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भारत सरकार
GOVERNMENT OF INDIA
जल संसाधन मंत्रालय
MINISTRY OF WATER RESOURCES

वार्षिक प्रतिवेदन
ANNUAL REPORT
2006-2007

सरदार सरोवर निर्माण सलाहकार समिति
SARDAR SAROVAR CONSTRUCTION ADVISORY
COMMITTEE
वडोदरा
VADODARA

FOREWORD

The Sardar Sarovar Construction Advisory Committee (SSCAC) was constituted with a view to ensure efficient, economical and timely execution of the Unit-I (Dam & Appurtenant works), and Unit-III (Hydro Power works) of the Sardar Sarovar Project (SSP). The office of Sardar Sarovar Construction Advisory Committee has been issuing Annual Reports regularly since its inception in 1980. This Annual Report of SSCAC presents a glimpse of SSCAC, its constitution, its functions and various activities of SSCAC Secretariat and gist of decisions taken in the various meetings held during the year 2006-2007.

The Unit-I Component of the project involves main dam construction which started in April 1987, and was programmed to be completed by the end of January 1998 as per the Revised Implementation Schedule (RIS) approved by the SSCAC in February 1990.

Unfortunately, the construction work on spillway blocks of the dam remained held up for long, due to litigation in the Supreme Court of India. Though this hurdle was cleared in October 2000 with the final verdict of the Court in favour of project, yet the desired pace of progress could not be achieved owing to non-completion of required resettlement and rehabilitation (R&R) works of the project affected persons. The spillway portion could be raised upto elevation level (EL) 110.64 m by June 2004, thereby making it possible to derive partial irrigation and power benefits from the Project.

Further permission to raise the height of dam in spillway portion from EL 110.64 m to EL 121.92 m as per approved design was accorded by Narmada Control Authority on 8th March 2006 after taking into account the recommendations of Resettlement & Rehabilitation Sub-Group and Environment Sub-Group and the assurances of all the party States. After getting clearance from NCA, the dam has been raised upto EL 121.92 m in December 2006 and substantial power is being generated by both the power houses.

The Unit-III of the project involves construction works of the Canal Head Power House (CHPH) and the underground River Bed Power House (RBPH). All works of CHPH were completed in January 1998; however, power could only be generated after the dam had attained the height of EL 110.64 m. All the five units of CHPH have been commissioned successfully during August 2004 to December 2004. All the civil and electrical works of 1200 MW RBPH are complete and the 1st to 6th Units of RBPH have been commissioned in February 2005, April 2005, August 2005, October 2005, March 2006 and June 2006 respectively. 3538.513 Million Units energy has been generated by both power houses during 2006-07.

As part of its regular functions, SSCAC brings out half yearly Status Report of Unit-I and Unit-III works of Sardar Sarovar Project.

Date: December 2007

**(Nirmal Jot Singh)
Secretary
Sardar Sarovar Construction
Advisory Committee**

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CHAPTER 1 INTRODUCTION

1.1 BACKGROUND

The Narmada Water Disputes Tribunal (NWDT) was constituted in October 1969 by the Government of India, Ministry of Irrigation and Power, to adjudicate upon the water dispute regarding the inter State river Narmada and the river valley thereof. The final order and decision of the said Tribunal was published in the Official Gazette of India in December, 1979, in which the tribunal has ordered setting up of the "Sardar Sarovar Construction Advisory Committee" to perform the supervisory function over the construction of the Sardar Sarovar Project. The Tribunal considered that the said Construction Advisory Committee is desirable and necessary for ensuring efficient, economical and timely execution of Unit-I (Dam & Appurtenant works) and Unit-III (Power Complex) of the project. Accordingly the Sardar Sarovar Construction Advisory Committee (SSCAC) was constituted by the Government of India in September 1980 and the first meeting of SSCAC was held on 5th December 1980 at Vadodara.

1.2 CONSTITUTION

The constitution of the SSCAC originally ordered by the Ministry of Irrigation (Govt. of India) vide its Resolution No. 22/7/80-P-I dated 4th September 1980, was as per the NWDT Award, with the Secretary to Government of India, in charge of Ministry of Irrigation as its Chairman. Subsequently three amendments have been made in the constitution, two in April 1986 and one in August 1987. Copy of the original order of Government of India constituting the SSCAC is given as **Annex-I(A)** and the copies of subsequent amendments are presented as **Annex-I(C), I(D) & I(E)** respectively.

The present composition of the SSCAC is as under:

- i) The Secretary to the Government of India, in charge of the Water Resources -Chairman
- ii) The Secretary to the Government of India, Department of Power, Ministry of Energy*. -Member

- | | | |
|-------|---|------------|
| iii) | Chairman, Central Water Commission (CWC) or a Member of the CWC representing him in case the Chairman is unable to attend a meeting. | -Member |
| iv) | Chairman, Central Electricity Authority (CEA) or a Member of the CEA representing him in case the Chairman is unable to attend a meeting. | -Member |
| v) | Executive Member, Narmada Control Authority (NCA) or its Independent Member representing Chairman in case the Executive Member is unable to attend a meeting. | -Member |
| vi) | Financial Adviser in the Ministry of Water Resources. | -Member |
| vii) | Secretaries in charge of Finance Department of Government of Madhya Pradesh, Gujarat, Maharashtra and Rajasthan or their nominees. | -Members |
| viii) | Secretaries in-charge of Irrigation Department of Governments of Gujarat and Rajasthan or their nominees. | -Members |
| ix) | Secretaries in-charge of Power Department of Governments of Madhya Pradesh, Gujarat and Maharashtra or their nominees. | -Members |
| x) | Secretaries in charge of Revenue Department or any other Department concerned with land acquisition of Madhya Pradesh, Maharashtra & Gujarat or their nominees. | -Members |
| xi) | General Manager or Chief Engineers of Gujarat in charge of the project and Chief Engineers of Madhya Pradesh, Maharashtra and Rajasthan concerned with the project or their nominees. | -Members |
| xii) | Chairman, State Electricity Board of Madhya Pradesh, Maharashtra and Gujarat or their nominees. | -Members |
| xiii) | Financial Adviser, Sardar Sarovar Project. | -Member |
| xiv) | Secretary (to be appointed by the Government of India) | -Secretary |

Note: * Department of Power, Ministry of Energy is now renamed as Ministry of Power.

1.3 FUNCTIONS

As decided by the NWDT in its Award of December 1979, and as resolved by the Government of India in its order of 4th September 1980, the SSCAC shall:

- i) Scrutinise the project estimates prepared for Unit-I and Unit-III works, advise necessary modifications and recommend the estimates for the administrative approval of the concerned Government.
- ii) Examine and make recommendations on all proposals pertaining to technical features and designs as may be referred to it by any of the party States and where necessary consult experts for the purpose.
- iii) Examine and make recommendations on the programme of construction of different parts of the project in a coordinated manner, keeping in view the funds available, the economics of the project and the desirability of obtaining quick results.
- iv) Examine the requirement of funds for the construction of works and other purposes according to the approved programme and make the necessary recommendation.
- v) Examine and recommend, from time to time, the delegation of such powers, both technical and financial, as it may deem necessary for the efficient execution of the works on the project, to the officers engaged in the execution of the project.
- vi) Examine and, where necessary, recommend specifications for various classes of work.
- vii) Examine and make recommendations on all sub-estimates and contracts, the cost of which exceeds the powers of sanction of the General Manager/Chief Engineers.
- viii) Review progress reports, both for works and expenditure from the General Manager/Chief Engineers and recommend, where necessary, steps to be taken to expedite the work.

1.4 HEAD- QUARTERS & SECRETARIAT

In the Govt. of India resolution constituting the SSCAC, its headquarter was indicated as Gandhinagar. However, the SSCAC during its first meeting held in December 1980 had fixed Vadodara as its headquarter on the suggestion of Govt. of Maharashtra and in view of the fact that the dam site was near Vadodara and that the Govt. of Gujarat was in a position to provide office and residential accommodation to SSCAC Secretariat at Vadodara. The resolution regarding change of head-quarters of the SSCAC from Gandhinagar to Vadodara was issued in December 1980 and is given at **Annex-I(B)**.

The SSCAC has a full time Secretary of the rank of Chief Engineer appointed by the Government of India. The post of Secretary has been encadared in the Central Water Engineering (Group-A) Service of the Ministry of Water Resources since August 1986. The Secretary is assisted by a Deputy Secretary and three Assistant Secretaries who are also from the Central Water Engineering (Group-A) Service. The supporting staff is taken on deputation from the party States and other Central/State government offices.

1.5 CONDUCT OF BUSINESS AND PROCEDURE RULES

As per the NWDT Award, the SSCAC itself was to frame the rules for carrying out its business. Accordingly, the Committee, in its 3rd meeting has approved the rules for the conduct of its business and procedure, which were subsequently amended during its 11th, 14th and 67th meetings. The Conduct of Business and Procedure Rules are enclosed as **Annex –II**.

1.6 PERMANENT STANDING COMMITTEE (PSC)

1.6.1 Constitution of PSC

In order to streamline arrangements for scrutiny and sanctions to be accorded by SSCAC for various matters, concerning Unit–I and Unit–III of the Sardar Sarovar Project, SSCAC during its 9th meeting held on 9th June 1983 decided to create a Permanent Standing Committee (PSC).

The proposal of Terms of Reference for constituting the PSC, headed by the Chairman, Narmada Control Authority and with Member (P&P) of CWC, Financial Advisor to SSP and the Secretary of SSCAC as members, was

finalized in the first meeting of PSC held on 9th August 1983 and the proposal was accepted by the SSCAC in its 10th meeting held on 25th August 1983. In the 26th meeting of SSCAC held on 22nd September 1986, the PSC was reconstituted by including representatives from each of the four party States and the Financial Advisor of Ministry of Water Resources. The constitution of PSC was further amended in the 28th meeting of SSCAC held on 29th June 1987 to provide for the Executive Member, NCA as the Chairman of PSC instead of Chairman NCA as provided earlier. In the 64th meeting of SSCAC held on 24th August 1998, the Chief Engineer (CMO) of CWC was nominated as member of PSC in place of Member (P&P) of CWC.

The present composition of the PSC is as under:

- | | |
|--|-----------|
| 1. The Executive Member, Narmada Control Authority | -Chairman |
| 2. The Member (HE), Central Electricity Authority, Government of India | -Member |
| 3. The Chief Engineer (CMO), Central Water Commission, Government of India | -Member |
| 4. The Financial Advisor, Ministry of Water Resources, Government of India | -Member |
| 5. The Secretary (Narmada), Narmada & Water Resources and Water Supply Department, Government of Gujarat | -Member |
| 6. The Director (Finance & Administration), SSNNL, Government of Gujarat | -Member |
| 7. The Member (Engg.), Narmada Valley Development Authority, Government of Madhya Pradesh | -Member |
| 8. The Chief Engineer and Joint Secretary, Irrigation Department, Government of Maharashtra | -Member |
| 9. The Additional Chief Engineer, Irrigation Zone, Government of Rajasthan | -Member |
| 10. The Secretary, SSCAC, Government of India | -Member |
| | Secretary |

1.6.2 Functions of PSC

As per the proposal approved by SSCAC in its 10th meeting, the functions of Permanent Standing Committee are as under:

- i) Scrutiny of all project estimates and getting them modified as considered necessary.
- ii) Examination and acceptance on behalf of the SSCAC of estimates beyond the Powers of the General Manager/Chief Engineer upto Rs. 20 crore in each case for recommendation to the concerned Governments for administrative approval, and examination and recommendation of estimates costing more than Rs. 20 crore each to the main committee for acceptance.
- iii) Scrutiny of technical features and designs of the project works referred to the SSCAC and sending its recommendations to the referring authority. In case where the recommendations made by the Standing Committee would cause more than 10% deviation in cost beyond what was earlier approved by the SSCAC, the Standing Committee for approval to the SSCAC shall refer the matter to SSCAC.
- iv) Identification of problems to be referred to the Panel of Consultants and / or expert institutions and recommending them to the SSCAC for further necessary action; processing of the Consultants' suggestions and reporting to the SSCAC the Standing Committee's recommendations.
- v) Review of Construction Programme of Unit I & III and review of the monthly progress on all works of the project and making recommendations to the Construction Authority for such modifications / adjustments in the construction programme as may be required.
- vi) Recommendations of appropriation of funds to and between Unit I & III and between one work and another within a unit depending on the review of progress of works, within the overall Annual Outlay approved by the SSCAC.
- vii) Examination and recommendations to the concerned Governments on the tenders for the project works beyond the powers of project officers for works upto Rs. 20 crores each.

- viii) Examination and recommendations on specifications for project works.
- ix) Examination and recommendations to the SSCAC on tenders for project works costing more than Rs. 20 crores each.
- x) Recommendations on creation of posts required under the administrative control of the Secretary of the Sardar Sarovar Construction Advisory Committee and sanction to the relevant recruitment rules.
- xi) Such other functions as may be delegated to it by the SSCAC from time to time.

As per SSCAC's decision in its 29th meeting held on 29th September 1987, the PSC also functions as "Claims Committee" to consider the claims of the contractors beyond the delegated powers of project authority. As per the decision of 68th meeting of SSCAC held on 27th June 2002, the consolidated functions of PSC as Claims Committee are as follows:

The PSC shall function as Claims Committee and approve the contractors claims: -

- a) for all claims arising out of unforeseen circumstances, pertaining to all contracts approved by the SSCAC;
- b) for all claims arising out of change in quantities of tender items, or due to extra items, where each claim exceeds Rs.5 crores, pertaining to all contracts approved by the SSCAC;
- c) for all claims arising out of change in quantities of tender items, or due to extra items, if total value of the claims settled exceeds 25% of the contract value of the particular work, pertaining to all contracts approved by the SSCAC;
- d) for all claims arising out of change in quantities of tender items, or due to extra items, or for unforeseen reasons, if total claim exceeds 10% of the contract value of the particular work, pertaining to all contracts finalized by project authorities under power delegated to them.

1.7 REVIEW COMMITTEE

The Review Committee of NCA constituted as per the NWDT Award also functions as the Review Committee for the SSCAC in case of disagreement on any decision taken by the SSCAC. The Review Committee may suo-moto or on

the application of any party State, reviews any decision of the SSCAC. The decision of the Review Committee on such matters shall be final and binding on the concerned States. The Review Committee is chaired by the Union Minister for Water Resources; and the Chief Ministers of Gujarat, Madhya Pradesh, Maharashtra and Rajasthan, along with Union Minister of Environment and Forest, are its members. The Secretary of the Union Ministry of Water Resources is the convener of the Review Committee without any voting rights.

CHAPTER 2

TECHNICAL ACTIVITIES

2.1 MEETINGS OF THE SSCAC

The SSCAC is entrusted with the responsibility to ensure efficient, economical and expeditious execution of the Unit-I & Unit-III works of the Sardar Sarovar Project. The Committee deliberates on the various points concerned with the programme/progress of construction, estimates, claims, share cost payments etc.

Only one meeting of the SSCAC was held during the year. The 74th meeting was held on 27th September 2006 at New Delhi. The important decisions taken in the above meeting are given in the following paragraphs:

74th Meeting of the SSCAC

A) Confirmation of the Minutes of 73rd Meeting of SSCAC

The Committee confirmed the Minutes of the 73rd SSCAC Meeting.

B) Operation and Maintenance of Power House

The Committee approved the proposal of O&M of Power Complex of Sardar Sarovar Project on “Rate Plus” contract basis as submitted by Government of Gujarat (GOG).

C) Insurance coverage for Sardar Sarovar Power Project

The Committee decided that an Empowered Committee may be constituted and it should submit its report along with recommendations on the total sum to be insured and the best option to be selected in the interest of project to SSCAC for taking further necessary action at the earliest.

D) Payment of Share Cost of SSP by Party States

The Committee directed Government of Maharashtra and Madhya Pradesh to expedite the payment of balance share of undisputed share cost due to GOG.

E) Draft proposal for Annual Development Plan (ADP 2006-07) of Unit-I and Unit-III Works

The Committee approved the ADP 2006-07 of Unit-I and Unit-III works for an outlay of Rs.875 crores as recommended by the Permanent Standing Committee (PSC).

F) Extension of Time Limit and Revision of rates for construction of Tail Race Channel (TRC) for underground River Bed Power House.

The Committee approved the proposal of GOG as recommended by the PSC.

G) Construction of Garudeshwar Weir of Sardar Sarovar Project.

The Committee requested Central Electricity Authority (CEA) to expedite the detailed techno-economic study in consultation with the States for construction of Garudeshwar Weir.

H) Claim put forth by M/s Jaiprakash Associates on account of shortfall in concrete progress during the various working seasons from 1993-94 to 1997-98 due to the restrictions imposed in raising the spillway of Sardar Sarovar Dam

The Committee decided that both the States (GOG & GOMP) try to resolve the issue bilaterally and matter may be placed before SSCAC thereafter.

2.2 MEETINGS OF THE PSC OF SSCAC

No meeting of the PSC of SSCAC was held during the year.

2.3 MEETINGS OF THE EMPOWERED COMMITTEE ON INSURANCE COVERAGE FOR SARDAR SAROVAR POWER PROJECT

It was decided in the 74th meeting of Sardar Sarovar Construction Advisory Committee (SSCAC) held on 27th September 2006 to constitute an Empowered Committee under the Chairmanship of Executive Member, Narmada Control Authority (NCA) and consisting to Members of the Party States as well as from

CEA and NCA with Secretary (SSCAC) as Member Secretary of the Committee for the Insurance Coverage of Sardar Sarovar Power Project with the stipulation that the Committee should submit its report along with recommendations on the total sum to be insured and the best option to be selected in the interest of the project for consideration and approval by SSCAC.

The first meeting of the Empowered Committee was held on 19th February 2007 at Sardar Sarovar Dam Site, Kevadia, Gujarat wherein the Committee agreed in principle to the immediate need for Insurance Coverage to Sardar Sarovar Power Project Complex and made following recommendations

a) Items to be insured:

Canal Head Power House (CHPH), 400 KV Gas Insulated Switch (GIS) Yard, Auto Transformers & EOT Cranes, River Bed Power House (RBPH) and Transmission Lines.

b) Risk to be covered:

Fire with SRMD (Strike, Riot, Malicious Damage) + Earthquake + Terrorism + Flood With STFI (Storm, Tornado, Flood, Inundation), without Loss of Production & without Break down

c) The Insurance Companies may be invited by GOG to give their respective presentations on various packages in the next meeting.

d) The Committee would examine the need to include additional risks like loss of production, machinery breakdown etc. in the insurance coverage for Sardar Sarovar Power Project based on the presentations by Insurance Companies and the detailed analysis and information to be furnished by GOG.

2.4 MEETING OF THE REVIEW COMMITTEE FOR NCA (RCNCA)

13th meeting of Review Committee was held on 15th April 2006 at New Delhi during the year 2006-2007 under the Chairmanship of Hon'ble Union Minister of Water Resources.

2.5 PROJECT MONITORING AND STATUS REPORTS

The Secretary and other officers of SSCAC undertook frequent visits to dam, powerhouse and other appurtenant works and held discussions with the project officials for updating the information on the progress of works. Half yearly status report of the project covering the physical and financial progress of Unit-I (Dam

& Appurtenant works) and Unit-III (Hydropower works) ending June 2006 was prepared and circulated to the members and invitees of the Committee.

As per the decision taken in the 86th PSC meeting held on 14th November 2002, a Monitoring Team with Chief Engineer level officials from CWC, CEA, NCA and SSCAC was constituted by the PSC for closely monitoring the River Bed Power House (RBPH) progress. The Monitoring Team was envisaged to remain in operation till full completion of RBPH work. The last meeting of the Monitoring Team was held on 14th November 2005.

The 6th and last Unit of RBPH was commissioned in June 2006 and all power units of SSP are now under O&M by Gujarat Urja Vikas Nigam Limited (GUVNL). The ongoing works like fire fighting system, ventilation system, Air Conditioning work, provision of Computerized Control System (CCS) etc. in RBPH are in progress and in advanced stages of completion. The meetings of the Monitoring Team were discontinued after commissioning of all units of RBPH/CHPH. The power generation are planned and operated under the directions of Energy Management Center of NCA, Indore.

The status of project expenditure and Share Cost of party States were compiled on monthly basis & circulated to Party States/MOWR by the SSCAC Secretariat regularly during the year 2006-2007.

2.5.1 PROGRESS OF MAIN DAM AND APPURTENANT WORKS (UNIT –I)

The construction of the main spillway portion of the dam had been held up for over five years due to the writ petition filed by Narmada Bachao Andolan in the Supreme Court of India. The final judgment on the case was delivered by the Supreme Court on 18th October 2000, in which the Court cleared raising of the dam up to EL 90.0m, and also gave directions for further construction of dam as per the award of the Narmada Water Disputes Tribunal (NWDT). The work of raising the block nos. 30 to 46 to EL 90.0 m was completed on 30th December 2000.

The NCA, which is monitoring the Resettlement and Rehabilitation (R&R) progress of SSP, finalized an action plan for completion of R&R works in its 61st meeting held on 17th November 2000. The Action Plan finalized by NCA was also accepted by the Review Committee for Narmada Control Authority

(RCNCA) in its 8th meeting held on 10th January 2001. The R&R time frame as per above action plan and the corresponding tentative schedule for completion of dam works is given in the Table 2.1.

Table 2.1

Dam Height (EL) (Afflux)	Development of all civic amenities and keeping in readiness developed agricultural land and house plots with core houses at R&R sites and allotment of land and house plots to PAFs by	Completion of construction subject to approval of NCA after getting the clearance of R&R and Env. Sub-groups by
90 m (112.75 m)	Works Completed	
100m. (120.04m)	December, 2001	June, 2002
110m. (127.10m)*	December, 2002	June, 2003
121m. (136 m)**	December, 2003	June, 2004
138.68 m.	December, 2004	June, 2005

(*) Instead of 110.00 m, the dam was raised upto 110.64 m (corresponding to MDDL) (afflux level 128.16 m) in the next stage as discussed in the 70th meeting of NCA held on 12/13 March 2004.

(**) Instead of EL 121.00 m, the dam is being raised upto EL 121.92 m (crest level of the spillway) in the next stage as discussed in the 71st meeting of NCA held on 11th May 2004.

The NCA's stipulated target however was not achieved due to the slow progress of Resettlement and Rehabilitation works. Permission for raising of the effective dam height to EL 95.0m was given by NCA in its 64th meeting held on 17th May 2002, and the work was completed by middle of July 2002. The NCA in its 66th (Emergency) meeting, held on 14th May 2003, gave permission to raise the main spillway blocks (Nos. 30 to 46) up to EL 100m, along with permission to construct 3.0m high hump over blocks 31 to 45, leaving the blocks 30 and 46 as such for the safety of downstream stilling basin. The said work was completed by the end of June 2003. Subsequently the NCA in its 70th meeting held on 12th/13th March 2004 granted permission for raising the blocks no.30 to 46 to EL 110.64 m level. Besides these, the blocks numbering 29,47,48,49 and 50 which were at EL 105.0 m level, were also required to be raised to the EL 110.64m

level for achieving the effective dam height of 110.64 m. The work with the total quantum of 164699 m³ of concreting, commenced on 17th March 2004 and was completed on 30th June 2004. After deliberation on the R&R works in the States of Madhya Pradesh, Gujarat and Maharashtra and with the recommendations of Environmental and R&R Sub-groups, in the 76th emergency meeting of NCA held on 8th March 2006, permission was granted for raising the block nos. 30 to 46 to EL 121.92 m level. The work of raising these blocks to 121.92 m commenced on 9th March 2006 and was completed on 31st December 2006. The balance works remaining to be carried out are raising of piers and installation of Radial Gates in the spillway portion of the dam. As per Court's directions, the permission for further raising of dam is now to be given by the NCA, after obtaining clearances from the Resettlement and Rehabilitation Sub-Group, the Environmental Sub-Group and in consultation with the Grievances Redressal Authorities (GRA's) of Gujarat, Maharashtra and Madhya Pradesh.

The overall progress of Main Dam (Unit-I) achieved up to **March 2007** is given in Table 2.2.

TABLE 2.2
PROGRESS OF MAIN DAM (UNIT-I) WORKS UPTO MARCH 2007

Item	Unit	Est. Qty.	Progress up to March 2006	Progress during reporting period	Cumulative Progress upto March 2007	Percentage Progress up to March 2007
Excavation	TCM	6400	6358.00	1.051	6359.01	99.36
Concreting						
Dam	TCM	5620	5025.48	153.30	5178.78	92.15
Stilling Basin	TCM	1200	1370.61	17.79	1388.40	115.70
Sub-Total	TCM	6820	6396.09	171.09	6567.18	96.29
Drilling & Grouting	TRM	282	250.45	0.00	250.45	88.81

Note: TCM: Thousand Cubic Metre

TRM: Thousand Running Metre

Statement showing the block level achieved at the end of 31st March 2007 is given in Table 2.3.

TABLE 2.3

Statement showing the block levels achieved at the end of 31st March 2007

Block No.	Level in Metre	Block No.	Level in Metre
1	146.00	33	121.92
2	146.00	34	121.92
3	146.50	35	121.92
4	146.50	36	121.92
5	146.50	37	121.92
6	146.50	38	121.92
7	146.50	39	121.92
8	146.50	40	121.92
9	146.50	41	121.92
10	146.50	42	121.92
11	139.15	43	121.92
12	125.00	44	121.92
13	125.00	45	121.92
14	134.00	46	121.92
15	134.00	47	121.92
16	134.00	48	121.92
17	134.00	49	121.92
18	134.00	50	121.92
19	132.00	51(OFF)	121.92
20	132.00	51(NOF)	143.00
21 (NOF)	125.50	52	146.50
21 (OF)	121.92	53	146.50
22	121.92	54	146.50
23	121.92	55	146.50
24	121.92	56	146.50
25	121.92	57	146.50
26	121.92	58	146.50
27	121.92	59	146.50
28	121.92	60	146.50
29	121.92	61	146.50
30	121.92	62	146.50
31	121.92	63	146.00
32	121.92	64	146.00

Note: NOF Block No. 13 is truncated section at d/s from EL 121.0 m & beyond EL 125.0 m

2.5.1.1 PROGRESS OF OTHER WORKS RELATED TO MAIN DAM

Out of total 432 instruments to be installed in the main dam body, 379 instruments have already been installed and only 53 nos. of instruments are remaining to be installed. At present only 61 instruments are being monitored due to various reasons i.e. cutting of cables during construction, non- functioning of instruments etc. Some of the instruments are required to be changed. Proposal for rectification has been prepared by SSNNL. Nine seismological observatories were established to monitor the seismicity near dam site and at present seismic data is being collected from seven stations. The computer based seismic data processing and analysis system (DAC-300) with magnetic playback system and digitizer was installed at the Central Station at Kevadia Colony for processing and analysis of seismic data. Ten numbers of Digital Strong Motion Accelerographs have to be installed in the body of the dam. Three units are proposed to be installed in spillway block no. 43, two units in the power dam block no.55, one unit in non-overflow block no.13 and one unit each at right and left abutments of the dam.

2.5.1.2 PROGRESS OF IRRIGATION BYE -PASS TUNNEL (IBPT)

The decision about necessity of IBPT was taken in the 60th meeting of the NCA held on 18th July 2000, which was endorsed by the RCNCA in its 9th meeting held on 18th August 2001. The arrangement for irrigation Bye-Pass Tunnels (IBPT) comprises of two circular tunnels of 5.5 m finished diameter across the right bank hill connecting the main reservoir with the first irrigation pond. The twin IBPTs, with invert level of EL 88.39 m at the inlet, will have a discharge capacity of about 283.12 cumecs (10,000 cusecs) at reservoir level of 97.53 m and 424.81 cumecs (15,000 Cusecs) at reservoir level of 110.64m.

The work of IBPT is almost completed except installation of service gates and hydraulic hoist. Excavation, rock covering concreting, installation of steel liner, concreting around steel liner and service gates hoist chamber etc. are completed. Fabrication, supply and installation of service gate is scheduled to be completed by December 2007.

The overall progress of IBPT works at the end of March 2007 is given in the Table 2.4

TABLE 2.4
PROGRESS OF IBPT WORKS UPTO MARCH 2007

Item	Unit	Est. Qty.	Cumulative Progress up to 3/2006	Progress during reporting period	Cumulative progress up to 3/2007
Open Excavation	LCM	7.38	7.346	0.00	7.346
Tunnel & shaft excavation	LCM	0.35	0.318	0.0	0.318
Concreting	LCM	1.60	1.580	0.028	1.608
Installation gates	Tonne	2220	2140	00	2140

Note: LCM: Lakh Cubic Metre

2.5.2 PROGRESS OF POWER HOUSE WORKS (UNIT –III)

The Sardar Sarovar Project has an installed capacity of 1450 MW in its two power stations viz Underground River Bed Power House-RBPH (1200 MW) and Canal Head Power House-CHPH (250 MW). Total energy generation by both power houses during 2006-07 (April 2006 - March 2007) was 3538.513 MU. Operation and Maintenance of both CHPH and RBPH is being carried out by Gujarat Urja Vikas Nigam Limited (GUVNL).

2.5.2.1 CANAL HEAD POWER HOUSE (CHPH)

The CHPH is a surface power station in a Saddle Dam on the right bank at the fringe of the first balancing storage pond with installed capacity of 250 MW (5 units of 50 MW each), deploying Kaplan turbines. The Civil and Electrical works of Canal Head Power House were completed in all respect in January 1998; however, power could only be generated after the dam had attained the height of EL 110.64 m. All the five units of CHPH (1x50 MW) have been commissioned successfully during August 2004 to December 2004.

2.5.2.2 RIVER BED POWER HOUSE (RBPH)

The River Bed Power House (RBPH) is an underground power station on the right bank of river located about 165 m downstream of the Dam. The underground RBPH has 6 units of 200 MW each, deploying Francis type reversible turbines. As per Revised Implementation Schedule (RIS) of June 2002 approved by the SSCAC in its 69th meeting held on 29th July 2003, the milestone dates for various activities were fixed as per Table 2.4 given below:

Table 2.4
MILESTONE DATES FOR RBPH (RIS-JUNE 2002)

S. No.	Name of Activity	Target date for completion
1.	Civil Works of powerhouse cavern	30.06.2005
2.	Construction of Tail Race Channel	31.05.2004
3.	Fabrication and erection of Penstocks	31.12.2004
4.	Supply & erection of draft tube gates in Collection Pool and trash rack in exit tunnels.	31.12.2004
5.	Commissioning of RBPH	
	Unit I	30.09.2004
	Unit-II	31.01.2005
	Unit-III	31.05.2005
	Unit-IV	30.09.2005
	Unit-V	31.01.2006
	Unit-VI	31.05.2006 (Sixth/Final Unit)

The civil & electrical works of River Bed Power House have been completed for all six units. All six Units of RBPH were commissioned on 01.02.2005, 30.04.2005, 30.08.2005, 28.10.2005, 07.03.2006 and 20.06.2006 respectively. The status of progress of civil works of RBPH at the end of March 2007 is given in Table 2.5.

Table 2.5
PROGRESS OF CIVIL WORKS OF RBPH UPTO MARCH 2007

S.No	RBPH Works	Civil	Unit	Total Revised Estimated Quantity	Work done up to March 2007	Percentage of Completion
1	Open Excavation		TCM	1715.00	1703.36	99.32
2	Underground Excavation		TCM	732.06	688.07	93.99
3	Concreting		TCM	335.19	311.88	93.05
4	Shotcreting		TSM	207.73	184.86	88.99
5	Rock bolting		TRM	168.18	142.01	84.44

Note:TCM: Thousand Cubic Metre TSM: Thousand Square Metre TRM: Thousand Running Meter

The work of Lighting in RBPH Power House, Lift and Fire Fighting system of RBPH have already been completed. The work of Air Conditioning, Ventilation system and provision of Computerized Control System (C.C.S) of RBPH are in progress.

2.6 PROJECT EXPENDITURE AND SHARE COST DUES

The estimate of Sardar Sarovar Project amounting to Rs. 6406.04 crore at Price level 1986-87 was approved by the Planning Commission in October 1988 vide their letter No. 2 (194) / 88 – I & CAD of 5.10.88. The cost of Unit-I (Dam and Appurtenant Works) in this estimate is Rs. 1019.45 crore including the B-land cost of Rs.316.7149 Crore and the cost of Unit-III (Hydro Power works) is Rs. 979.95 crore. The revised estimated cost at 2000-01 price level of Unit-I amounting to Rs. 3003.57 crore (excluding B-land (R&R) cost of Rs. 3033.21 crore) and Unit-III for an amount of Rs. 2782.07 crore has been approved by the SSCAC in its 71st meeting held on 8th September 2004. An amount of Rs. 23871.88 crore has been booked as project expenditure by the GOG, upto the end of March 2007.

The overall position of undisputed share cost and balance dues payable by the party States to the Government of Gujarat is given in Table 2.6.

Table 2.6
STATUS OF BALANCE DUES ON UNDISPUTED BOOKED SHARE COST
ENDING MARCH 2007

(Amount in Rs. Crore)

Particulars	Madhya Pradesh	Maharashtra	Rajasthan	Total
Undisputed Share Cost	2065.06	978.19	576.40	3619.66
Share Paid	1939.84	583.39	646.95	3170.18
Balance Undisputed Share Dues	125.22	394.80	-70.55	449.48

Note: 1. (-) indicates excess payment

2. The above figures are based on information supplied by SSNNL.

2.7 OTHER MISCELLANEOUS ACTIVITIES

2.7.1 Meetings of NCA, R&R Sub Group, Dam Safety Panel etc. connected with the Works of Sardar Sarovar Project.

The Secretary, SSCAC is Member / Invitee in a number of Committees connected with the works of Sardar Sarovar Project. The details of meetings of these Committees held during the year 2006-07 and attended by SSCAC officials are given in Annex-III.

2.7.2 Visits by VIPs to Sardar Sarovar Project Site

Several VIPs visited Sardar Sarovar Project site in the Year 2006-07. Details of such visits are given in Annex- IV.

CHAPTER 3

SECRETARIAT OFFICE

3.1 OFFICERS IN-CHARGE

Smt. Gauri Chatterjee, Secretary, Union Ministry of Water Resources is Chairperson of the SSCAC by virtue of being Secretary, MOWR with effect from 01.08.2006. The SSCAC has a full time Secretary of the rank of Chief Engineer belonging to the Central Water Engineering (Group-A) Service to head the Organisation having headquarter at Vadodara. During the year 2006-2007, Shri A.D Bhardwaj held the regular charge of Secretary of SSCAC upto December 2006 and Shri K.R. Joshi held the post as additional charge for the balance period.

The Organisation chart of SSCAC Secretariat as on 31/03/2007 is given in Annex-V.

3.2 SUPPORTING STAFF

The Secretariat of SSCAC, being of temporary status, has no provision for its own cadre. While the Group-A posts are filled by officers from the Central Water Engineering (Group-A) Cadre, all other posts, except one post of Chowkidar, are filled by persons taken on deputation from the departments of States/Central Government or from its undertakings with preference given to officials from party States i.e. Gujarat, Madhya Pradesh, Maharashtra and Rajasthan. The Narmada Control Authority (NCA) has also provided the services of one Stenographer to the SSCAC on loan basis.

3.3 VACANCY POSITION

The Ministry of Water Resources approved creation of 38 numbers of posts for managing the office of Secretary, SSCAC in November 1984. Subsequently, one post each of Assistant Secretary & Assistant Engineer were surrendered in lieu of creation of one post of Deputy Secretary and one post of Stenographer Grade-D, the total number of posts remaining the same. Later on four posts (one each of SAS Accountant, Office Superintendent, UDC and LDC) were surrendered under 10% statutory cut imposed by the Government of India reducing the total number of posts to 34. Out of the 34 sanctioned posts, 17

posts were operated during the year. The details of these posts sanctioned and filled are given in Table 3.1.

Table 3.1

(As on 31/03/2007)

Category (Designation of posts)	Scale	Sanctioned posts			No. of posts Vacant
		Original	Approved for year 2006-07	Filled for year 2006-07	
GROUP – A					
i) Secretary	18,400-500-22,400	1	1	1	-
ii) Deputy Secretary	14,300-400-18,300	1	1	1	-
iii) Asstt. Secretary	12000-375-16500/ 10,000-325-15,200	3	3	3	-
Total...		5	5	5	-
GROUP – B					
i) Assistant Engineer	6500-200-10,500	3	1	1	-
ii) Stenographer Gr. I	5500-175-9000	1	-	-	-
Total...		4	1	1	-
GROUP – C					
i) Draftsman Gr-I	5500-150-9000	1	1	-	1
ii) Upper Div. Clerk	4000-100-6000	7	1	1	-
iii) Stenographer Gr.D	4000-100-6000	3	-	-	-
iv) Lower Div. Clerk	3050-75-3250-80-4590	5	5	5	-
Total...		16	7	6	-
GROUP – D					
i) Daftary	2610-60-3150-65-3540	1	-	-	-
ii) Peon	2550-55-2660-60-3200	6	3	3	-
iii) Safaiwala	2550-55-2660-60-3200	1	-	-	-
iv) Chowkidar	2610-60-3150-65-3540	1	1	1	-
Total...		9	4	4	-
Grand Total...		34	17	16	1

Footnote: (i) One Stenographer Grade D has been posted in the SSCAC on loan basis from the Narmada Control Authority (NCA).

(ii) Typing work of Office Job (Hindi)-Skilled Clerical, Typing work of Office Job (English) – Skilled/Clerical, Driving Govt. Vehicle (highly skilled), File Maintenance Work- Unskilled, Doorkeeper (Unskilled) for 25 days @ 8 hrs/day and Part time Safaiwala-Unskilled for 25 days are being got done on contract basis.

3.4 BUDGETS AND EXPENDITURE

The expenditure incurred by the SSCAC's Secretariat is borne equally by the four party State of Gujarat, Madhya Pradesh, Maharashtra and Rajasthan as per Clause-XIV Sub-Clause 16 (10) of the NWDT Award. Initially, the expenditure is reflected in the union budget under the Ministry of Water Resources as 'Non-Plan' expenditure, which is subsequently reimbursed from the participating States. The total budget provision for SSCAC Secretariat for the year 2006-2007 approved by the Ministry of Water Resources was of Rs. 49.00 lakhs. The actual expenditure for the year 2006-2007 upto the end of March 2007 was Rs.43.77 lakhs.

The position of payment of share cost of SSCAC Secretariat by the party States for the financial year 2006-2007 upto end of March 2007 is given in Table.3.2.

Table 3.2
STATUS OF SHARE COST DUES OF EXPENDITURE OF
SSCAC SECRETARIAT ENDING MARCH 2007

(Amount in Rupees)

S. No	Name of States	Outstanding share cost payable upto 2006-07	Share paid upto 2006-2007	Balance to be paid up to March 2007
1	Gujarat	4377571	3283241	1094330
2	Madhya Pradesh	2275757	2000000	275757
3	Maharashtra	2253821	2384391	(-) 130570
4	Rajasthan	2375321	2505991	(-) 130670
	Total...	11282470	10173623	1108847

(-) indicates excess payment

3.5 PROGRESSIVE USE OF HINDI

In accordance with official language policy of the Government of India, efforts were made by the SSCAC secretariat towards implementation of various provisions of the official languages act 1963 and the rules framed there under. Replies to the letters received in Hindi were sent in Hindi only. The officers and the employees of this office were motivated to do their maximum possible official work in Hindi. SSCAC secretariat has almost all officers and employees trained

for doing work in Hindi. Four meetings of Rajbhasha Karyanvayan Samiti and three workshops on Rajbhasha were organised during the year 2006-2007. Hindi Diwas was celebrated on 15th September in the office premises. In the reporting year, 77% work has been done in Hindi.

3.6 **TRAINING ACTIVITIES**

The officers of SSCAC participated in seminars, workshops, conferences, short-term courses etc. during the year 2006-07. The details of participation are given in Table 3.3.

Table 3.3

Sr. No.	Name & Designation	Programme	Place	Date
1.	Shri Rajesh Kumar, Assistant Secretary	Hindi Workshop	Solan (H.P)	26th –28th April, 2006

3.7 **VIGILANCE AND DISCIPLINARY CASES**

Shri Janardhana Babu R., Deputy Secretary was Vigilance Officer during the year. All officers have submitted the Annual Property Returns in time. No vigilance and/or disciplinary case concerning officers and staff received or pending in SSCAC during the year. The Vigilance Week from 6th November 2006 to 10th November 2006 was celebrated in SSCAC office. Posters and banners were placed in the public building and the pledge was taken by all officers and staff.

3.8 **REDRESSAL OF PUBLIC AND STAFF GRIEVANCES**

Shri Janardhana Babu R. was nominated as Director (Public and Staff Grievance) for SSCAC. No public grievance case was received during the year. One staff grievance case was received during the reporting period and is being addressed to CWC, New Delhi for redressal.

3.9 **WELFARE OF SC/ST STAFF**

For welfare of SC/ST, Shri Janardhana Babu R., Deputy Secretary was appointed as Liaison Officer of SSCAC during the year. No complaint / grievance case was received during the year.

3.10 QUAMI EKTA WEEK

SSCAC Secretariat celebrated Quami Ekta Week from 19th to 25th November 2006. During this week, all staff of SSCAC were administered the “National Integration Pledge.” Bilingual Posters displaying the message of Quami Ekta were displayed in the office premises.

3.11 PERSONS WITH DISABILITIES

SSCAC is a temporary organization created to perform the supervisory function over the construction of Sardar Sarovar Project and has a very small secretarial set-up. All Group A post are encadred in CWES (Group-A) service and these posts are filled with officers from Ministry of Water Resources/Central Water Commission on transfer basis and the Group B, C and D posts are filled with the persons from the State/Central Govt. on deputation basis. While selecting the candidate on deputation, preference is given to SC/ST/OBC/Woman/Handicapped persons. No budget provision has been earmarked separately for the benefit of persons with disabilities.

3.12 COMPUTERISATION

In the Secretariat all the officers have been provided computer on their desk. The office work is extensively automated. The office is having its own website “www.sscac.gov.in”.

3.13 RIGHT TO INFORMATION ACT

The information under RTI Act, 2005 of this office is made available on the official website www.sscac.gov.in with effect from October 2005. Shri A.D.Bhardwaj, Secretary was designated as Appellate Authority of SSCAC and Shri K.K.Saha, Assistant Secretary was nominated as Public Information Officer of SSCAC during the year under report.

3.14 CITIZEN’S CHARTER

The Citizen’s Charter of this office has been uploaded on official website www.sscac.gov.in during the year.

ORIGINAL CONSTITUTION OF SSCAC
(PUBLISHED IN THE GAZETTE OF INDIA, PART-I, SECTION-I, NO.39.
DATED 27TH SEPTEMBER, 1980)

No.22/7/80-P-I,
Government of India,
Ministry of Irrigation

New Delhi, the 4th September, 1980.

RESOLUTION

The Water dispute regarding the inter-State river Narmada and the river valley thereof, between the State of Gujarat, Madhya Pradesh, Maharashtra and Rajasthan was referred for adjudication to the Narmada Water Disputes Tribunal constituted by the Government of India in October, 1969 under the Inter-State Water Dispute Act, 1956. The Tribunal submitted its further and final report to the Government of India in December 1979. As required under Section 6 of the Act, the Government of India published the decision of the Tribunal in the official Gazette on 12th December 1979, whereupon the decision became final and binding on the parties to the dispute. In its final order, the Tribunal has, inter alia, directed setting up of an Inter-State Administrative Authority to be called Narmada Control Authority for the purpose of securing compliance with and implementation of decisions and directions of the Tribunal. The Tribunal has further directed the setting up of a Review Committee, which on the application of any Party State may review any decision of the Authority. While observing that the four party States have financial Commitments in respect of Unit-I Dam and Appurtenant works of the Sardar Sarovar Project and three of them, namely, Gujarat, Maharashtra and Madhya Pradesh have such commitment in respect of Unit-III (Power Complex of the Sardar Sarovar Project), the Tribunal has in addition considered it desirable and necessary that a Construction Advisory Committee should be constituted for ensuring efficient, economical and early execution of Unit I and III of the Project.

In pursuance of the above decision of the Narmada Water Disputes Tribunal, the Sardar Sarovar Construction Advisory Committee is hereby constituted, as under:

2. The Sardar Sarovar Construction Advisory Committee will consist of the following :-
- i) The Secretary to the Government of India, in charge of Irrigation -Chairman
 - ii) Chairman, Central Water Commission (CWC) or a Member of the CWC representing him in case the Chairman is unable to attend a meeting. -Member
 - iii) Chairman, Central Electricity Authority (CEA) or a Member of the CEA representing him in case the Chairman is unable to attend a meeting. -Member
 - iv) Chairman, Narmada Control Authority (NCA) or its Independent Member representing Chairman in case the Chairman is unable to attend a meeting. -Member
 - v) Joint Secretary (Financial Adviser) in the Ministry of Irrigation. -Member
 - vi) Secretaries in charge of Finance Department of Government of Madhya Pradesh, Gujarat, Maharashtra and Rajasthan. -Members
 - vii) Secretaries in charge of Irrigation Department of Government of Gujarat and Rajasthan. -Members
 - viii) Secretaries in charge of Power Department of Madhya Pradesh, Maharashtra and Gujarat. -Members
 - ix) Secretaries in charge of Revenue Department or any other Department, concerned with land acquisition of Madhya Pradesh, Maharashtra & Gujarat. -Members
 - x) General Manager or Chief Engineers of Gujarat in charge of the project and Chief Engineers of Madhya Pradesh, Maharashtra and Rajasthan concerned with the project. -Members
 - xi) Chairman, State Electricity Board of Madhya Pradesh, Maharashtra and Gujarat. -Members
 - xii) Financial Adviser, Sardar Sarovar Project. -Member
 - xiii) Secretary (to be appointed by the Government of India) -Secretary

The Chairman may invite any other person to attend any meeting of the Advisory Committee, should it be considered necessary for the proper discharge by the Committee of its functions.

3. The Sardar Sarovar Construction Advisory Committee shall :
 - i) scrutinise the project estimates prepared for works mentioned in paragraph 1 above, advise necessary modifications and recommend the estimates for the administrative approval of the concerned Governments.
 - ii) examine and make recommendation on all proposals pertaining to technical features and designs as may be referred to it by any of the party States and where necessary consult experts for the purpose ;
 - iii) examine and make recommendation on the programme of construction of different parts of the project in a co-ordinated manner, keeping in view the funds available, the economics of the project and the desirability of obtaining quick results;
 - iv) examine the requirement of funds for the construction of works and other purposes according to the approved programme and make necessary recommendations;
 - v) examine and recommend, from time to time, the delegation of such powers, both technical and financial, as it may deem necessary for the efficient execution of the project, to the officers engaged in the execution of the works on the project;
 - vi) examine and, where necessary, recommend specifications for various classes of work;
 - vii) examine and make recommendation on all sub-estimates and contracts, the cost of which exceeds the powers of sanction of the General Manager/Chief Engineers;
 - viii) review progress reports, both for works and expenditure from the General Manager/Chief Engineers and recommend, where necessary, steps to be taken to expedite the work.
4. The recommendations of the Construction Advisory Committee shall be conveyed to the Governments concerned by the Committee and copies sent to the Review Committee and Narmada Control Authority for information.
5. The recommendations of the Construction Advisory Committee shall normally be accepted by the State Governments concerned. In the event of any disagreement, the matter shall be referred to the Review Committee and the decision of the Review Committee shall be final and binding on all the concerned States.

In all matters relating to the construction of the Sardar Sarovar and appurtenant works (Unit-I), Power House and generating machinery (Unit-III) and Transmission lines to feed power to Madhya Pradesh, Maharashtra and Gujarat upto the next sub-station in each case, the Narmada Control Authority will carry out only such functions as do not specifically devolve upon the Construction Advisory Committee.

6. The Construction Advisory Committee will be subject to dissolution after three years of the completion of construction of Unit-I and Unit-III of the Sardar Sarovar Project. The post construction management of Unit-I and Unit-III will be by Gujarat under the supervision of the Narmada Control Authority.
7. The headquarters of the Construction Advisory Committee shall be at Gandhinagar in Gujarat.
8. The Construction Advisory Committee will frame rules regarding procedure and delegation of power for the purpose of carrying out its business.
9. The expenditure of the Construction Advisory Committee will be borne by the four Party States of Madhya Pradesh, Gujarat, Maharashtra and Rajasthan equally.

Sd/-
(C.C. PATEL)
Secretary to the Government of India.

ORDER

Ordered that this Resolution be communicated to all the State Governments, Ministries/ Departments of the Government of India, the Comptroller and Auditor General of India, Prime Minister's Office, President's Secretariat and Planning Commission.

Ordered also that the Resolution be published in the Gazette of India and that the State Governments be requested to publish it in the State Gazette for general information.

Sd/-
(C.C. PATEL)
Secretary to the Government of India.

ANNEX-I(B)

(TO BE PUBLISHED IN THE GAZETTE OF INDIA, PART I, SECTION-I)

No.22/22/80-P-I,
Government of India,
Ministry of Irrigation

New Delhi, the 27th December, 1980.

RESOLUTION

In suppression of para 7 of this Ministry's Resolution No.22/7/80-P.I dated the 4th September, 1980, the head-quarters of the Sardar Sarovar Construction Advisory Committee shall be at Baroda in Gujarat instead of Gandhinagar in Gujarat.

Sd/-
(C.C. Patel)
Secretary

ORDER

Ordered that this Resolution be communicated to all the State Governments, Ministries/Departments of the Government of India, the Comptroller and Auditor General of India, Prime Minister's Office, President's Secretariat and Planning Commission.

Ordered also that the Resolution be published in the Gazette of India and that the State Governments be requested to publish it in the State Gazette for general information.

Sd/-
(C.C. Patel)
Secretary

FIRST AMENDMENT

TO BE PUBLISHED IN PART-I SECTION-I OF THE GAZETTE OF INDIA

Government of India,
Ministry of Water Resources

New Delhi, the 17th April, 1986.

R E S O L U T I O N

No.22/7/80/P.I. In pursuance of the decision of the Narmada Water Disputes Tribunal, the Sardar Sarovar Construction Advisory Committee was constituted vide erstwhile Ministry of Irrigation's Resolution No.22/7/80-P.I. dated the 4th September, 1980. Para.2 of the Resolution giving composition of the Sardar Sarovar Construction Advisory Committee is amended as under :

- a) For existing entries (i) & (v) the following shall be substituted :
- i) The Secretary to the Government of India
Incharge of the Water Resources. Chairman
 - v) The Financial Adviser in the Ministry of
Water Resources. Member
- b) For the existing concluding portion, the following shall be substituted :
“ The Chairman may co-opt any other Members”.

O R D E R

Ordered that this Resolution be communicated to all the State Governments, Ministries/Departments of the Government of India, the Comptroller and Auditor General of India, Prime Minister's Office, President's Secretariat and Planning Commission.

Ordered also that the Resolution be published in the Gazette of India and that the State Governments be requested to publish it in the State Gazette for General information.

Sd/-
(B.Sen)
Joint Secretary to the Government of India.

ANNEX-I(D)

SECOND AMENDMENT

No.23/7/80-P.I
Government of India,
Ministry of Water Resources

Shram Shakti Bhavan, Rafi Marg,
New Delhi, the 17th April, 1986.

OFFICE MEMORANDUM

Sub :- Sardar Sarovar Construction Advisory Committee :
Co-opting Member for the Meetings of...

In pursuance of the decision of the Narmada Water Disputes Tribunal, the Sardar Sarovar Construction Advisory Committee was set up by the Government of India as per erstwhile Ministry of Irrigation's Resolution No.22/7/80-P.I, dated 4th September, 1980 (copy enclosed). The composition has been further amended as per resolution No.22/7/80-P.I., dated 17th April, 1986, while inter-alia provides that the Chairman of the Committee may co-opt any other Member. Accordingly Secretary, Ministry of Water Resources who is the Chairman of the Sardar Sarovar Construction Advisory Committee hereby co-opts the Secretary to the Government of India, Department of Power or his nominee as Member of the Sardar Sarovar Construction Advisory Committee.

Encl : As above.

Sd/-
(B.Sen)
Joint Secretary to the Government of India.

The Ministry of Energy,
(Deptt. of Power),
Shram Shakti Bhavan, New Delhi.

Copy forwarded to :

- 1) Chairman and Members (including Secretary, Deptt. of Power), of SSCAC.
- 2) The Secretary, Sardar Sarovar Construction Advisory Committee, 4th floor, Narmada Bhavan, Indira Avenue, Vadodara (Gujarat).

Sd/-
(B.Sen)
Joint Secretary to the Government of India.

THIRD AMENDMENT
TO BE PUBLISHED IN PART-I SEC.I OF THE GAZETTE OF INDIA

Government of India
Ministry of Water Resources

New Delhi, the 27th August, 1987.

RESOLUTION

No.22/7/80-P.I. In pursuance of the decision of the Narmada Water Disputes Tribunal, the Sardar Sarovar Construction Advisory Committee was constituted vide erstwhile Ministry of Irrigation's Resolution No.22/7/80-P.I, dated the 4th September, 1980 and amended further vide resolution of even number of 17th April, 1986. Para 2 of the Resolution giving composition of the Sardar Sarovar Construction Advisory Committee, is further amended as under :

For existing entries at Sl. No. (iv) and (vi) to (xi), the following shall be substituted

- | | | |
|-------|--|----------|
| iv) | Executive Member, Narmada Control Authority (NCA) or its independent Member representing Executive Member in case the Executive Member is unable to attend the meeting. | -Member |
| vi) | Secretaries in charge of Finance Department of Governments of Madhya Pradesh, Gujarat, Maharashtra and Rajasthan or their nominees. | -Members |
| vii) | Secretaries in charge of Irrigation Department of Governments of Gujarat and Rajasthan or their nominees. | -Members |
| viii) | Secretaries in charge of Power Department of Madhya Pradesh, Maharashtra and Gujarat or their nominees. | -Members |
| ix) | Secretaries in charge of Revenue Department, or any other Department concerned with land acquisition, of Madhya Pradesh, Maharashtra and Gujarat or their nominees. | -Members |
| x) | General Managers or Chief Engineers of Gujarat in charge of the project and Chief Engineers of Madhya Pradesh, Maharashtra and Rajasthan concerned with the project or their nominees. | -Members |
| xi) | Chairman, State Electricity Board of Madhya Pradesh, Maharashtra and Gujarat or his nominees. | -Members |

ORDER

Ordered that this Resolution be communicated to all the State Governments, Ministries/Departments of the Government of India, the Comptroller and Auditor General of India, Prime Minister's Office, President's Secretariat and Planning Commission.

Ordered also that the Resolution be published in the Gazette of India and that the State Governments be requested to publish it in the State Gazette for General information.

Sd/-
(RAMESH CHANDRA)
COMMISSIONER (PROJECTS)

**Government of India
Ministry of Irrigation**

SARDAR SAROVAR CONSTRUCTION ADVISORY COMMITTEE

CONDUCT OF BUSINESS AND PROCEDURE RULES, 1981

(As approved by the Sardar Sarovar Construction Advisory Committee in its third meeting and subsequently amended during its 11th meeting, 14th meeting and 67th meeting)

In exercise of the powers conferred on it by paragraph 8 of Government of India, Irrigation Department, Resolution No.22/7/80-P-I., dated 4th September 1980, the following rules are framed for the conduct of the business and procedure of the Sardar Sarovar Construction Advisory Committee.

1. **Short Title** :

These rules may be called the Sardar Sarovar Construction Advisory Committee (Conduct of Business and Procedure) Rules, 1981.

2. **Definitions**:

In these rules, unless there is anything repugnant in the context

- i) "Committee" means the Sardar Sarovar Construction Advisory Committee.
- ii) "Chairman" means the Chairman of the Sardar Sarovar Construction Advisory Committee.
- iii) "Member" means the member of the Committee duly appointed in accordance with para (2) a Ministry of Irrigation Resolution dated 04.09.1980 cited above.
- iv) "Secretary" means the Secretary of the Sardar Sarovar Construction Advisory Committee, appointed by Government of India.
- v) "Financial Adviser" means the Financial Adviser of the Sardar Sarovar Project.
- vi) "Chief Engineer" means a Chief Engineer associated with the works of the Sardar Sarovar Project (Unit-I & III) appointed by State Government or Electricity Board of Gujarat, Madhya Pradesh and Maharashtra.
- vii) "Project" means Sardar Sarovar Project (Unit-I & III).

viii) Narmada Control Authority and the Review Committee means the Narmada Control Authority and the Review Committee appointed by the Government of India in terms of the Narmada Water Disputes Tribunal Award.

3. **Frequency of meetings** :

- i) The meetings of the Committee shall normally be held once in three months.
- ii) The Chairman may, however, at his discretion, call a meeting at any time to transact urgent business

4. **Quorum** :

Any ten Members of the Committee shall form a quorum for a meeting. In case, however, any of the party States so desires, a particular item concerning two or more States will only be discussed in a meeting where at least one Member each from all the States and a representative of the Central Government is present – provided that if the particular item cannot be disposed of at two successive meetings owing to the absence of one or more Members from the Party States, then it shall be disposed of in the normal course.

5. **Notice of meetings, agenda, etc** :

- i) The meetings shall be fixed and the agenda thereof shall be finalized by the Secretary under the orders of the Chairman.
- ii) a) A notice of a meeting mentioning the agenda items, time and venue of the meeting and the agenda notes shall be issued in writing 15 days in advance of the meeting to all the members as well as to any other person whom the Chairman may direct to be invited for the meeting. However, for meeting convened to transact urgent business under clause 3 (ii) of these Rules, the notice period for the meeting shall be at the discretion of the Chairman SSCAC.
- b) Notwithstanding that any members have not received the agenda notes the meeting may proceed to transact the business on the agenda.

- c) Any urgent item, not included in the agenda circulated to the members may also be taken up for consideration in a meeting of the committee with the permission of the Chairman.
 - d) The review of the progress of the works of Unit-I & III of Sardar Sarovar Project shall form an item of the agenda of every ordinary meeting of the committee.
 - e) All audit notes having a bearing on the decisions taken in the Committee about the Sardar Sarovar Project Units-I & III as well as those pertaining to the working of the Committee's office shall after their receipt be placed before the next meeting of the Committee.
- iii) All references requiring consideration of the Committee will be addressed to the Secretary. Such reference will be in the form of self-contained notes.
 - iv) The Secretary, after due examination of the proposals in consultation with the Financial Adviser when financial issues are involved, will, prepare a note for the consideration of the Committee. The note will indicate the technical, financial and administrative implications of the proposals and bring out the point or points on which the Committee's specific decision or recommendation is sought. The Secretary's note will also include a copy of the self contained note received as under item (iii) above.
 - v) Views of the Financial Adviser shall be circulated along with the Agenda note, wherever financial implications are involved.

6. **President of meeting** :

The Chairman of the Committee, when present, will preside over all the meetings of the Committee. In his absence Chairman, Central Water Commission failing which the Chairman, Central Electricity Authority, failing which the Chairman, Narmada Control Authority, shall preside over a meeting of the Committee.

7. **Business to be transacted at a meeting** :

- i) Except with the express permission of the presiding authority, no business, which is not entered in the Agenda, shall be transacted at any meeting.

- ii) Any member who desires at any meeting to bring forward any business supplementary to the Agenda circulated in the notice for such meeting shall give a written notice of the same to the Secretary at least seven clear days before the date fixed for the meeting and the Secretary shall seek the orders of the Chairman for distributing copies thereof to the other members at the time of the meeting.
- iii) Notwithstanding anything contained in the Rules 5 & 7 above, any matter on which the decision of the Committee is urgently required and which has not been included in the Agenda of the meeting or circulated in the meeting as a supplementary agenda item may, with the approval of the Chairman, be placed before the meeting for its consideration and decision.
- iv) Order of Business : Except with the permission of the presiding authority no business shall be transacted at any meeting otherwise than in the Order in which it is entered in the agenda/supplementary agenda for that meeting.

8. **Decision of the Committee:**

All issues at a meeting shall be decided by consensus as far as possible and failing that by a majority of the Members present through voting each member having one vote. In the case of equality of votes, the person presiding shall have a casting vote.

9. **Minutes:**

The decisions or recommendations of the Committee shall be incorporated in the draft minutes of the proceedings of the Committee to be drawn up by the Secretary and got approved from the Chairman. Copies of the draft minutes shall be sent to the members of the Committee inviting their comments thereon. The members may send their comments thereon. The members may send their comments on the draft minutes within 21 days along with the specific suggestions for the modifications in the draft minutes. With the permission of the Chairman these suggestions will be circulated with the agenda for the next meeting of the Committee in which the draft minutes are to be taken up for confirmation.

10. Association of persons with Committee :

- i) The Committee may associate with itself any person possessing special knowledge or experience for advising it or attending to any work on its behalf for the purpose of efficient performance of any of its functions.
- ii) Any persons so associated, who is required to attend a meeting of the Committee may be paid special fees and allowances as may be fixed by the Committee in each case. In order to save time, it is suggested that a schedule of fees and allowance may be drawn up by a sub-group of the Committee. The actual application of the schedule would be left to the Committee in each case.
- iii) The person so associated or advising the Committee may take part in the discussions of the Committee relevant to the purpose for which he is associated or consulted, but he shall not have the right to vote at a meeting or take part in the discussions relating to other purposes.

11. Changes in incumbencies:

In the event of a change in the incumbency of any post included in the membership list of this Committee, the concerned State or Central Government will intimate the change to the Secretary of the Committee as early as possible and in any case before the new incumbent participates in the next meeting of the Committee.

12. Constitution of Sub-Group:

The Committee may, at its discretion, set up one or more Sub-Groups (Comprising Members of the Committee) for dealing with specific issues and delegate to the Sub-Groups such functions and power as it may deem fit. For the purpose of operation of this clause, Member of the CWC who is an alternative member of the SSCAC vice Chairman, CWC and Member of the CEA who is an alternative Member of SSCAC vice Chairman, CEA shall be treated as Members of the Committees defined under clause 2 (iii) of these Rules. The Secretary of the Committee would also be the Secretary of each Sub-group.

The Sub-group may associate with itself any person possessing special knowledge or experience for assisting or advising the Sub-group or attending to any work on its behalf for the purpose of efficient performance of any of the functions assigned to the Sub-group. Any person so associated may be paid

special fees and allowances as may be fixed by the Sub-group in accordance with the powers delegated to it.

Each Sub-group may meet at such places and at such times as may be determined by the Chairman of the respective Sub-groups.

The recommendations of the Sub-group would be placed before the Committee for ratification/decision at its next meeting.

13. **Action on the Committee's decisions :**

The recommendations of the Committee shall be communicated to the State and Central Governments and the Narmada Control Authority for appropriate action.

14. **Procedure in case of disagreement :**

Any disagreement with the decision of the Committee shall be communicated in writing by the disagreeing member or members within 7 days of the meeting in which the minutes of the concerned previous meeting are confirmed elucidating the grounds for not accepting the decision of the Committee. If the Committee after going through the aforesaid elucidation does not revise the decision in its next meeting and the disagreement still persists, the member State shall then take up the matter with the Review Committee as provided in para 5 of Government of India's Resolution No. 22/7/80-P.I, dated 4th September 1980, constituting the committee.

15. **Emergency Procedure :**

- i) If, for any reason, it is not practicable to convene an ordinary meeting of the Committee as per rule 3 foregoing, and a decision on the proposal is required urgently, a Member may make a reference to the Chairman of the Committee bringing out the urgency.
- ii) On receipt of such a reference, the Secretary will prepare a note and, together with the comments of the Financial Adviser, will submit the same to the Chairman for orders.
- iii) All orders passed by the Chairman under the procedure mentioned in sub-rule (ii) above will be placed before the next meeting of the Committee for confirmation.

16. General Procedure :

- i) The Financial Adviser shall prepare and submit for the consideration of the Committee an annual financial review of the project for which the Chief Engineers of the Project shall supply all relevant information.
- ii) Copies of all sanctions, tenders, and financial decisions pertaining to the work of Unit-I & III of Sardar Sarovar Project taken by the State Governments shall be supplied to the office of the Committee for purpose of record and follow-up action, if any. The Financial Adviser shall, on behalf of the Committee, scrutinize all such sanctions and financial transactions and bring to the notice of the Committee any specific points as he may deem fit by initiating a self-contained agenda note. The Financial Adviser will be entitled to call for such information from the concerned State Governments or officers under the State Government on matters that are to come up before the Committee.
- iii) The Committee shall consider and recommend from time to time, to the State Governments reimbursements to be made by one State for the expenditure incurred by the other State on work components, the cost of which is to be shared by the party States in accordance with the Decision of the Narmada Water Dispute Tribunal.

17. General Correspondence and office procedure :

- i) All routine correspondence on behalf of the Committee will be carried out by the Secretary.
- ii) The Secretary of the Committee will be the administrative Head of the Establishment of the Committee and shall be Chief Executive Officer of the Committee.
- iii) The Office of the Committee shall follow all financial and fundamental procedures, Contingent Expenditure Rules, etc. prescribed by the Government of India from time to time, till such time separate rules are framed by the Committee.

ANNEX – III

**DETAILS OF MEETINGS OTHER THAN SSCAC/PSC
ATTENDED BY SSCAC OFFICIALS**

FROM APRIL 2006 TO MARCH 2007

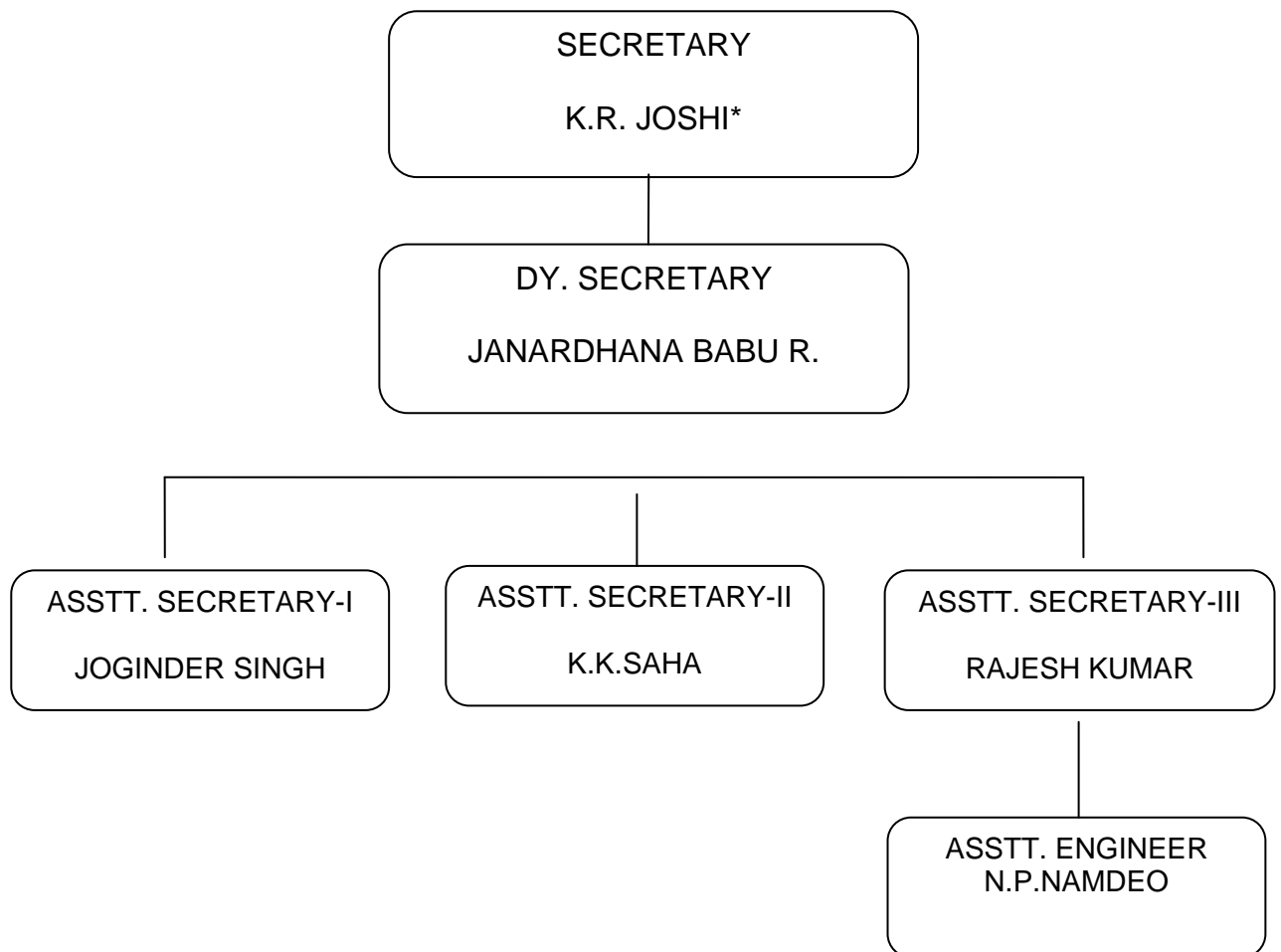
Sr.No	Meeting	Date (Place)	Attended by
1	Narmada Control Authority		
	1) 77 th Meeting	13/11/2006 (New Delhi)	Shri Janardhana Babu R., Dy. Secretary
2	R & R Sub-Group		
	1) 64 th Meeting	05/04/2006 (New Delhi)	Shri A.D Bhardwaj, Secretary
	2) 65 th Meeting	18/05/2006 (New Delhi)	Shri A.D. Bhardwaj, Secretary
	3) 66 th Meeting	01/08/2006 (New Delhi)	Shri A.D. Bhardwaj, Secretary
	4) 67 th Meeting	12/10/2006 (New Delhi)	Shri Janardhana Babu R., Dy. Secretary
	5) 68 th Meeting	13/02/2007 (New Delhi)	Shri Janardhana Babu R., Dy. Secretary
3	Narmada Main Canal Sub-Committee		
	20 th Meeting	28/11/2006 (Indore)	
	21 st Meeting	20/02/2007 (Vadodara)	Shri K.R.Joshi, Secretary
4	Environment Sub-Group		
	43 rd Meeting	27/11/2006 (New Delhi)	Shri Janardhana Babu R., Dy. Secretary
5	Power Sub-Committee		
	39 th Meeting	18/08/2006 (New Delhi)	Shri Janardhana Babu R., Dy. Secretary

Sr.No	Meeting	Date (Place)	Attended by
	40 th Meeting	19/02/2007 (Kevadia)	Shri Rajesh Kumar, Asstt. Secretary
6	Sardar Sarovar Reservoir Regulation Committee, NCA		
	1) 4 th Meeting	04/04/2006 (New Delhi)	Shri A.D. Bhardwaj, Secretary
	2) 5 th Meeting	31/07/2006 (New Delhi)	Shri A.D. Bhardwaj, Secretary
	3) 6 th Meeting	12/01/2007 (New Delhi)	Shri K.R.Joshi, Secretary
	4) 7 th Meeting	10/03/2007 (New Delhi)	Shri Janardhana Babu R., Dy. Secretary
7	Empowered Committee for Insurance Coverage of SSPP		
	1) 1 st Meeting	19/02/2007 (Kevadia)	Shri K.R.Joshi, Secretary Shri Janardhana Babu R., Dy. Secretary Shri Rajesh Kumar, Asstt. Secretary
8	Hydromet Sub Group		
	1) 7 th Meeting	12/01/2007 (New Delhi)	Shri K.R.Joshi, Secretary Shri Janardhana Babu R., Dy. Secretary

ANNEX – IV**VISIT OF VIP'S TO THE SARDAR SAROVAR PROJECT**

Sr. No.	Name and Designation of VIP	Date of Visit
1.	Shri S.B. Deshmukh, H'ble Justice High Court	09.04.2006
2.	Shri Y.R. Meena, H'ble Chief Justice, High Court	14.04.2006
3.	Shri Narottambhai Patel, H'ble Minister	20.04.2006
4.	Shri Surendranath Nayak, H'ble Minister, Orissa	06.05.2006
5.	Shri Chhatrasingh Mori, H'ble Minister	18.05.2006
6.	Shri Ratibhai Sureja, H'ble Minister	10.06.2006
7.	Shri Ramanlal Vora, H'ble Minister	15.06.2006
8.	Smt Anandiben Patel, H'ble Minister	23.06.2006
9.	Shri Vajubhai Vala, H'ble Minister	23.06.2006
10.	Shri Narendra Modi, H'ble Chief Minister, Gujarat	24.06.2006, 31.12.2006
11.	Shri Sundersingh Chauhan, H'ble Minister	27.07.2006
12.	Abhilashakumari, H'ble Justice High Court	29.07.2006
13.	Shri S.M. Janardan, Principal Secretary, Karnataka	05.08.2006
14.	Shri Bhupendrasingh Chudasama, H'ble Minister	22.08.2006
15.	Shri B.N. Nawalavala Member UPSC, Delhi	27.09.2006
16.	Shri A.R. Dave, H'ble Justice, High Court	29.09.2006
17.	Smt. R.M. Doshit, H'ble Justice, High Court	27.10.2006
18.	Shri Kumar Alok, Secretary Govt. of India	09.11.2006
19.	Shri Dineshkumar, Parliament Committee	16.02.2007
20.	Shri Shankarsinh Vaghela, H'ble Central Minister	07.04.2007

**ORGANISATION CHART OF SSCAC SECRETRIAT
(AS ON 31ST MARCH 2007)**



* Shri A.D. Bhardwaj held the post of Secretary upto 7th December 2006 and Shri K.R.Joshi held the post thereafter.

ANNEX – VI**SALIENT FEATURES OF SARDAR SAROVAR PROJECT****I. LOCATION**

State	:	Gujarat
District	:	Narmada
Taluka	:	Rajpipla (Nandod)
River	:	Narmada

II. HYDROLOGY

Watershed area of the river above dam site	:	88000 sq. km. (33970 sq.mile)
Mean annual rainfall	:	1120mm (44.10 inch.)
<u>Annual run-off at dam site</u>		
at 50% dependability	:	4.10 Mha m (33.20 MAF)
at 75% dependability	:	3.36 Mha m (27.22 MAF)
at 90% dependability	:	2.44 Mha m (19.77 MAF)
Designed flood (1 in 1000 years)	:	87000 cumecs (30.7 lakh cusecs)

III. RESERVOIR

Full Reservoir Level (FRL)	:	138.68m (455 ft)
Maximum Water Level (MWL)	:	140.21m (460 ft)
Minimum Draw Down Level (MDDL)	:	110.64m (363 ft)
Normal Tail Water Level (NTWL)	:	25.91m (85 ft)
Gross Storage Capacity	:	0.95 Million ha m (7.70 MAF)
Dead Storage Capacity	:	0.37 Million ha m (2.97 MAF)
Live Storage Capacity	:	0.58 Million ha m (4.73 MAF)
Annual evaporation	:	0.06 Million ha m (0.5 MAF)
Submergence at FRL 138.68m(455 ft)	:	37533 ha

<u>No. of villages affected</u>		<u>Full</u>	<u>Partial</u>
Madhya Pradesh	:	1	191
Maharashtra	:	-	33
Gujarat	:	<u>3</u>	<u>16</u>
Sub Total	:	4	240
Grand Total	:		244

No. of families affected

Madhya Pradesh	:	39369
Maharashtra	:	3995
Gujarat	:	<u>4726</u>
Total		48090

IV. DAM

Type	:	Concrete gravity
Length	:	1210.02 m
Maximum height	:	163.00 m
Top of dam	:	EL 146.5 m
Crest Level	:	EL 121.92 m

Spillways

Max. Discharge Capacity)	:	84949.25 Cumecs (30 lakh cusecs)
Service spillway	:	23 Bays 60 ft (18.30 m) each
Auxiliary spillway	:	7 Bays 60 ft (18.30 m) each

Crest Gates

Type	:	Radial
Size	:	18.30m x 16.76 m (23 Nos.) 18.30m x 18.30 m (7 Nos.)
Construction Sluices at EL. 18.0m	:	2.10m x 2.74 m (10Nos)
River Sluices at EL. 53.00m	:	2.5m x 3.6 m (4 Nos.)

V. POWER INSTALLATION

	<u>RBPH</u>	<u>CHPH</u>
Location	Right Bank	Right Bank
No. of units	6	5
Rated capacity of each unit	200 MW	50 MW
Installed capacity	1200 MW	250 MW
Type of turbines	Francis (Reversible)	Kaplan (Conventional)
Type of Power House	Underground	Surface

VI. CANAL SYSTEM

FSL at head regulator of Main Canal	:	91.45 m (300 ft)
Type of canal	:	Lined contour canal
Length	:	458.41 km upto Gujarat-Rajasthan border and 74 km in Rajasthan
Base width at head reach	:	73.1 m
Base width at Gujarat Rajasthan Border	:	10.3 m
FSD in head reach	:	7.6 m

Maximum Discharge at Head Regulator	:	1132.66 cumecs (40000 cusecs)
Max. Discharge at Gujarat-Rajasthan Border:	:	71 cumecs (2500 cusecs)
Gross Command Area (GCA)	:	34.286 lakh ha - Gujarat 3.00 lakh ha - Rajasthan
Culturable Command Area (CCA)	:	18.419 lakh ha - Gujarat 2.460 lakh ha - Rajasthan
Annual Irrigation	:	17.92 lakh ha - Gujarat 1.51 lakh ha - Rajasthan

VII. IRRIGATION BYE-PASS TUNNEL

No. & Size	:	2 Nos. 5.5 m dia. (circular)
Length of Tunnel	:	190.24 m
C/C distance between two tunnels	:	22 m
Sill level at inlet	:	88.39 m
Crown Level	:	94.89 m
Bed gradient	:	1 in 100
Total discharge capacity of 2 tunnels	:	283.20 cumecs (10000 cusecs) @ Res. level 97.53 m (320 ft.) 424.81 cumecs (15000 cusecs) @ Res. Level 110.64 m (363 ft.)

Gates

Service Gates	:	4 Nos., Sliding Type 2.6 m (W) x 3.9 m (H)
Emergency Gates	:	2. Nos., Fixed Wheel Type 4.32 m (W) x 5.5 m (H)

VIII. COST

(in Rs. Crore)

<u>PRICE LEVELS</u>	<u>1986-87*</u>	<u>1996-97 **</u>	<u>2000-01***</u>
Unit-I (Dam & Appurtenant works)	1019.45	4473.75	6036.78 [^]
Unit-II (Main Canal)	1588.54	4410.00	5216.35
Unit-III (Hydro Power works)	979.95	2184.75	2782.07
Group-IV (Branches & Dist. system)	2818.10	11850.00	14578.17
Total cost of the project	6406.04	22918.50	28613.37

Notes:

- * Full estimated cost at 1986-87 price level has been approved by the Planning Commission.
- ** Only the Unit-I estimate (partly) and Unit-III estimate of 1996-97 price level has been approved by the SSCAC in its 69th meeting held on 29th July 2003.
- *** Unit-I Estimate (3003.57 crore) excluding B-Land (R&R) Cost and Unit-III Estimate has been approved by the SSCAC in its 71st meeting held on 8th September 2004.
- [^] Unit-I cost includes share of Indira Sagar Project (MP) of Rs.464.51 crore @ 17.63% of cost of Unit-I of Indira Sagar Project amounting to Rs. 2634.77 crore
- | | |
|---|--------------------------|
| Break-up of Unit-I Cost | |
| Unit-I (excluding B-land) approved by SSCAC | Rs. 3003.57 crores |
| B-Land (R&R) cost | Rs.3033.21 crores |
| Total | Rs.6036.78 crores |