Bawgata Hydropower project

Location

On Bawgata stream , approximately 10 miles from the North-East of Pae-Nwe-Gone town, Pago Division. (Map reference- 94 B/ 15 46 4217)

Survey report

In 1953, the survey report of "Comprehensive report on Economic and Engineering Survey of Burma" by Knappen-Tipptts-Abbett-Mc Carthy (KTA) from USA mentioned that Bawgat hydro-power project was one of the projects that should make survey. In 1964, UN agency made an assessment to Bawgata Hydropower project and mentioned it in their Sittwaung Valley water resources development proposal.

Metrological Information

Yearly average rainfall from 1980 to 1999 in Nyaung Lae Bin city near the project area is 105.9 inches. Yearly av age water flow into Bawgata stream where the project dam located is 1.548 million acres/ feet.

$1.548 \cdot 10^6 \times 1233 \approx 1.908 \cdot 10^6 \, m^3$
acre/feet m^3
$31.5 \cdot 10^6$ sec/year $\Rightarrow 60 \, m^3/sec$

Summary Statistic of the project

According to the UN report in 1964, summary statistic of the project was as per mentioned below.

1. Type of the project – Dam/ Penstocks cannel
2. Spillway area- 55 square mile (1 square mile = 2589988 m^3 also 2.589 km^2)
3. Type of dam- Rock
4. Height- 230 fts
5. Reservoir capacity – 6.6 lakh Acres fts (813 000 m^3)
6. Length of penstock – 6 miles = 1609m.
7. Circumference- 11.5 fts
8. Height of water pressure – 1900 fts
9. Designated volume of water flow – 1230 cu/ sec
10. Turbine and generator – 160 megawatt
11. Average generated power per year – 500 billion KW/ hours

1 inch = 25,4mm.

1 feet = 12 inches.
= 304.8 mm.

1 acre = 4046 m^2. 0,4 ha.
1 acre = 208,7 × 208,7 feet
= 43560 square feet

1 cubic feet = 0,0283 m^3

1 acre foot = 43560 cubic feet
= 1233 m^3

Initial Assessment team

The team members participated in the initial assessment is as follows.

a.	U Zaw Zaw Tun	Deputy Director (Industry)
b.	U Kyaw Thu Win	Assistant Director number 2 (Civil)
c.	U Augn Zaw Lwin	Assistant Director (Industry)
d.	U Thein Myint	Assistant Director (Metrology)
e.	U Sein Win	Staff officer (Civil)
f.	U Tin Aung Khaing	Staff officer (Civil)
g.	U Tun Lin Maung	Staff officer (Industry)
h.	U Aung Soe	Staff officer (Civil)
i.	U Nay Myo Ko	Staff officer (Civil)
j.	U Aung Min Htet	Deputy Staff officer (Industry)

Activities

On December 20 of 2009, the Initial Assessment team started their trip by cars at 7 a.m. from Shwe Kyin hydropower project site to Min Lann Than Seik village where Bawgata hydropower project located nearby. The assessment team arrived the village (12 miles far from Shwe Kyin) at 8 a.m. and observed the status after the evacuation of the forest for the camp.

After that, the assessment team proceeded to Bawgata village, and at around 9 a.m. they met the village elders and USDP officials and discussed the potential station to be located at Kyauk Maw Kyee village.

The initial assessment team also met Chief Colonel Ko Ko Latt of the southern command Sa.Ka Kha (10) stationed at Baw Kha Hta village and presented the planned project and related security issue.

Chief Colonel Ko Ko Latt and the initial assessment team then went to Kyauk Maw Payar Kyee Village and observed the evacuation status of the forest for the project site nearby. Then they discussed with the village locals seeking their approval for the station site.

After that, Chief Colonel Ko Ko Latt and the initial assessment team paid homage to the Kyauk Maw Pagoda and visited the potential transit station number 1 at the teak forest near the pagoda.

The initial assessment team looked for the potential route for the construction materials to be able to cross the Bawgata stream in summer and took sample of the sands from the stream.

In the afternoon at 12:30 p.m., the initial assessment team left the project area and on their way back to Shwe Kyin, they took records of the bridges in need of renovation or repair, parts of the road for repair or constructed by heavy machinery and arrived Shwe Kyin site at 15:30 hours.

Finding/ Conclusion

Shwe Kyin –Bawgata road is granite road type and the width is 15 feet. There is a need to renovate and widen the road and in some places, there is a need to build the drainages. Since there are granite small mountains nearby, construction of the road would not be difficult.

The following machineries would be needed for the construction or renovation of the road. It is planned that the renovation of the road will be started from January 2010.

1) Hydraulic Excavator (1) item
2) Tracked Dozer CL II (1) item
3) Dump Truck 10/11 ton (2) items

The station site is tentatively planned at Kyauk Maw Kyee village. 20 acres of the forest has been cleared for the site. Fencing of the site is estimated to be done by January. The construction of the stop over guest house between Minn Lann and Than Seik is supposed to be done by January.

List of the bridges between Shwe Kyin-Thank Seik

Sr.	Bridge no.	Location	Type	Width	Length	Remark			
				feet	feet	Good	Fair	Bad	destroyed
1	1	between Shwe Kyin and Chay Taw Yar Village	Wooden and Iron	14	40		Fair		
2	2	between Shwe Kyin and Chay Taw Yar Village	Wooden	14	10		Fair		
3	3	Chay Taw Yar Village (in front of Rubber factory)	Wooden	14	12		Fair		
4	4	Chay Taw Yar Village (in front of police station)	Wooden	14	12		Fair		
5	5	Chay Taw Yar Village (middle)	Concrete pipe	14	8				destroyed
6	6	between Shwe Kyin and Tha Yet chaung village	Wooden	14	14			Bad	
7	7	between Shwe Kyin and Tha Yet chaung village	Wooden	14	12		Fair		
8	8	between Shwe Kyin and Tha Yet chaung village	Wooden	14	12		Fair		
9	9	between Shwe Kyin and Tha Yet chaung village	Wooden	14	12				destroyed
10	10	between Shwe Kyin and Tha Yet chaung village	Concrete pipe	16	6				destroyed
11	11	between Shwe Kyin and Tha Yet chaung village	wooden	14	16		Fair		
12	12	between Shwe Kyin and Tha Yet chaung village	wooden	14	20		Fair		
13	13	between Shwe Kyin and Tha Yet chaung village	wooden + Balley	14	40				destroyed
14	14	between Shwe Kyin and Tha Yet chaung village	wooden	14	20		Fair		
15	15	between Shwe Kyin and Tha Yet chaung village	wooden	14	16		Fair		
16	16	Tha Yet chaung village (entrance)	wooden + concrete	16	30	Good			
17	17	Tha Yet chaung village (middle)	wooden	16	30	Good			
18	18	between Tha Yet chaung village and Inn Ga Nee village	wooden	16	20		Fair		
19	19	between Tha Yet chaung village and Inn Ga Nee village	wooden	14	12			Bad	
20	20	Inn Ga Nee village (entrance)	wooden + concrete	16	55	Good			
21	21	Inn Ga Nee village (middle)	wooden	16	20			Bad	

22	22	between Inn Ga nee and Upper Me Zaung village	wooden	16	20				destroyed
23	23	Upper Me Zaung Village	wooden	16	40			Bad	
24	24	Than Seik Villagag (Min Lann)	wooden	16	20		Fair		
25	25	Between Than Seik village and Tone Ka Tone village	wooden	14	16				destroyed
26	26	Between Than Seik village and Tone Ka Tone village	wooden	14	18		Fair		
27	27	Between Than Seik village and Tone Ka Tone village	wooden	14	12			bad	
28	28	Tone Ka Tone village	Wooden and Concrete	16	50	Good			
29	29	Tone Ka Tone old village and Shu Khin Thar village	wooden	14	20				destroyed
30	30	Tone Ka Tone old village and Shu Khin Thar village	wooden	14	18		Fair		
31	31	Shu Khin Thar village	wooden	16	50	Good			
32	32	between Shu Khin Thar and Pa De Kaw village	wooden	14	20			bad	
33	33	Pa De Kaw Village	wooden	14	20				destroyed
34	34	Baw Ka Hta Stream	wooden + Balley	14	360				destroyed

Number of Bridges under 50 feet = 30
Number of Bridges between 50 feet and 100 feet = 3
Number of Bridges above 100 feet = 1
Total = **34** number

Photos Interpretation

1) Picture number 1 = View of Potential stop-over Site between Min Lann and Than Seik
2) Picture number 2 = View after cleaning up of the forest for the stop-over Site between Min Lann and Than Seik
3) Picture number 3 = Tentative Road – Entrance to Kyauk Maw Payar Kyee Village
4) Picture number 4 = Tentative Site near Kyauk Maw Payar Kyee after clearing of the forest
5) Picture number 5 = Approval Seeking process for the Tentative project site location near Kyauk Maw Payar Kyee Village
6) Picture number 6 = Tentative Project Site at Kyauk Maw Payar Kyee
7) Picture number 7 = Tentative Sopt where Heavy Machineries can cross the Bawkahta creek
8) Picture number 8 = Sample Sands collection
9) Picture number 9 = View of Shwe Kyin –Bawkahta Road where some parts need repair
10) Picture number 10 = Parts of the road that need to renovate between Shwe Kyin and Bawkahta