related to Sapta Kosi High Dam Multipurpose Project and Sun Kosi Storage cum Diversion Scheme.

14.3 Review of balance and additional field works, if any, for preparation of DPR and recommendation for extension of time

Project Managers submitted the Revised Work Schedule to JTE showing the timeline for each field activity/study, necessary for completing the remaining works up to February, 2017 (Annex-III-A) and preparation of Detailed Project Report (Annex-III-B). After deliberations, JTE recommended for extension of tenure of JPO-SKSKI for another 24 months i.e. up to 28th February, 2017 to complete the field survey, investigation works and preparation of Detailed Project Report (DPR) for Sapta Kosi High Dam Multipurpose project and Sun Kosi Storage-cum-Diversion Scheme. JTE stressed adherence of Revised Work Schedule by JPO-SKSKI.

14.4 Award of Pending Works / Studies

14.4.1 EIA Study

Member Secretary, JTE (I) informed the JTE that a proposal for award of work of EIA study in Nepalese Territory amounting to IRs. 3,63,18,906/-, of Sapta Kosi High Dam Multipurpose Project and Sun Kosi Storage-cum-Diversion Scheme, Nepal to the Joint Venture of M/s Full Bright Consultancy (Pvt.) Ltd. and M/s NESS, Kathmandu, which is the lowest bidder, has been received.

JTE deliberated the proposal and decided that since the drilling work by NEA has been resumed at Sapta Kosi dam site, the work of EIA study may be awarded.

Accordingly, JTE approved to award the work of EIA study of Sapta Kosi High Dam Multipurpose Project and Sun Kosi Storage-cum-Diversion Scheme, Nepal in Nepalese Territory to the Joint Venture of M/s Full Bright Consultancy (Pvt.) Ltd. and M/s NESS, Kathmandu at their quoted amount of IRs. 3,63,18,906/- (Indian Rs. Three crore sixty three lakh eighteen thousand nine hundred and six) only. The period of completion of the study is 16 months.

JTE also deliberated on the EIA Study of Sapta Kosi High Dam Multipurpose Project, Nepal in Indian Territory. Project Managers informed the JTE that the approved ToR for EIA Study in Indian Territory has already expired. JTE directed the Project Managers to initiate the process of revalidation of ToR from MoEF, GoI and go for competitive bidding among Indian Agencies.
14.4.2 Communication Survey

JTE noted that Tender Evaluation Committee (TEC) in its meeting held on 8-9 January, 2014 had recommended for award of work of Communication Survey to M/s WAPCOS (I) Ltd at a negotiated cost of 1Rs. 58,00,000/-. The period of completion of the study is 9 months. The concurrence of both the Team Leaders for award of work to M/s WAPCOS (I) Ltd. was obtained and work awarded to M/s WAPCOS (I) Ltd. The Consultant has submitted the Inception Report and the comments of JPO-SKSKI on the same has been conveyed for inclusion.

JTE ratified the decision of Team Leaders for awarding the work of Communication Survey to M/S WAPCOS(I) Limited at the negotiated amount of 1Rs. 58,00,000 (Indian Rupees fifty eight lakh) only.

14.4.3 Irrigation Studies and Command Area Survey in Nepalese territory

JTE noted that the revised estimate for carrying out the remaining works of Irrigation studies of Command Area Survey in Nepalese Territory has been technically sanctioned for 1Rs. 11,41,96,252/- (Indian Rupees Eleven crore forty one lakh ninety six thousand two hundred fifty two) only vide letter no. 4/1/irrig-studies/JPO-SKSKI/N&BC/2014/04 dated 05.01.2015 from the Indian side and vide letter no. 28/071-72 dated 08.01.2015 from Nepalese side. JTE also noted that five consulting firms submitted their EOI, out of which four consulting firms were found eligible and were issued RFP documents, which is now scheduled to be opened on 8th February, 2015. JTE directed the Project Managers, JPO-SKSKI to convene the meeting of Tender Evaluation Committee immediately after opening the RFP documents to obtain its recommendations for award of work.

14.4.4 Balance Drilling / Drifting works

Sapta Kosi High Dam Multipurpose Project

i. JTE noted that the drilling has been resumed by NEA on right bank of River Sapta Kosi with effect from 23rd December 2014 and so far drilling at 3rd drill hole location (100m) has been completed. JTE deliberated the progress of drilling by NEA at Sapta Kosi Dam Axis and directed the Project Managers, JPO-SKSKI to adhere to the work plan submitted by NEA.

ii. JTE noted that drilling work at Sisauli Barrage site (150 m) has been awarded to M/S Indian Geotechnical Services, New Delhi on 21.12.2014 by JPO-SKSKI, which was within the delegated financial powers to the Project Managers, JPO-SKSKI. The agreement for the said work has been signed on 11.1.2015. JTE directed the Project Managers to carry out drilling at these sites as per schedule.

iii. JTE ratified the decision of both the Team Leaders to award the work of "Diamond Core Drilling for Geotechnical Investigation at Spillway area of Sapta Kosi High Dam Multipurpose Project, Near Barahkshetra, District - Udaipur, Nepal" in favour of M/s Arihant Drilling Pvt. Ltd., Gurgaon, Haryana at their quoted
amount of INR. 50,21,875/- (Indian Rs. Fifty lakh twenty one thousand eight hundred and seventy five) only. The period of completion of work is 120 days.

iv JTE ratified the decision of both the Team Leaders to award the work of “Diamond Core Drilling for Geotechnical Investigation at underground powerhouse complex area of Saptako Broad Dam Multipurpose Project, near Bharatpur, District - Dhankuta, Nepal” in favour of M/s Arihant Drilling Pvt. Ltd., Gurgaon, Haryana at their quoted amount of INR. 2,91,13,000/- (Indian Rs. Two crore ninety one lakh thirteen thousand) only. The period of completion of work is 240 days.

Sun Kosi Storage cum Diversion Scheme

i JTE noted that drilling work at Uttarayani Barrage site (100 m) has been awarded to M/S Indian Geotechnical Services, New Delhi on 21.12.2014 by JPO-SKSKI, which was within the delegated financial powers to the Project Managers, JPO-SKSKI and the agreement for the said work has been signed on 11.1.2015. JTE directed the Project Managers to carry out drilling at these sites as per schedule.

ii JTE ratified the decision of both the Team Leaders to award the work of “Diamond Core Drilling for Geotechnical Investigation at Kamala Dam Complex (Spillway area, HRT including Intake, Surge Shaft, Pressure Shaft and Power House) of Sun Kosi Storage-cum-Diversion Scheme near Timnai, District- Udaipur, Nepal (Package-C, Revised)” in favour of M/S Indian Geotechnical Services, India at their quoted amount of INR. 46,36,000/- (Indian Rupees Forty six lakh thirty six thousand) only. The period of completion of work is 180 days.

JTE further noted that the Geological Mapping of Kuruleghat Dam Site, Diversion Tunnel and Khadikop Powerhouse by GSI is under progress and the process for award of work for drilling at these areas shall be taken up after the Geological Mapping.

14.4.5 Design Flood Studies

Project Managers, JPO-SKSKI informed JTE that Director, Hydrology (North), CWC has suggested for preparation of GIS Map using SRTM data for the entire catchment of Saptako Broad so that Catchment Response Function (Unit Hydrograph), physiographic parameters and hypsometric details for assessment of Design Flood for Saptako Broad High Dam Multipurpose Project can be developed. CWC has sent an estimate of INR.28,00,000/- for carrying out Glacial Lake Outburst Flood (GLOF) Studies.

After deliberations, JTE agreed to undertake the following studies and directed the Project Managers to award the following works:

i. Preparation of GIS Map using SRTM data for the entire catchment of Saptako Broad to NIH, Roorkee with estimated cost of INR.5,26,000/-

ii. GLOF study to CWC with estimated cost of INR.28,00,000/-
14.4.6 Flood Benefit Studies

Project Managers, JPO-SKS\text{KI} informed JTE that Department of Water Induced Disaster Prevention (D\text{WIDP}), GoN has been identified for undertaking the studies for assessment of flood benefits in Nepal from the project. The Terms of Reference (TOR) for the Flood Benefit Study has already been sent to the D\text{WIDP}, GoN. The financial proposal from D\text{WIDP} is awaited. The Nepalese side assured submission of proposal within three months.

14.4.7 Power Potential and Power System Studies

In the 11\text{th} JTE meeting, it was directed to arrange a meeting between NEA, GoN and CEA. GoI to sort out the issues related with the Power System Survey and Power Evacuation Studies in Nepalese Territory on the basis of the preliminary Power Potential Studies carried out by CEA and initiate necessary action for carrying out further studies, however, the same could not be materialized. Indian side agreed to hand over the details of Power Potentials Studies / Simulation Studies carried out for Saptapati High Dam Multipurpose Project to the Nepalese side. JTE directed the Project Managers, JPO-SKS\text{KI} to convene the meeting of NEA, DoED and CEA within one month and sort out the issues.

14.5 Bagmati Dam Multipurpose and Kamala Multipurpose Projects

On the issue of preparation of Preliminary Report of Bagmati Multipurpose Project, the Indian Side of JTE informed that JPO-SKS\text{KI} has carried out desk studies and plans to initiate action for carrying out the property survey in proposed reservoir area of dam at Noonthe. It was also informed that such a study will help in deciding the optimal height of dam keeping in view the flood cushion. The Nepalese side informed that due to social and environmental issues including resettlement issues, it requires detailed discussion among concerned agencies and stakeholders in Nepal. Hence, the Nepalese side expressed that this matter can be further deliberated in the next JTE meeting.

JTE noted that the Kamala Multipurpose Project is considered as integral part of Sun Kosi Storage-cum-Diversion Scheme and is being considered under Sun Kosi Storage-cum-Diversion Scheme.

14.6 Review of proposed field visits of experts

JTE noted that following three visits, namely:

a) Visit of CSMRS Team to Saptapati and Kamala Projects, Nepal to explore the possibility of collecting Rock-fill material without blasting from the identified borrow areas.

b) Visit of CSMRS Team to Saptapati and Kamala Projects, Nepal for collection of Rock-fill material from the identified borrow areas of Saptapati and Kamala projects and
c) Visit of Geologists from Geological Survey of India to Kamala Dam Complex for Geological Mapping, have already taken place.

Further, visit of a team of Geologists from GSI for the work of Geological Mapping of Sun Kosi Dam Site at Kuruleghat, Diversion Tunnel and Khadikhop Powerhouse is undergoing and visit of CW&PRS officers along with manufacturer’s representative to the eight nos. of Seismological Stations is proposed during 2nd week of February, 2015.

14.7 Review of staff position in Joint Project Office-Sapta Kosi & Sun-Kosi Investigation (JPO-SKSKI), Biratnagar

JTE was informed that as per the revised CIPB Memo (4th revision) there are 20 nos. of sanctioned posts each for Indian and Nepalese officials in JPO. Presently only 11 Indian and 8 Nepalese personnel are posted in JPO-SKSKI. Project Managers requested that since the works at various sites have already been started and many works including drilling activities at various locations have either resumed or being planned to be started, posting of personnel at full strength from both sides is required for smooth functioning of JPO-SKSKI. JTE discussed the matter and agreed to deploy key officials from respective Governments within approved strength as per the requirement of works. JTE directed the Project Managers to identify the key posts required to be filled and send the proposals to the respective Governments.

14.8 Enhancement of Financial Powers delegated to JPO-SKSKI

In the 6th meeting of Joint Committee on Water Resources (JCWR) headed by the Secretaries of India and Nepal held at New Delhi on 24-25 November, 2011, it was directed that financial powers delegated to the project Managers, JPO-SKSKI may be enhanced in order to expedite the decision making process. Accordingly, the proposal for enhancement of delegated financial powers to the Project Managers and Senior Engineers on the pattern of financial powers available to field officers of CWC was framed and sent to Ministry of Water Resources, Govt for the approval of competent authority. The proposal for enhancement of financial power to the Project Managers and Senior Engineers is under process in MoWR, RD and GR, Govt for approval of Competent Authority. Indian side agreed to pursue the matter with MoWR, RD and GR, Govt.

14.9 Ratification of decision of Team Leader (I) making Chief Engineer, YBO, CWC, New Delhi and Member Secretary, JTE (I) as Competent Authority to accord the Technical Sanction to the working estimates beyond the delegated powers of the Project Managers and also to approve the Tender documents instead of Chief Engineer, LGBO, CWC, Patna

JTE noted the decision of Team Leader, JTE(I).
14.10 Revision of cost estimate and preparation of note for Committee on Public Investment Board (CPIB) [Fifth revision] for completion of residual works and continuation of Offices of JPO-SKSKI beyond February, 2015

The work programme for completing the balance work and preparation of DPR was discussed in detail. After protracted deliberations, JTE recommended extension of tenure of JPO-SKSKI for another 24 months i.e. up to 28th February, 2017, without upward revision of cost. The Project Mangers were directed to revise the CPIB accordingly and submit a fresh CPIB for approval of competent authority before 28th February, 2015.

14.11 Any other item with the permission of the chair

The Nepalese side raised the issue regarding reasonable increase in BPIA being paid to the Nepalese officials in JPO-SKSKI. For this purpose, a suitable proposal (with proper justification) would be submitted by the Nepalese side for consideration of competent authority in Government of India.

It was agreed that the next meeting of JTE shall be held sometime in the first fortnight of May, 2015 in Nepal.

The meeting was conducted in cordial and friendly atmosphere and ended with exchange of thanks.

Signed on 30th January, 2015 at Delhi.

\[\text{(Narendra Kumar)}\]
Member (River Management),
Central Water Commission
& Ex-Officio Additional Secretary to
the Government of India

\[\text{(Dinesh Kumar Ghimire)}\]
Director General
Department of Electricity Development
Government of Nepal
<table>
<thead>
<tr>
<th>S.N.</th>
<th>Nepalese Side</th>
<th>Indian Side</th>
</tr>
</thead>
</table>
| 1.   | Mr. Dinesh Kumar Ghimire  
Director General,  
Department of Electricity Development and  
Team Leader, JTE (N) | Mr. Narendra Kumar  
Member (RM), CWC  
and  
Team Leader, JTE (I) |
| 2.   | Mr. Ashok Singh  
Deputy Director General  
Department of Irrigation | Mr. N. K. Mathur  
Commissioner, Ganga,  
MOWR |
| 3.   | Mr. Gautam Rajkarnikar  
Deputy Director General  
Department of Hydrology and Meteorology | Mr. S.D. Dubey  
Chief Engineer, HP&I,  
CEA |
| 4.   | Mr. Subarn Lal Shrestha  
Deputy Director General  
Department of Electricity Development | Mr. Y.K. Handa  
Chief Engineer, Design (N&W),  
CWC |
| 5.   | Mr. Pravin Raj Aryal  
Deputy Director General  
Department of Electricity Development | Mr. S.K. Sahu  
Chief Engineer, (LGBO), CWC,  
Patna |
| 6.   | Mr. Brigu Dhungana  
Under Secretary  
Ministry of Foreign Affairs | Mr. Manish Tripathy  
Director (Finance),  
MOWR |
| 7.   | Mr. Gokarna Raj Pantha  
Senior Divisional Engineer  
Ministry of Energy | Ms Shuchita Kishore  
Under Secretary (N),  
MEA |
| 8.   | Mr. Sanjaya Dhungel  
Senior Divisional Engineer  
Water and Energy Commission Secretariat | Mr. M. P. Singh  
Chief Engineer (YBO), CWC &  
Member Secretary, JTE (I) |
| 9.   | Mr. Arvind Kumar Gupta  
Senior Divisional Engineer  
Department of Water Induced Disaster Prevention | Mr. Indu Bhushan Kumar  
Chief Engineer, Planning &  
Monitoring, WRD,  
Bihar |
| 10.  | Mr. Pradip Kumar Sah  
Project Manager (N), JPO-SKSKI,  
Biratnagar & Member Secretary, JTE (N) | Dr. J.S. Mehta  
Director, GSI,  
New Delhi |
| 11.  | Mr. Anil Rajbhandary  
Director, System Planning Department,  
Nepal Electricity Authority | Mr. Sanjeev Bhatia  
Second Secretary (Commerce),  
EoI, Kathmandu, Nepal |
| 12.  | Mr. Sagar Raj Goutam  
Senior Divisional Engineer  
Department of Electricity Development | Mr. Munni Lal  
Sr. Joint Commissioner,  
MoWR |
| 13.  | Mr. Babu Raj Adhikari  
Senior Divisional Engineer  
Department of Electricity Development | Mr. Deepak Kumar  
Director, N&BC,  
CWC |
| 14.  | Mr. Tirtha Raj Wagle  
Minister Counsellor, Embassy of Nepal,  
New Delhi | Shri A. K. Pal  
Project Manager (I), JPO-SKSKI,  
Biratnagar, Nepal |
AGENDA FOR 14**TH** JTE MEETING OF SAPTA KOSI SUN KOSI INVESTIGATION PROJECT TO BE HELD ON 29**TH**-30**TH** JANUARY, 2015 AT DELHI (INDIA)

14.1 - Follow up action on decisions taken on various items of 13**TH** meeting of JTE.

14.2 - Review of progress of field works and various studies related to Sapta Kosi High Dam Multipurpose Project and Sun Kosi Storage cum Diversion Scheme.

14.3 - Review of balance and additional field works, if any for preparation of DPR and recommendation for extension of time

14.4 - Award of Pending Works / Studies for:
   a) EIA Study
   b) Communication Survey
   c) Irrigation Studies and Command Area Survey in Nepalese territory
   d) Balance Drilling / Drifting works
   e) Design Flood Studies
   f) Flood Benefit Studies
   g) Power Potential and Power System Studies

14.5 - Bagmati Dam Multipurpose and Kamala Multipurpose Projects

14.6 - Review of proposed field visits of experts

14.7 - Review of staff position in Joint Project Office-Sapta Kosi & Sun-Kosi Investigation (JPO-SKSKI), Biratnagar

14.8 - Enhancement of Financial Powers delegated to JPO-SKSKI

14.9 - Ratification of decision of Team Leader (I) making Chief Engineer, YBO, CWC, New Delhi and Member Secretary, JTE (I) as Competent Authority to accord the Technical Sanction to the working estimates beyond the delegated powers of Project Managers and also to approve the Tender documents instead of Chief Engineer, LGBO, CWC, Patna

14.10 - Revision of cost estimate and preparation of note for Committee on Public Investment Board (CPIB) [Fifth revision] for completion of residual works and continuation of Offices of JPO-SKSKI beyond February, 2015

14.11 - Any other item with permission of the Chair – Non- revision of BPIA for Nepalese personnel posted at JPO-SKSKI
### SCHEDULE OF PREPARATION OF VARIOUS CHAPTERS OF DPR

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<thead>
<tr>
<th>Sl. No.</th>
<th>Details of DPR Chapters</th>
<th>Nodal Unit</th>
<th>Reports and other relevant materials available with JPO</th>
<th>Time Frame for Final Chapter</th>
<th>Remarks</th>
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<tr>
<td>1.</td>
<td>Executive Summary</td>
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<td>Introduction</td>
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<td>4.</td>
<td>Topographical Survey</td>
<td>JPO-SKSKI</td>
<td>- do -</td>
<td>Dec, 2015</td>
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<td>Geology &amp; Geotechnical Investigations</td>
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<td>6.</td>
<td>Design flood, Water availability and Sediment Studies</td>
<td>CWC (Hydrology Unit)</td>
<td>Draft Report on water availability received from CWC. Design Storm study has been carried out by IMD. GLOF Studies are entrusted to CWC</td>
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<td>7.</td>
<td>Hydro Power Potential Studies</td>
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<td>8.</td>
<td>Sediment &amp; Water Quality</td>
<td>JPO-SKSKI</td>
<td>Draft Report on Sediment Studies received from CWC, WQ Studies carried out by CSMRS.</td>
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<td>9.</td>
<td>Dam &amp; Spillway</td>
<td>CWC (Designs-N&amp;W Unit)</td>
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<td>Diversion &amp; Outlet Facilities</td>
<td>CWC (Designs-N&amp;W Unit)</td>
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<td>11.</td>
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<td>Construction Material Survey</td>
<td>CSMRS</td>
<td>Rockfill material samples from river bed collected for testing. Materials being sent for Lab tests. Other reports have been received. Dec, 2015</td>
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<td>18</td>
<td>Seismological and Special Studies</td>
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<td>19</td>
<td>Flood Benefit Studies</td>
<td>DWIDP, GoN</td>
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<td>Communication Studies</td>
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<td>Work yet to be awarded to M/s WAPCOS Ltd.                             April, 2016</td>
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<td>Any other Studies not covered above</td>
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<td>December, 2016 Chapter on Instrumentation is to be attempted</td>
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Notes:
- April, 2015
- June, 2015
- Dec, 2015
- December, 2016
- January, 2017
- April, 2016