

**Sub: Construction Management System - Circular No.- 39**

**Ref: Methodology for approval of Variations in the contract for RUSDIP- (RUSDIP - Phase II) works.**

1. The variations may occur during execution of work due to site conditions, change in design, drawing, alignment, specifications, strata conditions, change in the scope of work, occurrence of utility shifting or any other unforeseen reasons. No new work should be taken up beyond the original scope of the work. If any change is anticipated, EE, IPIU shall take prior approval of PMU before execution of such work.
2. The Variations in the contract should be analyzed as early as possible. The contractor should not be asked to execute any such Variation without written order from the EE IPIU. In case of any time being taken in approval of detailed variations, in-principal approval should immediately be conveyed by EE, IPIU to contractor after approval from PMU.
3. **Role of IPIUs:** The variation case should be submitted by EE IPIU to PMU & IPMC simultaneously, as soon as variation is identified/ anticipated for approval in the enclosed format as **Annexure "I"**. The following methodology should be adopted for preparing variation case and according approval of variations as per Schedule of Powers in RUSDIP, which are required to be approved for payment to the contractors:
  - a. Each Variation in any contract in IPIU shall be assigned a specific number in serial for which Accountant IPIU will maintain a Variation Control Register. The number shall be assigned as City Name / VAR- (Variation number in IPIU) /Package no./Variation number of package i.e.
    - ALW - VAR-01/ WS-01/ 1
    - ALW - VAR-02/ DR-01/ 1
    - ALW - VAR-03/ WS-01/ 2
    - ALW - VAR-04/ WS-02/ 1
    - ALW - VAR-05/ DR-01/ 2 and so on.
  - b. The variation shall be immediately prepared jointly by the in-charge Support Engineer DSC and AEn IPIU in consultation with contractor as soon as it is identified. The variation should consist of details of justification of the proposed rates in accordance to the Particular Conditions of Contract (PCC) variation clauses 36 & 37 in the remarks column.
  - c. The concerned contract in-charge - AEn, IPIU will prepare a comprehensive report in accordance to the following checklist in booklet form mentioning:
    - Detailed reasons of variations,
    - Revised design details,
    - Revised BOQ for the items as per revised design,
    - Justification of Variations,
    - Analysis of alternative proposals to execute the variation,
    - Basis of rates for extra/excess item,
    - Rate analysis for non BOQ - non BSR items, giving specific recommendations, justification of variation quantities and rates for each variation.

Check list for the same is as under for ready reference:

- (i) Name of work
- (ii) Package ID
- (iii) Name of Contractor
- (iv) A&F sanction number, date and amount
- (v) Technical sanction number date and amount

- (vi) Stipulated date of Start
- (vii) Stipulated date of Completion
- (viii) Original Contract Price
- (ix) Number of Variations already approved with amount of each variation
- (x) Revised contract price
- (xi) Details of proposed variation
  - ✓ Preamble: mentioning brief of the contract package, proposed variation and rationale of such variation.
  - ✓ Reasons of variations i.e. change in design, drawing, alignment, specifications, strata conditions, change in scope of work, occurrence of utility shifting, miscellaneous reasons etc.
  - ✓ Revised design details to be enclosed separately
  - ✓ Revised BOQ for the items as per revised design to be enclosed separately
  - ✓ Justification of Variations i.e. necessity of variation, analysis of alternative proposals to execute the variation, specific recommendations of EE, IPIU
  - ✓ Basis of rates for extra item / excess items
  - ✓ Rate analysis for non BOQ - non BSR items and soft copy of the list of such items
  - ✓ Deviation statement
- (xii) Value of proposed variation
- (xiii) Proposed revised contract price after considering the savings / excesses in the Contract
- (xiv) % variation on original contract price
- (xv) Competent Authority for approval of variation as per SOP
- (xvi) Likely effect on timely completion of the contract and Contractor & EE, IPIU undertaking in this regard (enclose undertaking of contractor regarding this)
- (xvii) Analysis of work performance with respect to time elapsed at the time of submission of variation and the period of any delay attributable to Contractor / Department as per original work plan with action taken in Annexure- II.

- d. The variation case should contain the enclosures i.e. revised design details, effect on items as per revised design, rate analysis for non BOQ - non BSR items, deviation statement, copy of earlier approved variations approved by IPIU etc.
- e. The variation should be verified for its correctness by the Construction Manager or Dy. CM or Assistant Construction Manager DSC (as the case may be) and EE IPIU jointly for further submission to PMU and should specifically check the proposed rates in accordance to PCC clauses 36&37.
- f. The variations submitted to PMU for approval shall be specifically recommended with the detailed comments and justifications by the EE IPIU. The EE PIU must ensure before sending any variation for approval in PMU, that these are in prescribed format, have specific variation number and the variation statement is signed by the all concerned i.e. DSC personnel, IPIU contract in-charge, Accountant IPIU and head of IPIU. EE and head of IPIU shall ensure that the rate analysis has been signed by him. The variation and rate analysis with out signatures of EE IPIU will not be accepted.
- g. The EE and head of IPIU should check the BOQ items thoroughly with reference to similar nature of items in BOQ before execution & submission of any item as extra item in the variation. At times, due to site conditions and other valid reasons, the original item of BOQ needs to be replaced with an extra item having differences in specifications like change in depth of manholes and depth of sewer lines in sewerage works, change in diameter of pipes & depth of pipe lines in water supply works, change in ratio of concrete mix etc. having more or less similar nature of work. For example; there may be an extra item due to increase in the depth of sewer line from 1.5m to 2.5m. In such case extra item of 2.5m depth sewer line is proposed and saving is envisaged in BOQ item having depth of 1.5m. It may be observed from

such items that the contractor was to carry out major part of the proposed item in the original BOQ item, which has now become the saving item. In this case only additional work of excavation and refilling is to be carried out by the contractor in addition to the original BOQ item. In such cases, EE IPIU should thoroughly examine such items and assessment of the proposed rates for approval of variation should be done after considering the scope of original BOQ item.

- h. The market rates proposed for approval should be supported by authentic quotations collected in person by the IPIU officer. IPIU should analyze various alternatives to ascertain fair reasonable rates. Over heads and Contractors profit in the rate analysis should be taken on the basis of the practice followed in RUIDP SOR.
  - i. The variation case proposed by IPIU for approval in PMU (with copy of complete relevant papers) shall be sent to PD, RUIDP and PMC.
  - j. Copy of variation orders approved & issued to the contractor in the Format (F-14 prescribed in QAQC) by EE IPIU shall be sent to PD, RUIDP.
4. **Role of IPMC:** As soon as the variation case is received in the IPMC; the IPMC shall observe the following:
- a. The proposed variation case shall be analyzed by IPMC and send comments to sector in-charge PMU with their observation and particularly for each non-SOR items for its justification of rates & rate analysis submitted by the IPIU, with in three days of its receipt in accordance to the Contract conditions. The IPMC should invariably keep record of all non BSR items with their agreed rate analysis and check the justification of rates analyzed by IPIU's. This should be done with respect to earlier rates agreed for such similar items.
5. **Role of PMU:** As soon as variation case is received in the PMU; the PMU shall observe the following:
- a. City/ Sector in-charge shall give a copy of forwarding letter received from IPIU to ACP for entering the case in the PMIS of RUIDP. He will ensure that the case has been entered in the PMIS.
  - b. Sector wise controlling officer will maintain a Control Register in PMU through PO/APO as its in-charge.
  - c. The concerned city/ sector in-charge and controlling officers of PMU should thoroughly examine the variations (justification of proposed items, proposed rates in accordance to Contract conditions, examine for replacement items detailed at 3(g) and other required information), put their signatures on variation statement and accordingly submit the case on file for approval/ rejection through Dy. PD(T), FA, APD to PD. After approval the city/ sector in-charge shall convey the decision to IPIU along with the duly signed statement.
  - d. AEn (contract in-charge) in PMU shall keep record of such variation with relevant contract package file of PMU and update the Variation Control Register prepared for their sector. Copy of such order (only order & no agenda) shall be given to ACP for updation in PMIS. He will ensure that the details of approval of the variation has been has been entered in the PMIS.

All the members of PMU, IPIU, IPMC and DSC should abide this circular.

  
(Dinesh Kumar)  
Project Director  
Dated: 24/09.2009

F3 (106) (32)/RUSDIP/PMU/CMS/2007/ 14400-443

Copy to following for information and necessary action:

1. Addl. PD/ FA/ Dy. PD (T)/ Dy. PD (Adm.)/ SE (WW)/ WS / PO (all)/ Sr. AO / All APOs / AAO/ PA to PD PMU, RUIDP, Jaipur.
2. Executive Engineer/APO's, IPIU, RUSDIP (Concerned), Alwar, Baran-Chhabra, Barmer, Bharatpur, Bundi, Chittorgarh, Churu, Dholpur, Jaisalmer, Jhalawar-Jhalrapatan, Karauli, Nagaur, Rajsamand, Sawai Madhopur and Sikar.
3. Team Leader IPMC, DSC-I, Bharatpur, DSC-II, Nagaur, DSC-III, Jhalawar, RUSDIP.
4. DSC-I, Alwar/ Dholpur/ Karauli/ Sawai Madhopur, DSC-II, Churu/ Jaisalmer/ Barmer/ Sikar and DSC-III, Chittorgarh/ / Rajsamand/ Bundi/ Baran, RUSDIP.
5. ACP, RUIDP, Jaipur to send by e-mail and put up the circular on the website.

  
Dy. Project Director (T)

Name of Work : .....  
 Name of Package: Package No. ....  
 Variation No. AL/W/NO1A/AR/01  
 Name of Contractor: .....  
 Tender Rate ---% above/below to Engineers Estimate  
 Original contract Value ---1.50 cr.

PART-A - EXCESS ITEMS

S. No	Refers to e of BOQ No	Item Description	Unit	Rate of item as per E&E Estimate	As per BOQ		Revised Quantity to be executed	Already Approved Variation			Variation proposed for approval			Total Variation Amount	% Variation above original Amount	Remarks	
					Qty	Rate (Rs.)		Amount (Rs.)	Qty	Rate (Rs.)	Amount (Rs.)	Qty	Rate (Rs.)				Amount (Rs.)
1	2	3	1	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		Illustration-1:- Earth work in excavation in foundation (Blasting prohibited) upto 25% of BOQ Quantity OR in individual item total cost upto 2 lakhs or 1 percent of the Initial Contract Price ( whichever is lesser) irrespective of the percentage excess in the quantity. (on BOQ rate)	cum		100	950	95000	300	0	0	0	25	950	23750			=> Detail justifications for variations.
		Balance quantity after subtracting 1(a) or 1(b) i.e. Revised Qty.-(1(a) or 1(b))															=> Justification of rates as per Clause No. 13 of Particular Condition of Contract
2	2(a)	Illustration-2:- Earth work in excavation in all types of soils. Upto 25% of BOQ Quantity OR in individual item total cost upto 2 lakhs or 1 percent of the Initial Contract Price ( whichever is lesser) irrespective of the percentage excess in the quantity. (on BOQ rate)	cum		100000	50	5000000	200000	0	0	0	200	2810	184316	184316		
		Balance quantity after subtracting 2(a) or 2(b) i.e. Revised Qty.-(2(a) or 2(b))															
		Total			100000	50	5000000	200000	0	0	0	100000		5750000	5750000		

Excess Items cost Rs. (in Words): .....

Format for submission of Variation Statement for approval in VAC of PM/J

Name of work Package no

S. No	Item description	Unit	Item to be executed		Remarks
			Quantity	Rate (Rs.)	
1	2	3	4	5	6
					=> Detail justifications for variations
					=> Justification of rates as per clause No. 37 of Particular Condition of Contract
	Total				

Total Contract Amount in Rs =  
 Percentage variation in excess items from Contract Amount in Rs =  
 Percentage variation in extra items from Contract Amount in Rs =  
 Total percentage variation from Contract Amounts

CERTIFICATE

"It is certified that the proposed variations are essential, reasonable and justified therefore recommended for approval."  
 "The excess items are unavoidable for successful completion of work."  
 "The contract value will not exceed the A&F of the package"  
 "The work cannot be executed on the rate below the proposed rates for the items submitted on the basis of rate analysis."

Contractor Support Engineer DSC

Accountant. JPII

AEs. JPII

ACMJDs- CM/CM, DSC - I (JPII)

EE, JPII

Government of Rajasthan  
Office of Executive Engineer, IPIU .....  
Rajasthan Urban Infrastructure Development Project

CHECK LIST FOR FIN. TIME EXTENSION FOR COMPLETION OF WORK

1. Name of Work
2. Package No.
3. Administrative & Financial Sanction
4. Revised Administrative and Financial Sanction
5. Technical Sanction to the estimate
6. Revised Technical Sanction
7. Approval conveyed by of Tender
8. Letter of Acceptance
9. Notice to Proceed
10. Name of Contractor
11. Actual Date of Completion
12. Date of handing over the drawings and other documents to the contractor (Give details & Enclose copies of letters)
13. Date of handing over site along with levels etc. (Give details & Copies of letters)
14. If Work started late, what action was taken under the contract agreement if not why?
15. (a) Whether the Contractor has applied for extension  
(b) If yes, then mention No. & date
16. Amount of work done by contractor
17. Excess to work order amount
18. Saving to the work order amount
19. Total Delay in completion
20. Notices given to Contractor prorate progress not maintained or work stopped by contractor
21. Reply submitted by the contractor
22. Representation given by the contractor
23. Decision on replies and representation conveyed to the Contractor  
(b) If no Decision reasons of tendency

24. Amount of Work Done by Contractor after stipulated date of completion

25. Reasons of delay

26. Period of delay attributable to the reasons within control of Contractor

27. Period of delay not attributable to the contractor due to beyond his control.

28. Proportionate extra period for excess Work executed by contractor over the work order amount

29. Total period of delay not attributable to the contractor (Item No.27+28)

30. L.D already imposed

31. Prorata progress of work

(A) Milestone

Stipulated period

(B) Value of Workdone ( Lakhs Rs.)

32. Details of amount of workdone when there was no hindrance

33. Details of receipt of bills & payment:

Date of receipt of bill in PIU	Date of payment to contractor	Amount in Rs. (Lacs)
TOTAL		

34. Details of financial progress achieved

Month	Amount ( Rs. in Lacs)
Final Bill	
TOTAL	

35. Is the price adjustment payable to the Contractor after stipulated period of completion if no liquidated damage is imposed : No

36. Comments of Accountant, IPIU

37. Recommendation of CM/TL/ Dy. CM/ ACM DSC:

38. Recommendation of EE,IPIU:

39. Recommendation of FA & CAO :

40. Recommendation of Project Director :

Accountant

AE, IPIU

CM/Dy. CM/ACM

EE, IPIU

**Days and causes of Hindrances in Package**

Name of Work:

Date of Notice to Proceed

Initial Intended Date of Completion

Actual Date of Completion

S.N.	Nature of Hindrance	Date of occurring of Hindrance	Date of overcome of Hindrance	Total Days of Hindrance (4-3)	Overlap days	Net Days of Hindrance (5-6)	Days of Hindrance		Remarks
							Not effective due to no. of equivalent days of work done during hindrance period as per pro-rata progress	Not Attributable to Contractor due to beyond his control	
I	Issue of construction drawings					0	0	0	
II									
III									
<b>Total Days</b>						0	0	0	

Actual Period of Delay

Actual Date of Completion

Delay attributable to the Contractor (Days)

Total L D Proposed to be levied (Rs.)