

B I O - D A T A

Name : Rajendra Kumar Agrawal

Organization : NHPC Ltd.

Designation : General Manager

Academic/ Professional Qualifications:

Sl. No.	Qualification	Institute
1.	PG Diploma in Alternative Dispute Resolution and Conciliation	NALSAR University of Law, Hyderabad.
2.	Diploma in Computers in Office Management	Indira Gandhi National Open University, New Delhi.
3.	M. Tech. in Structural Engineering	Indian Institute of Technology, Mumbai, Maharashtra.
4.	B.E. in Civil Engineering	Malaviya Regional Engineering College, Jaipur, Rajasthan.

Experience:

- The undersigned has experience of Software Development for Structural & Hydraulic Engineering applications and usage of Software Packages for various Engineering Problems
- Execution/ Supervision of Tunneling works, Concrete Dams and Drilling & Grouting works of hydraulic tunnels & dams.
- Contract Management and Examination of various issues of major packages of Hydroelectric Projects and handling of Arbitration cases.
- Finalization of tender documents for works and purchases, their evaluation and placing Orders thereof.
- Presently looking after the Safety aspects of Hydroelectric Power Stations and Projects.

(Rajendra Kumar Agrawal)

B I O - D A T A

NAME : Rajendra Kumar Agrawal

FATHER'S NAME : Shri Ramswaroop Agrawal

DATE OF BIRTH : 10th March' 1963

PRESENT ADDRESS : Block-B, Flat No. 303,
Lake view (Ansal) Apartment,
Shamla Hills, Bhopal-462041

PERMANENT ADDRESS : E-35, Jalvidyut Apartment,
Sector-21C, Part-III,
Faridabad (Haryana).

ACADEMIC/PROFESSIONAL QUALIFICATIONS :

EXAM	SUBJECTS	BOARD/INSTITUTE	YEAR OF PASSING	MARKS OBTAINED	DIVISION
DCO	Diploma in Computers in Office Management	Indira Gandhi National Open University, New Delhi.	1995	LG-B 68.6%	Very Good
M.Tech.	Structural Engineering*	Indian Institute of Technology, Bombay.	1987	8.05 CGPA	First Div.
B.E.	Civil Engineering	Malaviya Regional Engineering College, Jaipur, Rajasthan.	1984	73.4%	First Div. with Hons.
Hr. Sec.	Physics, Chemistry, Maths, English	Secondary Education Board, Rajasthan.	1979	82.0	First Div. with Dist.
Secondary	- do -	- do -	1978	82.0%	- do -

*PROJECT : Thermal Stresses in Fiber Reinforced Plastics Plates by 'Finite Element Method' under the guidance of Dr. Tarun Kant, I.I.T. Bombay India.

SYSTEMS WORKED ON

1.	CYBER 180/830	MAINFRAME	NIC, NEW DELHI
2.	CYBER 170/730	MAINFRAME	NIC, NEW DELHI
3.	CYBER 170/740	MAINFRAME	IIT, BOMBAY
4.	NEC-1000	MAINFRAME	NIC, NEW DELHI
5.	CAD WORKSTATION		NHPC, NEW DELHI
6.	PC-XTs/ATs		NHPC, NEW DELHI
7.	SPECTRUM/7	MICROCOMPUTER	NHPC, NEW DELHI

LANGUAGES AND SOFTWARES WORKED ON

1. FORTRAN 77
2. BASIC
3. SEASAM-80
4. DP-2D (Drafting Package)
5. Lotus 1-2-3, SoftCALC, dBASE III Plus, SoftBASE , Wordstar, Softword, Words, Power Point, Excel
6. STADD-III
7. AutoCAD

EXPERIENCE

Design & Engineering

Presently working as Deputy Manager (Civil) in Design Division (Computer Cell) in National Hydroelectric Power Corporation Limited (A Government of India Enterprise), New Delhi, since July 1996. I joined this organization in December 1987 as Probationary executive (Civil). Job responsibilities mainly comprise software development for structural and hydraulic engineering applications and usage of software packages for various engineering problems as described below :

- Dynamic Analysis of concrete gravity dam of Rangit HE Project with modal superposition, forced response analysis in time domain using the Finite Element Software package SESAM'80 in National Informatics Center, New Delhi, on CYBER-830 Mainframe System.
- Static Analysis of gravity dam of Rangit HE Project using the Finite Element Software package SESAM'80 in National Informatics Centre, New Delhi, on CYBER-830 Mainframe System.
- Dynamic Analysis of concrete gravity dam with Response Spectrum Method using the FEM software package STAAD-III.
- Static Analysis of concrete gravity dam using the FEM software package STAAD-III.

- Development and review the program for plane frame analysis and development of stiffness matrix for rectangular tapered members.
- Stability analysis of gravity dam as per IS code.
- Stability analysis of earth dam as per IS code.
- Estimation of head losses in water conductor system.
- Detailed Hydraulic Transient Analysis of water conductor system including downstream water conductor system and optimization of lower expansion gallery and upper pond volumes for Nathpa Jhakri Power Project.
- Detailed Hydraulic Transient Analysis of water conductor system of Dulhasti, Rangit, Loktak, Uri-I & Dhauliganga HE Projects.
- Headrace Tunnel diameter optimization studies.
- Development for estimation of economic diameter of hydraulic
- Energy generation/Power potential studies of Bairasiul/Tankapur and Dulhasti HE Projects.
- Reservoir operation studies for finding water availability, area submergence and estimation of river basis power potential.
- Reservoir flood routing studies of Chamera HE Project.
- Back water studies for power channel and Tail race channel of Tanakpur HE Project.
- Back water studies for diversion tunnel and open channel system for different discharges to estimate the upstream water levels to decide the coffer dam height.
- Calculation of location of hydraulic jump and their water profiles.
- Gate operation scheme for reservoir filling.
- Economic diameter studies of penstocks.
- Development of program for forecasting of opening of under sluices and spillways/barrage gates depending on rate of water inflow and rate of water level rise/depletion in reservoir.
- Technical checking of estimates for major & minor civil engineering works.

- Training of officials in development and usage of computer programs and training of Draftsman to use the Computer Aided Drafting Software 'DP 2D'.
- Documentation of computer programs and preparation of users manuals.
- Management of day-to-day maintenance of in house computer systems.
- Reconnaissance, preliminary and detailed survey works of road and colony etc.
- Preparation of estimates of access paths, temporary residential and official buildings etc.
- Hydraulic Transient Studies of Power Channel Tanakpur HE Project.
- Preparation of tender drawings of inlet & outlet structure and concrete lining of Diversion tunnel of Dhauliganga HE Project.
- Preparation of design briefs/reports and Design and analysis of inlet & outlet structures and concrete lining of Diversion tunnel of Dhauliganga HE Project.
- Preparation of plan & L-section excavation plan, sections of Diversion tunnel inlet structure.

❖ **Dulhasti HE Project (July' 2000 to May' 2006)**

a) Contract & Cost Complex

- i) Preparation of Revised Cost Estimate of the project. Preparation of Revised schedule for balance works of the Project.
- ii) Compilation of daily, fortnightly, monthly, quarterly progress and CPDB reports.
- iii) Technical scrutiny of cost estimates.
- iv) Executive Assistant to General Manager, Dulhasti HE Project in day to day official correspondences and in operation and management of contracts with French consortium (i.e. M/s COMELEX, M/s ALSTOM, M/s SEITP & M/s COB) and M/s JSA-JV who is executing the balance Civil works.
- v) Looking after the Networking, MMS and other financial packages, repair & maintenance and up-keeping of computers of all complexes of the project.
- vi) Preparation of Annual Plan etc.

b) Administration and Co-ordination Complex

- i) Dealing with general administrative matters of the complex and co-ordination with other complexes of the project.
- ii) Security matters including liasioning and correspondence with CISF.
- iii) Public Relation and liasioning with local administration.
- iv) Dealing with land acquisition cases.
- v) Administration control of pool vehicles, guesthouse etc.
- vi) Other administrative matters as assigned by HOP from time to time.

c) Dul Dam Complex

- i) Execution/supervision of HRT Excavation & concrete lining of TBM/DBM excavated HRT and Desilting Basin and Concrete lining of Other Hydraulic structures.
- ii) Straightening of HRT alignment at RD \pm 600m & \pm 5300m (from D/s) and shear zone treatment.
- iii) Core drilling, water testing and primary, secondary, tertiary & quarnary grouting of the holes for dam curtain and drilling and interface/contract grouting for dam.
- iv) Drilling & grouting for underground works like Intake Tunnels, Gate Shaft, Desilting basin etc. and cavity grouting of HRT lining
- v) Supervision of hill slope treatment by way of shotcreting, reservoir rim treatment works, cavity filling, road works at dam site like construction of retaining walls, breast walls, soling, Metalling and premixing etc. Running and maintenance of Dul/Tamruchie colony, Transit camp etc. Dul site.

❖ NHDC Ltd. (From May' 2006 to till date)

- 1. Finalization of tender documents, coordination with end-user, Finance & other agencies and monitoring of tendering from Publishing of NIT in news paper/corporation website to approval for award **of work** and signing of Agreement thereafter.
- 2. Finalization of tender document **for purchases** pertaining to C.O. & cases of project falling within the delegated power of Corporate Office and coordination with end-user, Finance & other agencies and monitoring of tendering from Publishing of NIT in news paper/Corporation website to approval and placing Supply Order thereof.

3. Contract Management/examination of various issues of major packages of Indira Sagar & Omkareshwar Projects awarded from Corporate Office/including vetting/preparation of Board Agenda Notes.
- i) Examination of case of-
 - Back Water Studies carried out by M/s JAL, beyond the Scope of Contract –1.
 - Price Escalation, time extension and liquidated damages in respect of HM Works of ISP awarded to M/s TSPL
 - Recovery of Cost of Margin Money and Other Charges of LC in respect of Contract 2, 3 & 4 of Omkareshwar Project.
 - ii) Finalization of the case of extra items and miscellaneous claims of HM Works of M/s TSPL of Indira Sagar Project.
 - iii) Reply to CTE's queries and verification/ authentication of credentials submitted by the L1 contractor/ subcontractor in respect to award of works of Omkareshwar Project.
 - iv) Preparation of Board Agenda note for-
 - Grant of Time Extension for HM Equipments of ISP awarded to M/s TSPL.
 - Extension of Performance Bank Guarantee and tests at FRL for HM equipments of ISP awarded to TPE.
 - v) Effective implementation of ISO: 9000 & related activities in the Division.

4. **Handling of Arbitration cases**

- (i) Claim for cost due to increase in Seismic Coefficient for design of Concrete Dam pertaining to Contract-1 of Omkareshwar Project (8x65 MW) in all respect i.e. examination of Statement of Claim, Rejoinder to Statement of Defense etc. and preparation/ finalization of Additional Statement of Defense, issues for arguments etc. & communication with all concerns and preparation of arguments in consultation with Sr. Advocates, Project authorities, Design & Engineering and law Division etc.
- (ii) Claim for change in Energy Dissipation Arrangement pertaining to Contract-1 of Omkareshwar Project (8x65 MW) in all respect i.e. examination of Statement of Claim, Rejoinder to Statement of Defense etc. and preparation/finalization of Statement of Defense, issues for arguments etc. & communication with all concerns and preparation of arguments in consultation with Sr. Advocates, Project authorities, Design & Engineering and law Division etc.
- (iii) Claim for Price Adjustment on Ex-works Price of the Equipment pertaining to Contract-1 & 3 of Omkareshwar Project (8x65 MW).

- (iv) Disputes pertaining to Dulhasti HE Project (3x130 MW) J&K in respect of :
- (a) Rate of payment to contractor for the concreting beyond "A" line in the reaches excavated by other agencies.
 - (b) Rate of payment to contractor for concreting between "A" line and A line 10 CM beyond "A" line in the reaches where excavation is carried out by the contractor by drill & blast method of excavation.

TRAINING COURSES ATTENDED

1. Training programme on 'Updating Design', Instrumentation and Dam Safety Surveillance Technology at New Delhi from 7th Aug to 5th Sep 1989 conducted by Central Water Commission (CWC), Delhi.
2. Application of Finit Element Method in Geo technical and Structural Engineering Problems and An Introduction of FEM Software packages I-DEAS & ABAQUS from 7th to 17th May' 1991 conducted by CWC, New Delhi.
3. A workshop on Design with Finite Element Method organized by Indian Geotechnical Society, Delhi Chapter from 13th to 15th Nov.' 1991 at Central Water Commission, New Delhi.
4. One week training on 'Computer Aided Drafting' by OMC Computers, New Delhi.
5. One week training on 'SoftCAL, SoftBASE and SoftWORD' by Soft Tek (P) Ltd., New Delhi (March' 1991).
6. Workshop on 'Application of FEM in Geotechnical and Structural Engineering Problems' conducted by Indian Geotechnical Society, Delhi Chapter, New Delhi (Nov.' 1991).
7. I have been deputed to FRANCE under transfer of technology program and worked with COYNE ET BELLIER, (Bureau D Ingenieurs Conseils) PARIS, FROM 14th June to 13th August 1993. The main subject of study was CAD OPERATION/DESIGN. Under this program, collaboration with COB, I did The Static And Dynamic Analysis of Dul Concrete Gravity Dam Using the FEM Software STAAD-III.
8. Training Programme on 'Total Quality Management' from 25th to 26th May' 2005 organized by 'Quality Management International' at Badkhal Lake, Faridabad.

9. Training Programme of 'General Management for NHPC Executives' from 27.01.2006 to 11.03.2006 at Power Management Institute, NTPC Limited, Noida.
10. I have attended International Convention on 'Contract Management for Accelerated Development of Indian Hydropower Projects' on 16th Nov.' 2007 organized by Central Board of Irrigation and Power at New Delhi.
11. Management Development Programme on 'Problem solving skills and decision making techniques' from 2nd to 6th June' 2008, organized by Indian Institute of Management (IIM) Lucknow.
12. FIDIC Training seminar on 'Management of Contract Claims & Resolution of Disputes' from 25 to 26 Aug.' 2008 organized by Consulting Engineers Association of India at Mumbai.
13. Short term course on 'Seismic Design of Concrete Gravity Dams' held at IIT Kanpur during 3-6 March' 2009.
14. Management Development Programme on 'Contract Management' from 31st Aug. to 04th Sep.' 2009 organized by Indian Institute of Management (IIM) Ahmedabad.
15. Attended one day conclave on 'Modern Contract Documents for Development of Hydropower Projects' organized by CBIP & CEA on 1st Oct.' 2009 at New Delhi.
16. One day training on 'Decision Making and Leadership Skill Development' held at NHDC Ltd., C.O., Bhopal on 22nd Oct.' 2009
17. 5 days training on "Contract implementation and Dispute Resolution in Project" by ESCI, Hyderabad.

(RAJENDRA KUMAR AGRAWAL)