

# SATPARA DAM - FIELD VISIT REPORT

## Verification of Project Works Completed up to March, 2013



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## 1. PURPOSE of VISIT

A field visit to monitor progress of works at Satpara Multipurpose Dam and Hydropower Project was conducted from March, 28 to March 30, 2013 by the Senior Energy Expert of Energy Policy Project. In particular, a field inspection was carried out to verify the completion status of power houses 3 & 4 and the land acquisition issue of the remaining portion of DR-1 of the irrigation system.

## 2. STATUS of WORKS COMPLETED

For the purpose of verifying completed works at the Satpara multipurpose dam project, Saleem Paracha inspected the project on site for physical verification of completed works. Following is the brief summary of project works completed up to end March, 2013;

- |  |                 |
|--|-----------------|
| 1. Civil Works for Dam and Powerhouse 1 & 2:         | 100 % complete  |
| 2. Irrigation System:                                | 99.9 % complete |
| 3. Civil, Electrical and Mechanical Works for 3 & 4: | 95 % complete   |
| 4. Consulting Services for Satpara Project:          | 95 % complete   |

Civil works on the main dam and powerhouse # 1 & 2 were completed in July 2011 as per schedule specified in the Activity Agreement. Construction activities on the irrigation system were 99.9 % complete and the remaining works include land acquisition and construction completion of the remaining portion of DR-1.

Project Director, WAPDA Satpara informed that the land acquisition dispute between GB and WAPDA has been resolved and the remaining portion of DR-1 will be completed by June 2013. WAPDA is finalizing the award of contract to a local civil contractor for the completion of remaining works, within three months.

WAPDA awarded civil works contract for unit # 3 & 4 to M/s Descon as a variation order to the existing contract and the excavation works started in early April, 2011. The contract for E&M works was awarded to M/s Andritz Technologies, China on June 9, 2011 with a completion period of 21 months.

The overall completion status of Units 3 & 4 is 95 % as of March 31, 2013 and the contractor has started the pre-commissioning tests to achieve power generation from unit # 3 by mid. April and unit # 4 by end April 2013. The 11Kv transmission line from unit # 3 & 4 was complete and interconnected with the Skardu 66 Kv Grid Station to dispatch power to the local people of Skardu area.

All four units of powerhouse # 1 & 2 were operating and generating 8.5 MW due to low reservoir level. At full reservoir level expected in early August both powerhouses will operate at full generation capacity of 13.8 MW and with the completion of powerhouse # 3 & 4, the total generation is expected to be 17.6 MW in this summer.

To ensure the sustainability of the project as mentioned in the Activity Agreement of Satpara dam Project, WAPDA will enter into a Power Purchase Agreement (PPA) with Gilgit-Baltistan PWD that would recover WAPDA's costs including O&M for a continued sustainable Project operation; however, WAPDA has not yet signed a PPA with Gilgit-Baltistan PWD and was requested to address this issue immediately.

### 3. SEEPAGE CONDITION at the DAM

It was observed during the visit that the reservoir level was increasing due to increase in the inflow of water in the Satpara reservoir. On March, 29, 2013 the total seepage recorded downstream of the dam was 8 cusecs.

### 4. IMPLEMENTATION OF EMMP

WAPDA/Satpara has appointed EHS Officer and EHS Engineer to maintain day-to-day coordination and to ensure that the EMMP is adequately implemented. The staff has also prepared Check List for the implementation of the EMMP Plan. AEAI through its sub-contracted firm is also monitoring and auditing implementation compliance of EMMP. A separate report is submitted to USAID/ENR for their review.

### 5. SITE VISIT PHOTOGRAPHS

Site visit photographs are appended below;



Figure 1: Plaque placed at Satpara Dam



**Figure 2: Turbine Generators of Power House No. 3**



Figure 3: Turbine Generator at Power House No. 4



**Figure 4: 66KV Skardu City Grid Inter-Connection with Power House 3 & 4**



**Figure 5: Satpara Reservoir**



**Figure 6: Excitation System & Control of Power House No. 3**