

Appendices

Appendix 2.1

Turnkey contracts and consultancy contracts for execution of works under OSP (canals)

(Reference: Paragraphs 2.1.5 and 2.1.7.1, Pages 7 and 9)

(₹ in crore)

| Sl. No. | Name of Division | Name of Work | Agreement no. | Contract amount | Scheduled completion dates |
|--|--|---|---------------|-----------------|----------------------------|
| Turnkey Construction Contracts | | | | | |
| 1 | Division 32, Barwaha and Division 8, Sanawad | Construction of OSP (canals) Phase-I on turnkey basis | 01/2006-07 | 177.99 | 02.11.2008 |
| 2 | Division 20, Mandleshwar | Construction of OSP (canals) Phase-II on turnkey basis | 16/2007-08 | 193.00 | 26.09.2010 |
| 3 | Division 30, Manawar | Construction of OSP (canals) Phase-III on turnkey basis | 14/2007-08 | 310.20 | 27.02.2011 |
| 4 | OSP Division, Dhamnod | Construction of OSP (canals) Phase-IV on turnkey basis from RD 0 to 58.281 km (Group-I) | 15/2010-11 | 519.93 | 25.03.2014 |
| 5 | Division 30, Manawar | Construction of OSP (canals) Phase-IV on turnkey basis from RD 58.281 km to 125 km (Group-II) | 16/2010-11 | 349.30 | 25.03.2014 |
| 6 | Division 32, Barwaha | Construction of NKSL project on turnkey basis (as detailed in Para 2.1.7.4) | 01/2012-13 | 396.38 | 04.11.2013 |
| Consultancy contracts for canal works | | | | | |
| 7 | Division 32, Barwaha | Consultancy Services for OSP (Phase-I) | 01/2004-05 | 1.98 | 17.10.2008 |
| 8 | Division 20, Mandleshwar | Consultancy Services for OSP (Phase-II) | 5DL/2007-08 | 1.75 | 04.06.2010 |
| 9 | Division 30, Manawar | Consultancy Services for OSP (Phase-III) | 15DL/2007-08 | 4.50 | 27.02.2011 |
| 10 | OSP Division, Dhamnod | Consultancy Services for OSP (Phase-IV) (Group-I) | 11DL/2011-12 | 2.48 | 15.11.2014 |
| 11 | Division 30, Manawar | Consultancy Services for OSP (Phase-IV) (Group-II) | 12DL/2011-12 | 1.67 | 15.11.2014 |

Appendix 2.2

Undue financial aid to the contractor for adopting lesser diameter pipe

(Reference: Paragraph 2.1.8.9, Page 25)

(Amount in ₹)

| Sl. No. | Particulars | As per Estimate | Actual | Difference |
|-----------------------------|---|-----------------|---------------------|------------|
| 1 | Inner diameter of pipe (in mm) | 2,000.000 | 1,800.000 | |
| 2 | Outer Diameter of pipe (in mm) | 2,028.000 | 1,828.000 | |
| 3 | Inner Area of pipe (in sq mm) | 31,41,592.700 | 25,44,690.087 | |
| 4 | Outer Area of pipe (in sq mm) | 32,30,173.048 | 26,24,473.975 | |
| 5 | Cross sectional area of pipe (in sq. mm) (4 - 3) | 88,580.348 | 79,783.888 | |
| 6 | Cross sectional area of pipe (in sq. metre) | 0.0885 | 0.0797 | |
| 7 | Volume of one metre pipe (in cum) | 0.0885 | 0.0797 | 0.0088 |
| 8 | Volume of 46,921 metre pipe (in cum) | 4,152.509 | 3,739.604 | 412.905 |
| 9 | length of pipe (in metre), which could be made of 412.905 cum = (412.905/0.0797) | | 5,180.740 | |
| 10 | Minimum Rate of steel per running metre (as per the running account bill of contractor) | | 40,000.000 | |
| Undue benefit (9×10) | | | 20,72,29,600 | |

Appendix 2.3
Execution of coping in lesser width
(Reference: Paragraph 2.1.9.1, Page 26)

| Name of Canal | Reach in km | Discharge | Coping width to be provided (in metre) | Coping width executed (in metre) | Short execution in quantity (in cubic metre ¹⁰⁵) | Rate of concrete lining as per bill (₹ per cubic metre) | Undue advantage due to short execution (₹ in lakh) |
|-------------------------------|---|---------------------|--|----------------------------------|--|---|--|
| OSP Canal Phase-I | Common Water Carrier: RD 0.100 to 12.393 (12,293 metre) | More than 10 cumecs | 0.550 | 0.300 | 614.65 | 2,246.92 | 13.81 |
| | RBC: RD 0 to 9.775 (8,259 metre excluding Narmada Aqueduct) | More than 10 cumecs | 0.550 | 0.300 | 412.95 | 2,169.79 | 8.96 |
| | LBC: RD 0 to 40.185 (40,185 metre) | More than 10 cumecs | 0.550 | 0.300 | 2,009.25 | 2,448.92 | 49.20 |
| | LBC: RD 40.185 to 64.110 (23,925 metre) | 3 to 10 cumecs | 0.350 | 0.300 | 239.25 | 2,448.92 | 5.86 |
| OSP Canal Phase-II | RBC: RD 9.775 to 68.92 (58,140 metre) | More than 10 cumecs | 0.550 | 0.300 | 2,907.00 | 3,227.72 | 93.83 |
| OSP Canal Phase-III | RBC: RD 68.92 to 140.15 (71,230 metre) | More than 10 cumecs | 0.550 | 0.300 | 3,561.5 | 3,463.686 | 123.36 |
| | RBC: RD 140.150 to 162.70 (22,550 metre) | 3 to 10 cumecs | 0.350 | 0.300 | 225.50 | | 7.81 |
| OSP Canal Phase-IV (Group II) | ORBLC: RD 51.281 to 68.525 (17,244 metre) | 7 to 10 cumecs | 0.350 | 0.300 | 172.44 | 3,026.47 | 5.22 |
| Total | | | | | | | 308.05 |

¹⁰⁵ Length of canal × difference in coping width × thickness of CC lining (0.10 metre) × 2 (for both banks)

Appendix 3.1

Extra cost on inadmissible lead of materials

(Reference: Paragraph 3.1.4.3, Page 42)

| | Rate adopted | | | Rate required to be adopted | | |
|--|----------------------|----------------|---------------------|-----------------------------|----------------|---------------------|
| | Quantity (in cum) | Rate (in ₹) | Amount (in ₹) | Quantity (in cum) | Rate (in ₹) | Amount (in ₹) |
| Canal lining in bed | 34,081.78 | 3,106.00 | 10,58,58,009 | 34,081.78 | 3,106.00 | 10,58,58,009 |
| Canal lining in slope | 31,846.42 | 3,256.00 | 10,36,91,944 | 31,846.42 | 3,256.00 | 10,36,91,944 |
| Safety ladder | 1,227.84 | 3,219.00 | 39,52,417 | 1,227.84 | 3,219.00 | 39,52,417 |
| Lead of cement 45 km | 7,466.14 | 288.63 | 21,54,952 | 0 | 0 | 0 |
| Lead of cement 30 km | 7,355.37 | 225.18 | 16,56,282 | 0 | 0 | 0 |
| Lead of sand 30 km | 26,324.27 | 225.18 | 59,27,699 | 0 | 0 | 0 |
| Lead of sand 20 km | 2,552.64 | 177.45 | 4,52,966 | 0 | 0 | 0 |
| Lead of metal 5 km | 28,663.79 | 109.20 | 31,30,086 | 0 | 0 | 0 |
| Lead of metal 25 km | 28,418.46 | 223.70 | 63,57,210 | 0 | 0 | 0 |
| Lead of water 2 km | 67,156.10 | 55.00 | 36,93,586 | 0 | 0 | 0 |
| PVC strip | 2,73,292.80 | 96.00 | 2,62,36,109 | 2,73,292.80 | 96.00 | 2,62,36,109 |
| Lead of PVC strip | 49,193.60 | 2.00 | 98,387 | 49,193.60 | 2.00 | 98,387 |
| Total | 67,156 | | 26,32,09,647 | 67,156¹⁰⁶ | | 23,98,36,866 |
| Clubbed Rate for CC lining (Amount/ Quantity) | | | 3,919.37 (A) | | | 3,571.34 (B) |
| Difference in rate (A-B) | | | | | | 348.03 |

¹⁰⁶ Quantity includes quantity of canal lining in bed, slope and of safety ladder.

Appendix 3.2

Category wise release of funds to MPSAIDC in the Scheme for
Development of Food Processing Industries

(Reference: Paragraph 3.2.2, Page 54)

(₹ in lakh)

| Year | Opening Balance | | | Released | | | Utilised | | | Closing Balance | | |
|---------|-----------------|-------|--------------|----------|-----------------|-------|----------|-----------------|------|-----------------|---------------|--------|
| | General | SC | ST | General | SC | ST | General | SC | ST | General | SC | ST |
| 2008-09 | 0.00 | 0.00 | 0.00 | 47.00 | 5.00 | 16.00 | 47.00 | 0.00 | 0.00 | 0.00 | 5.00 | 16.00 |
| 2009-10 | 0.00 | 5.00 | 16.00 | 47.00 | 0.00 | 0.00 | 47.00 | 0.00 | 0.00 | 0.00 | 5.00 | 16.00 |
| 2010-11 | 0.00 | 5.00 | 16.00 | 47.00 | 5.00 | 16.00 | 47.00 | 0.00 | 0.00 | 0.00 | 10.00 | 32.00 |
| 2011-12 | 0.00 | 10.00 | 32.00 | 47.00 | 5.00 | 16.00 | 41.73 | 0.00 | 0.00 | 5.27 | 15.00 | 48.00 |
| 2012-13 | 5.27 | 15.00 | 48.00 | 47.00 | 5.00 | 16.00 | 47.00 | 0.00 | 0.00 | 5.27 | 20.00 | 64.00 |
| 2013-14 | 5.27 | 20.00 | 64.00 | 75.85 | 7.66 | 23.18 | 75.59 | 0.00 | 0.00 | 5.54 | 27.66 | 87.18 |
| 2014-15 | 5.54 | 27.66 | 87.18 | 76.09 | 7.66 | 23.18 | 82.72 | 0.00 | 0.00 | -1.10 | 35.32 | 110.36 |
| 2015-16 | -1.10 | 35.32 | 110.36 | 145.30 | 6.00 | 19.00 | 134.60 | 0.00 | 0.00 | 9.60 | 41.32 | 129.36 |
| 2016-17 | 9.60 | 41.32 | 129.36 | 570.88 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 580.48 | 41.32 | 129.36 |
| 2017-18 | 580.48 | 41.32 | 129.36 | 0.00 | 0.00 | 0.00 | 570.88 | 0.00 | 0.00 | 9.60 | 41.32 | 129.36 |
| | | | Total | | 1,273.80 | | | 1,093.52 | | | 180.28 | |

Appendix 3.3

Calculation of interest on balance amount of mobilisation advance

(Reference: Paragraph 3.2.4, Page 60)

| | | | | | | | (Amount in ₹) |
|--------------|-------------------------|-------------------|--------------------------------|--|--------------------------|-----------------|--|
| Sl. no. | RA Bill sl. no. | Voucher. no./date | Mobilisation advance recovered | Balance amount of mobilisation advance | Interest leviable | Delay (in days) | Interest on pending amount of mobilisation advance |
| 1 | 17 | 31/ 28.6.14 | 2,39,950 | 4,99,29,823 | 23.10.2014 to 21.04.2015 | 181 | 39,61,555.27 |
| 2 | 18 | 01/ 3.9.15 | 3,20,330 | 4,96,09,493 | 22.04.2015 to 02.09.2015 | 134 | 29,14,048.03 |
| 3 | 19 | 21/ 24.9.15 | 16,41,047 | 4,79,68,446 | 04.09.2015 to 23.09.2015 | 20 | 4,20,545.28 |
| 4 | 20 | 41/ 11.12.15 | 18,76,227 | 4,60,92,219 | 25.09.2015 to 10.12.2015 | 77 | 15,55,770.24 |
| 5 | 21 | 38/ 23.12.15 | 3,30,477 | 4,57,61,742 | 12.12.2015 to 22.12.2015 | 11 | 2,20,659.36 |
| 6 | 22 | 19/ 11.2.16 | 30,63,200 | 4,26,98,542 | 24.12.2015 to 10.02.2016 | 49 | 9,17,141.29 |
| 7 | 23 | 33/ 27.2.16 | 15,63,755 | 4,11,34,787 | 12.02.2016 to 26.02.2016 | 15 | 2,70,475.31 |
| 8 | 24 | 15/ 21.3.16 | 11,92,512 | 3,99,42,275 | 28.02.2016 to 20.03.2016 | 22 | 3,85,196.73 |
| 9 | 25 | 21/ 16.5.16 | 32,04,522 | 3,67,37,753 | 22.03.2016 to 15.05.2016 | 55 | 8,85,732.13 |
| 10 | 26 | 15/ 17.6.16 | 14,37,539 | 3,53,00,214 | 17.05.2016 to 16.06.2016 | 31 | 4,79,696.06 |
| 11 | 27 | 21/ 28.6.16 | 11,30,137 | 3,41,70,077 | 18.06.2016 to 27.06.2016 | 10 | 1,49,786.64 |
| 12 | 28 | 12/ 15.11.16 | 2,20,533 | 3,39,49,544 | 29.06.2016 to 14.11.2016 | 139 | 20,68,596.87 |
| 13 | As of March 2018 | | | 3,39,49,544 | 16.11.2016 to 31.03.2018 | 501 | 74,55,877.94 |
| Total | | | | | | | 2,16,85,081.15 |

Appendix 3.4

Extra cost due to application of incorrect rates of earth work in Tawa Project

(Reference: Paragraph 3.2.7, Page 65)

(Quantities in cum and Amount in ₹)

| USR Item No. | Item | Quantity | Clubbed rate as per estimate | | Clubbed rate payable | | |
|---------------------------------------|--|------------------|------------------------------|---|----------------------|------|-----------------------|
| | | | Rate | Amount | Quantity | Rate | Amount |
| 401 (b) | Excavation in hard soil including 50 m lead and 1.5 lift with dressing | 16,79,570 | 26 | 4,36,68,820 | 16,79,570 | 38 | 6,38,23,660 |
| 418(a) | Watering of earthwork for compaction at optimum moisture content with lead of water up to 100 m | 8,29,217 | 13 | 1,07,79,821 | 8,29,217 | 13 | 1,07,79,821 |
| 417(a) | Compaction of earthwork at optimum moisture content to dry density not below 90 <i>per cent</i> by light rollers i.e. by powered rollers or sheep foot earth masters of hand rammer excluding watering | 8,29,217 | 12 | 99,50,604 | 8,29,217 | 12 | 99,50,604 |
| 2903(4) | (a) Quantity for Av lead 1.5 km. | 8,29,217 | 70.56 | 5,85,09,551.52 | 0 | 0 | 0 |
| Total | | 16,79,570 | | 12,29,08,796.52 | 16,79,570 | | 8,45,54,085 |
| Clubbed rate | | | | 73.18 | | | 50.34 |
| Rate difference | | | | | | | 22.84 |
| Quantity of earthwork executed | | | | | | | 12,53,314.33 |
| Extra Cost | | | | Quantity 12,53,314.33 cum×22.84 + 16.20 <i>per cent</i> above tender premium | | | 3,32,63,062.58 |

Appendix 3.5

Extra cost due to application of incorrect rates of earth work in Barna Project

(Reference: Paragraph 3.2.7, Page 66)

(Quantities in cum and Amount in ₹)

| USR Item No. | Item | Quantity | Clubbed rate as per estimate | | Clubbed rate payable | | |
|---------------------------------------|---|---|------------------------------|-----------------------|----------------------|-----------------------|--|
| | | | Rate | Amount | Rate | Amount | |
| 401 (b) | Excavation in hard soil including 50 m lead and 1.5 lift with dressing | 10,55,550.44 | 26 | 2,74,44,311.44 | 64 | 6,75,55,228.16 | |
| 2903(4) | Lead of materials | | | 0.00 | | | |
| | (a) Quantity for Av lead 0.5 Km. | 2,63,887.61 | 62.64 | 1,65,29,919.89 | 0 | 0.00 | |
| | (b) Quantity for Av lead 1.00 Km | 5,27,775.22 | 66.6 | 3,51,49,829.65 | 0 | 0.00 | |
| | (c) Quantity for Av lead 2.0 Km | 2,63,887.61 | 74.52 | 1,96,64,904.70 | 0 | 0.00 | |
| Total | | 10,55,550.44 | | 9,87,88,965.68 | | 6,75,55,228.16 | |
| Clubbed rate | | | 93.59 | | 64 | | |
| Rate difference | | | 29.59 | | | | |
| Quantity of earthwork executed | | | 9,23,303.068 | | | | |
| Extra Cost (A) | | Quantity 9,23,303.068 cum×29.59 + 9.81 per cent above tender premium | | | | 3,00,00,682.60 | |
| 401 (b) | Excavation in hard soil including 50 m lead and 1.5 lift with dressing | 2,64,815.68 | 26 | 68,85,207.68 | 64 | 1,69,48,203.52 | |
| 418 (a) | Watering of earthwork for compaction at optimum moisture content with lead of water up to 100 m | 2,66,306.22 | 13 | 34,61,980.86 | 13 | 34,61,980.86 | |
| 417 (a) | Compaction of earthwork at optimum moisture content to dry density not below 90 per cent by light rollers i.e., by non-powered rollers or sheeps foot earth masters or hand rammer (excluding watering) | 2,66,306.22 | 8 | 21,30,449.76 | 8 | 21,30,449.76 | |
| 2903(4) | lead of material | | | 0.00 | | 0.00 | |
| | (a) Quantity for Av lead 0.5 Km. | 66,203.92 | 62.64 | 41,47,013.55 | 0 | 0.00 | |
| | (b) Quantity for Av lead 1.00 Km | 1,32,407.84 | 66.6 | 88,18,362.14 | 0 | 0.00 | |
| | (c) Quantity for Av lead 2.0 Km | 66,203.92 | 74.52 | 49,33,516.12 | 0 | 0.00 | |
| | (B) Water for CMC and LBMC Av lead 0.5 Km) | 2,66,306.22 | 4.5 | 11,98,377.99 | 4.5 | 11,98,377.99 | |
| Total | | 2,66,306.22 | | 3,15,74,908.10 | | 2,37,39,012.13 | |
| Clubbed rate | | | 118.57 | | 89.14 | | |
| Rate difference | | | 29.43 | | | | |
| Quantity of earthwork executed | | | 2,23,469.135 | | | | |
| Extra Cost (B) | | Quantity 2,23,469.135 cum×29.43 + 9.81 per cent above tender premium | | | | 72,21,870.58 | |
| Total Extra Cost (A+B) | | | | | | 3,72,22,553.18 | |