

***DRAFT***

**PROGRAMME CONSTRUCTION SANS**  
**BOIS**

**RAPPORT PROVISOIRE**

**NIGER**  
**JANVIER AU JUIN, 1994**

**DANIEL D. MCCORMICK**  
**PCV, PCSB**

**Programme Construction Sans Bois  
Niger, January--June, 1994  
OVERVIEW**

**Formations des maçons**

<b>Site</b>	<b>Masons Trained</b>	<b>Buildings Completed</b>
Balleyara	5	3
Torodi	8	5
Gotheye	13	8
Ouallam	8	2
	(retrained)	
<b>TOTAL</b>	<b>34</b>	<b>18</b>

**Constructions des bâtiments de demonstration**

1. Bazazaga (Bimi N'Konni)
2. Enkouregao (Madarounfa)
3. Mirriah (Mirriah)
4. Kourmasawa (Madarounfa)
5. N'Doungou (Kollo)
6. Souloulou (Guidan Roumji)
7. Makalondi (Say)

**Constructions Hors du Programme**

1. Korougoungou
2. Kirtachi
3. Balleyara

**Constructions spontanées**

- Filingué (5)  
Hamdallaye (2)  
Garbey, Ouallam (2)

## INTRODUCTION

Peace Corps Niger has been working with Development Workshop to promote Construction Sans Bois (CSB) since 1988. The main goal of this cooperation has been to make the technology accessible to individuals and communities most in need of an alternative to traditional wood-consuming construction. Since 1991, our combined efforts have led to the training of some 20 masons and the construction of over 20 demonstration buildings (primarily in the Tillabéri Department).

In response to growing interest in and demand for CSB, Peace Corps Niger and Development Workshop/IUCN outlined an ambitious programme for the first half of 1994 which envisioned the retraining of 14 CSB masons, the training of 24 new masons, and the construction of at least 18 buildings (See Appendix III). In view of the scale of the project and the continued expansion of CSB throughout the Sahel, Peace Corps and Development Workshop/IUCN agreed to support a volunteer assigned full-time to the coordination of the Niger programme. This enabled the core of the CSB team to conduct a training programme in Mali simultaneously.

After some minor adjustments (See Appendix IV), the programme ultimately retrained 8 CSB masons in the Ouallam area, trained 29 new masons in three regional trainings which produced 19 client-partenaire buildings (Balleyara, Torodi, and Gotheye), and produced 7 demonstration buildings across southern Niger (Makalondi, N'Dounga, Bazazaga, Enkouregao, Kourmasawa, and Mirriah). In addition, it oversaw the construction of 3 buildings funded by Peace Corps independent of the programme (Korogoungou, Kirtachi, Balleyara), and provided technical assistance for 7 'spontaneous' constructions in Filingué (5) and Hamdallaye (2).

## TRAINING OF MASONS

### Objectives

The training curriculum for the 1994 programme was a simplified version of the training of masons conducted by Development Workshop/IUCN in Filingué in Nov.-Dec., 1993. Our experience in Filingué demonstrated that teaching both vaults and domes to novice masons requires more time and technical resources (i.e., *formateurs principaux*) than were available for this programme.

Thus, the programme emphasized a two-tier training process. First-year masons were only trained to build simple one and two-room square houses with domed roofs. (Since the *guide mobile* dictates the proper placement of bricks in the dome, masons with no experience in CSB can be effectively trained to build domed structures during one six-week course). *Cases rondes* were excluded from the first-year training curriculum due to the limited demand for this style in most regions. Masons who are selected for a second training will be taught to build more complicated structures, such as vaulted roofs and *cases rondes*.

### Procedures

Thus, the trainings in the Torodi, Balleyara, and Gotheye regions encompassed only those competencies and techniques necessary to build simple one and two-room domed structures. As originally planned, two *masons-formateurs*, following the *Guide de Formateur* developed by Development Workshop, were to instruct eight trainees as they built a two-room domed structure. Each *formateur* would then take four trainees and each team will construct another two rooms. For such a limited curriculum and loaded schedule, training structures were generally neither cost-effective nor logistically practical, except in the case of Gotheye. Upon the successful completion of the trainings, each mason will be issued a certificate specifying his level of competence, i.e., one and two-room square buildings with domed roofs.

In the Ouallam region 14 masons who were trained in 1991 were to be retrained during the

client, money is deducted from the deposit which can be used to pay labour or buy materials. When the building is completed, the remainder is returned. This would be very difficult to carry out, but it might work if demand is strong. Concerning community clients, they should be discouraged in the context of trainings. Only if all materials are on site before the training begins should community buildings be considered during trainings.

The only way to avoid client interference is by using training structures. Training requirements and specifications could be respected and bricks could be taken down when the trainers felt it necessary. Moreover, the trainees could complete a building from foundation to finishings without interruption or delay. If some way can be found to share the costs with a project or client, perhaps by selling the structures after completion, training structures would not be prohibitively expensive.

The flawed perception that CSB is costlier than traditional construction can only be rectified through publicity. In regions where CSB buildings and masons abound, people are rapidly beginning to appreciate the technology as a bargain (and a beautiful one at that).

The quality of the masons depends on the quality of the individuals. Although many think of their newly acquired skill only in terms of money and power, there are an equal number of farsighted masons who are willing to do an honest job at a fair price. Issiaka Moussa from Hamdallaye is one example: although he's probably not the best mason in Hamdallaye, he's the only CSB-trained mason, yet he has already completed two simple buildings independent of any project and at a competitive price. Masons like him, and they are many, are the future of CSB.

## **CONSTRUCTION OF DEMONSTRATION BUILDINGS**

### **Objectives**

In addition to these trainings, the 1994 programme included the construction of seven demonstration buildings. In the past these "demos" have served to introduce the technique into a region and prove its viability. If they arouse enough interest in and demand for CSB in the region, a training of local masons can be planned for the following year.

### **Procedures**

In most cases an individual or community provides all the local materials and labour while the CSB programme provides trained masons and technical support. In some cases, other projects such as Peace Corps or the Embassy Self-Help Fund have provided doors, windows, cement, etc., for community buildings.

### **Summary**

#### **Bazazaga, Birni N' Konni**

Dates: January 9 to February 15, 1994

Participants: Hassan Bourody, PCV  
Mammadou Issa, Head Mason  
Abdou Moumouni, Assistant Mason

Style: 2-room square dome

Purpose: PCV house

This house was built by the 'community' for the new PC volunteer. Construction longer than planned due to severe divisions in the community and their refusal to cooperate. The masons, nevertheless did a great job and the building itself is a fine example (Abdou Moumouni had completed the training of masons in Filingué).

## **Mirriah**

Dates: January 28 to February 18 and February 28 to March 13, 1994

Participants: Loren Blum, owner  
Elhassan Akadé, Heamason  
Yacouba Tidjani, schmuck

Style: 3-room excentric vault-vault

Purpose: Private house

Loren Blum is a Fulbright scholar doing research in Mirriah. She paid for all the materials and labour and PCSB provided a mason in order to put up a model building in that region which has excellent banco. Yacouba Tidjani, a Tanout mason who had just come from the Filingué training, assured her that he was capable of building eccentric vaults when in fact, he was completely incompetent. After the second week of construction, he had not even started the vaults and there were several tracings on the wall. Finally, it became obvious he could not finish the building and that he was stalling simply for money (people who worked with him had little good to say about him). He was sent home and Elhassan completed the job. He was not satisfied with Tidjani's work and took several courses of bricks down. Thanks to Elhassan, the house has attracted a great deal of interest in the community.

## **Enkouregoa**

Dates: February 11 to March 4, 1994

Participants: Chris Harms and John Patron, PCVs  
Mammoudou Issa, Head mason  
Hamisou Ibrahim and Abdou Barao, Assistant masons

Style: 2-room, square domes

Purpose: PCV house

Last year, the Peace Corps Biodiversity team in the area decided on Enkouregoa as its center; thus, the team coordinator needed a house there. The logical choice was CSB, introducing the technique to the area. Peace corps funded all materials and labour, including one assistant mason, while PCSB paid the head mason and one assistant mason. The building took longer than scheduled because, according to the head mason, the assistant masons (who had been trained in Filingué) did not know what they were doing. When last observed there were serious drainage problems around the building which could damage the foundations. This could be remedied by packing earth at the foot of the back wall, which has hopefully been done by now.

## **Souloulou**

Dates: March 23 to April 4

Participants: Lisa Grimes, PCV  
Elhassan Akadé, Head Mason  
Hamisou Ibrahim and Abdou Barao, Assistant Masons

Style: 2-room square domes

Purpose: Hospitilisation rooms for the dispensaire

As with most community projects, the Souloulou construction ran into delays caused by lack of materials on site. The bricks had been produced but were not on site and the El hadji who had been paid to transport them never did. Each and every villager, men and women, old and young, carried the bricks on their heads hundreds of meters to the site near the dispensaire. Nevertheless, they still ran out of bricks and the masons were sent home with the building very near completion. The villagers eventually finished it themselves, but did not put a deuxième couche on the domes. It has rained there and the building has not yet leaked, so perhaps the crepissage will suffice. The rooms are used for patients requiring hospitalisation. The American Embassy Self-Help Fund paid for doors, windows, and cement for the building.

### **Makalondi**

Dates: March 4 to March 15, 1994

Participants: Brian Zoeller, PCV  
Moussa Abdoulaye, Head mason  
Sitou Moussa, Assistant mason

Style: 1-room square dome

Purpose: Boutique

Sitou Moussa attended the Torodi training from Makalondi. He had begun making bricks for a traditional building which he was going to use as a boutique. After the training he expressed interest in building CSB and promised to furnish all materials and labour. It was agreed that PCSB would provide a more experienced mason to help him. Although rainfall is higher in Makalondi than in most of Niger, the banco there is excellent and many of the older buildings show little sign of wear. This was the first building Moussa Abdoulaye had built completely on his own and technically it leaves a lot to be desired. The main problem is the arch over the door which has settled more than average. One of the bricks came loose and there are vertical cracks on either side of the arch extending into the dome. Rocks were jammed into the joints to stabilise it, and it doesn't appear to have moved since.

### **Kourmasawa**

Dates: April 15 to April 25, 1994

Participants: Samantha Silliman, PCV  
Hamisou Ibrahim and Abdou Barao, Head masons

Style: 1-room square dome

Purpose: Community cooperative building

This was the first house Hamisou and Abdou (who were trained at Filingué) built on their own and it was a very simple one. Nevertheless, they wrongly believed that their skill was worth more than the 15000cfa they would each receive. After everything was set and they were brought to the village to begin, they refused to do it for the money and were taken home. They were then told that other very capable masons could be found whom they had trained with, who had already built on their own, and who would do the job very well and for less money. They decided that the original payment would suffice and proceeded to build a very satisfactory, if simple, cooperative building.

## **N'Dounga**

<u>Dates:</u>	May 10 to May 27, 1994
<u>Participants:</u>	Service National de Participation, client Hassan Issa, Head mason Zada Salley, Assistant mason
<u>Style:</u>	2-room dome
<u>Purpose:</u>	Demonstration

The *Service National de Participation* is a semi-autonomous organisation under the *Ministere de l'Hydraulique et l'Environnement*. This service trains young Nigeriens for six months in *maçonnerie, menuiserie--metalique et bois, et l'agro-pastoralisme*. After training, the participants spend another 18 months in the field as volunteers. The coordinator of planning is a sensible and motivated Nigerien who is very interested in CSB. The Service furnished all materials and labour for a demo at the training center while we provided the trained masons. Work went very slowly at first and the masons were not too impressed with the volunteers' work ethic. However, after speaking to the director, work days were extended to 18h00 and the volunteers worked in shifts and work proceeded at a good pace (after Tabaski). Considering that Hassan Issa had only just been trained in the less-than-adequate Balleyara training, he did an excellent job. Eventually the Service would like to include CSB as part of the training of masons.

### **Evaluation**

All of the demonstration buildings have achieved the stated objectives. They have proven that CSB can work in those particular regions and they have generated widespread interest in the technology. Now the question is, what comes next in these regions? How can we follow up on these demos and take advantage of the excitement they have generated?

Technically, there were very few problems with the constructions, aside from the Tidjani nightmare. Many of the same minor flaws that were seen during the trainings could be seen in the demonstration building as well. None show any signs of potential structural failure; however, the drainage problem at the Enkouregao site could be potentially disastrous if not taken care of immediately.

Almost all of the buildings were simple one- and two-room square domes. Ideally, it would have been preferable to build a variety of styles to demonstrate the versatility of CSB and to test the relative popularity of each. Unfortunately, the options were limited by the dearth of well-trained and trustworthy masons available. This situation should be somewhat alleviated in the future.

Demonstration buildings are very important, often the only way of introducing the technology to a region; however, they consume an inordinate amount of time and energy compared to the trainings. Perhaps this is due to the community nature of most of them. Another great problem was communication. It is all but impossible to correspond over the vast spaces of Niger. Many of the problems could have been much more easily solved if I could have only talked to the people involved in the field. Even then, however, I could not depend enough on the technical knowledge of the 'responsible' (usually Peace Corps volunteers).

### **Recommendations**

Although demonstration buildings are glutinous consumers of time and energy, they form an essential part of the programme. In Mirriah, for example, the demo sparked enough interest to justify a full scale training there next season. CSB is already fairly well known there, even though there has been very little 'sensibilisation' beside the demo.

Once a large pool of skilled and honest masons have been trained, it should become possible to simply put a mason in contact with the client, public or private, and provide only a minimum of supervision, merely quality control. Where projects are concerned (i.e., Peace Corps,

cooperatives, hospitalisation rooms, etc.), the person in charge--the '*responsable*'--must take full responsibility for every aspect of the project and construction, including planning, preparation, getting the mason(s) to the site, paying the mason(s) and assuring that the work progresses with few problems and delays. This would require a minimum level of understanding of CSB techniques. Also, I believe it would be less complicated if each specific project, rather than PCSB, provided funds for mason fees (mason fees should be included in the project proposal budget).

**APPENDIX I**

**PROGRAMME CONSTRUCTION SANS BOIS , NIGER  
JANVIER AU JUIN 1994  
MACONS DEBUTANTS**

**Gotheye Formation**

PRENOM NOM	AGE (ans)	DOMICILE	EDUCA- TION (ans)	ANNES D'EXPERIENCE EN BANCO	EXPERIENCE AVEC AUTRES MATERIAUX	LANGUES PARLEES	LANGUES ECRITES	FORMATIONS		GRADE/ OBSERVA- -TIONS
								LIEU	DATE	
1. Djabiri Abdroumani	31	Gotheye	4	6	Cement	Zarma, Français, (Hausa)	Français	Gotheye	5/94	B
2. Soumana Abdou	47	Gotheye	---	1,5	Cement, Menuiserie	Zarma (Hausa)	---	Gotheye	5/94	
3. Seydou Amadou	47	Gotheye	---	20 (5th categorie)	Cement	Zarma	---	Gotheye	5/94	
4. Boubacar Talfi	44	Gotheye	---	10 (5th categorie)	Cement	Zarma, Hausa	---	Gotheye	5/94	A
5. Harouna Niamdou	46	Gotheye	---	10	---	Zarma	---	Gotheye	5/94	C
6. Antera Yinsou	33	Kouli Koira	---	8	---	Zarma	---	Gotheye	5/94	
7. Yayé Mourou	31	Kouli Koira	---	5	---	Zarma	---	Gotheye	5/94	
8. Monkaila Salou	60	Kakassi	---	42	---	Zarma (deaf)	---	Gotheye	5/94	
9. Seybou Bomberi	38	Larba Birno	9	3	---	Zarma, Français	Français	Gotheye	5/94	B+
10. Abdroumani Monkaila	40	Garbé Kourou	8	20 (hors categorie)	ciment	Zarma, Français, Hausa	Français	Gotheye	5/94	A
11. Hamadou Boubacar	45	Kaissani	5	5	---	Zarma, Français	Français	Gotheye	5/94	
12. Seini Yacouba	46	Djioubourga	---	7	---	Zarma	---	Gotheye	5/94	C
13. Tahieri Gabo	50	Fimiaré	---	21	---	Zarma	---	Gotheye	5/94	C

**Torodi Formation**

1. Adamou Kalikoy	55	Torodi	---	28	ciment	Zarma	---	Torodi	21/2	A
2. Hamidou Abdoulaye	46	Torodi	---	19	ciment	Zarma, (Hausa), (Peul)	---	Torodi	21/2	B
3. Jibo Hama	45	Torodi	---	20	ciment	Zarma, Peul, (Français)	---	Torodi	21/2	B
4. Hamadou Oumarou	45	Torodi	---	27 (categorie 6)	ciment	Peul, Zarma, Hausa, (Français)	---	Torodi	21/2	A
5. Sitou Moussa	24	Makalondi	7	4	ciment	Hausa, Gourma, Français, Peul, Zarma	Hausa, Français	Torodi	21/2	C
6. Hallidou Soumana	41	Chiambanga	---	10	ciment	Zarma, Peul	---	Torodi	21/2	B+
7. Abdroumani Soumana	38	AdaréRhimbé	---	9	ciment	Zarma, Peul, Hausa	---	Torodi	21/2	A
8. Boubacar Boukari	40	Diagoga	---	9	ciment	Peul, Zarma	---	Torodi	21/2	A

### Balleyara Formation

1. Zada Salley	26	Tondi Ciré	---	9	ciment	Zarma	---	Balleyara	1/15	A (Apprentice to Mammoudou Issa)
2. Hassan Issa	40	Tondi Ciré	---	15	ciment	Zarma, Hausa	---	Balleyara	1/15	A
3. Boureima Coda	45	Maourey	7	20	ciment	Zarma, (Français)	---	Balleyara	1/15	C
4. Sinna Cambé	44	Zarmey	(Koranic)	8	ciment	Zarma ,Hausa	---	Balleyara	1/15	N/A
5. Oudou Abdoulaye	30	Zarmey	---	5	---	Zarma	---	Balleyara	1/15	N/A
6. Hassan Alfari	44	Deygindé	---	10 (manoeuvre)	ciment	Zarma	---	Balleyara	1/15	N/A
7. Abdoulaye Soona	50	Boula	---	20	ciment	Zarma (Français)	---	Balleyara	1/15	B
8. Marafa Hama	50	Tabla	---	20	ciment	Zarma	---	Balleyara	1/15	A

### Ouallam Recyclage

1. Abdou Boubacar		FanakaKwara								
2. Seidou Alhassan		FanakaKwarw								
3. Djibo Issaka		Berey								
4. Boubacar Sabo		Tiala								
5. Boubacar Yankouri		Hanam Tondi								
6. Hama Ali		Diginasa								
7. Adamou Barcé		Daké Daké								

## APPENDIX III

### PROGRAMME CONSTRUCTION SANS BOIS

Niger

January--June, 1994

#### Background

Peace Corps Niger has been working with Development Workshop to promote Construction Sans Bois (CSB) since 1988. The main goal of this cooperation has been to make the technology accessible to individuals and communities most in need of an alternative to traditional wood-consuming construction. Since 1991, our combined efforts have led to the training of some 20 masons and the construction of over 20 demonstration buildings (primarily in the Tillaberi Department).

In response to growing interest in and demand for CSB, Peace Corps Niger--in collaboration with Development Workshop/IUCN--has outlined an ambitious programme for 1994 which anticipates the retraining of 16 CSB masons, the training of 24 new masons, and the construction of at least 18 buildings. Because of the scale of the project, Peace Corps and Development Workshop/IUCN have agreed to support a volunteer assigned full-time to the coordination of this programme.

#### Le Programme

##### Training Objectives

The training courses planned for the 1994 programme will be a simplified version of the training of masons sponsored by Development Workshop/IUCN in Filingué in Nov.-Dec., 1993. Our experience in Filingué demonstrated that teaching both vaults and domes to novice masons requires more time and technical resources (i.e., *formateurs principaux*) than are available for this programme.

After much discussion among the CSB team (which includes the *formateurs principaux*), we decided to emphasize a two-tier training process. First-year masons will be trained to build simple one and two-room square houses with domed roofs. Since the *guide mobile* dictates the proper placement of bricks in the dome, masons with no experience in CSB can be effectively trained to build domed structures during one five-week course. We also decided to exclude *cases rondes* from the first-year training curriculum due to the limited demand for this style in most regions. Masons who are selected for a second training will be taught to build more complicated structures, such as vaulted roofs and *cases rondes*.

##### Training Procedures

Thus, the trainings in the Torodi, Balleyara, and Gotheye regions will encompass only those competencies and techniques necessary to build simple one and two-room domed structures. Two *maçons-formateurs*, following the *Guide de Formateur* developed by Development Workshop, will instruct eight trainees as they build a two-room domed structure. Each *formateur* will then take four trainees and each team will construct another two rooms. Upon the successful completion of the trainings, each mason will be issued a certificate specifying his level of competence, i.e., one and two-room square buildings with domed roofs.

In the Ouallam region 16 masons who were trained in 1991 will be retrained during the construction of several one and two-room domed and vaulted buildings under the supervision of two *formateurs*. Vaults will be emphasized during this retraining to offer the population a choice of

styles. Because of their rectangular shape and economy of bricks (they use about 25% less large bricks than a domed building of similar dimensions), vaults have been popular in Filingué.

### Construction

In addition to these trainings, during which at least three structures will be built in each region, the programme includes the construction of several demonstration buildings. In most cases an individual or community provides all the local materials and labour while the CSB programme provides trained masons and technical support. In the past these "demos" have served to introduce the technique into a region and prove its viability. If they arouse enough interest in and demand for CSB in the region, a training of local masons can be planned for the following year.

Although vaults will not be taught as part of the initial trainings, a separate team of masons will build demonstration buildings incorporating vaults in each region where trainings will be held.

Following is a list of the demonstration buildings planned for the 1994 programme:

<u>Site</u>	<u># of Rooms</u>	<u>Purpose</u>
Torodi	2	Auberge/case de passage
Balleyara	2,1	PCV coordinator's house, storage
Gotheye	2	Villager's house
Ouallam	2	Cooperative
Bazagaza	2	PC volunteer's house
Enkouregao	2	PCV coordinator's house
Kormasawa	2	Cooperative
Souloulou	2	Sick rooms

N.B. Peace Corps Volunteer (PCV) houses are considered community buildings--the community is required to provide housing for the volunteer. If the community agrees to provide a *maison sans bois*, they must contribute all local materials and non-skilled labour while Peace Corps or Development Workshop/IUCN pays for the mason.

### **Human Resources**

Following is a list of the *maçons formateurs* available for the 1994 programme. They have all recently completed the training of trainers in Filingué and subsequently directed a team of four trainees during the training of masons.

<u>Name</u>	<u>Language(s)</u>
1. Abdou Noma	Zarma, French, (Hausa)
2. Mamadou Issa	Zarma, Hausa
3. Hassan Boureima	Zarma, (Hausa)
4. Kadiri Elhassan	Zarma
5. Mounkaila	Zarma, (Hausa)
6. Elhassan Akadé	Hausa, (French)

## APPENDIX IV

7/3/94

**To:** John Norton, Development Workshop  
**From:** Dan McCormick, PCSB  
**Re:** Your fax of 1/3/94

Dear John,

I hope all is well *en France et la famille va bien*. Everything is fine here. Abdou--'friend of Peter'--should have started painting my house this morning. *Inchallah*. Other than the paint, the house is great; finally a little space.

1. Regarding the housing budget:

The estimates I gave you for the housing allowance leave some margin for future increases in costs. I do not foresee any changes which would require further adjustment to the housing budget.

2. Regarding the general programme budget:

After reviewing my notes and the original budget, it is clear that the increase in cost for the 1994 programme will be much less significant than I had estimated in my last fax (28/2). The revised budget I have just faxed you totals 3694800cfa, an increase of only 318200cfa over the initial estimate (3376600cfa). If you compare this revised budget with the original programme budget, you will see that the main cost increase stems from the *maçon-conseiller* (162500cfa). Peter and I agreed that such a technical advisor would not only be very helpful, but even essential to the success of the programme. So far he (Alhassan) has been worth every cfa and more. I have also purchased 50 CSB t-shirts for the masons and personnel involved in the trainings at a cost of 90000cfa (18 French francs a piece).

Most of the cost overruns in the programme will be covered by savings made elsewhere in the budget. Although four training structures had originally been budgeted, we will only use one (in Gotheye), making 150000cfa available for unexpected training costs. Also, though we had originally planned on the trainings lasting only five weeks, I had anticipated 40 days in the original budget (42 days would be even better), most trainings should not go more than a few days longer than this.

The unforeseen expense for the **Balleyara** training resulted from delays inherent in community buildings (i.e., the bricks were not finished on time nor transported to the building site punctually due to a lack of communication and cooperation among villagers). The endless pace of community projects has also plagued our construction budget (**Bazazaga**). Nevertheless, the importance of introducing CSB into new regions far outweighs these slight cost increases.

A second problem which has caused delays and cost cfa has been masons who had not been sufficiently trained at Filingué. The mason from Tanout, Tidjani, began a demo house in **Myrriah** which he was incapable of finishing. Eventually I sent him back to Tanout and sent Alhassan out to complete the house. Tidjani's time, although expensive, was essentially worthless. (His character was not worth much either). During the construction in **Enkouregao**, the head mason had to basically retrain the two assistant masons from the Maradi area though they had completed the training in Filingué.

Of the masons who came to the Filingué training from other regions few or none are competent or confident enough to build even a simple MSB. The Filingué training was overly ambitious in teaching both domes and vaults to novice masons, yet it was successful (*in Filingué*) because so many masons were trained from a single area. Not only did this make many masons available at a competitive price, it also allowed--even forced--masons to work together and learn from each other (I realize this is no great revelation). One reason I included trained masons as *assistant formateurs* in the trainings was to give them more training; however, they would be more aptly titled *stagiaires avancés*

Keeping Filingué in mind, we would like to expand the **Gotheye training** to include 12 instead of 8 masons, adding four--making a total of five--from Gotheye *même*. As you know, in Gotheye traditional construction

uses 40 cm walls. No one there has yet complained about the number of bricks needed in CSB. The technique should be well accepted by the population. Unfortunately, the training takes place late in the building season; water sources for brick making are drying up and it is unlikely that many buildings will go up before the rains. The newly trained masons will not get much of a chance to practice CSB until the following construction season.

Concomitant with the Gotheye training, we will conduct a '**retraining**' of masons in Ouallam. The eight masons selected will be those who have built in CSB since they were initially trained in 1990. Oullamites, both *Anasara* and *Nigerien*, have suggested several reasons why CSB has not been accepted in the region. One reason given is that most of the masons were not sufficiently trained after completing the 1990 training; thus, there is a need for additional training, incorporating techniques developed since 1990. This will be carried out during the construction of two one-room, square, domed buildings. A second reason given for the lack of demand is that the masons themselves have not tried to *sell* CSB to the public. In an attempt to remedy this, the Ouallam retraining will include several sessions during which masons will be introduced to animation techniques--photos, slides, *pagivolte*, etc.--and will practice presenting these to real people in real places. Another reason often given for the reluctance of people in the region to build *sans bois* is their poverty. As a result of several years of meagre harvests, many of the able men leave the region to seek seasonal work elsewhere; thus, there are not a lot left to make bricks nor is there enough money to pay someone to make them. Our programme does not include rain making, however the two structures which will be built during the training--with materials supplied by the villages--will be used for grain storage in an attempt to extend the supply of food available throughout the year.

Also in **Ouallam** this year, we would like to introduce vaults to see if this style proves more popular than domes and thereby stimulates demand for CSB. A private client will provide all the materials and labour for a three-room building with vaults, we will supply the masons. This will be a **demonstration building** only and will not form part of the retraining.

I have added another **demonstration building** in **N'Dounga** (Kollo) to the programme. The client is the *Service National de Participation*, a semi-autonomous organisation under the *Ministere de l'Hydraulique et l'Environnement*. This service trains young Nigeriens for six months in *maçonnerie, menuiserie--metalique et bois, et l'agro-pastoralisme*. After training, the participants spend another 18 months in the field as volunteers. The director is a sensible and motivated Nigerien who is very interested in CSB. If we could provide the masons, he would furnish all materials and labour for a demo at the training center. Eventually he would like to include CSB as part of the training of masons. Of course, this is all subsequent to your approval.

I can tell you very little about **Filingué**, since I have not been able to get up there as often as I should due to lack of vehicle support. My work could be made more efficient with a dependable vehicle. Since I've been using the IUCN Pajero it has been necessary to take a driver (Illa) in case of break down. I'm unsure of the impact this will have on the cost of the programme.

I've documented as best I can any changes to the original programme, I hope this will suffice for the time being. In spite of an increase of 318200cfa, the revised budget still represents a cost of merely 76347cfa per mason trained and 111971cfa per demo built, not including client houses built as part of the trainings. It would be difficult to carry out the programme more effeciently than this. I have about a week until trainings and constructions begin again after Ramadan. In this time I would like to document in detail the programme up to this point, including expenses and per diem (which will be a tiny portion of the budget--less than 25000cfa/month on average). After Ramadan, I will be extremely busy until the end of the season (there are several other constructions going on outside of the programme). The Hamdallaye workshop is scheduled for May 19 to 24. I will take home leave--via France--in June. *INCHALLAH*

I'm eagerly awaiting your response to this missive, and am looking forward to your visit. Please give my warmest Nigerien hot season regards to Claire and the kids, *et al*

Sincerely,

Daniel D. McCormick

PROGRAMME CONSTRUCTION SANS BOIS, 1994

BUDGET GLOBAL (POSTE)						
<u>Indemnités</u>	Nb.	Nb. Jours	Taux/jour	Total	Dépense Actuelle	Solde Actuel
<b>(820 04) Formations des maçons</b>						
<b>Torodi</b>						
Maçons-formateurs	2	40	2'250	180'000	180'000	0
Formateur-assistants	1	40	1'400	56'000	56'000	0
Maçons-stagiaires	8	40	1'000	320'000	317'000	3'000
			sous-total	556'000	553'000	3'000
<b>Balleyara</b>						
Maçons-formateurs	2	35	2'250	157'500	157'500	0
Aide-formateur	1	21	1'400	29'400	39'200	-9'800
Maçons-stagiaires	8	49	1'000	392'000	326'500	65'500
			sous-total	578'900	523'200	55'700
<b>Gotheye</b>						
Maçons-formateurs	2	42	2'250	189'000	330'750	-141'750
Aide-formateur	1	21	1'200	25'200	58'800	-33'600
Maçons-stagiaires	12	42	1'000	504'000	637'000	-133'000
			sous-total	718'200	1'026'550	-308'350
<b>Ouallam (recyclage)</b>						
Maçons-formateurs	2	16	2'250	72'000	68'000	4'000
Aide-formateur	1	16	1'200	19'200	0	19'200
Maçons-stagiaires (per diem)	8	4	1'000	32'000	67'000	-35'000
			sous-total	123'200	135'000	-11'800
			sous-total indemnités formations	1'976'300	2'237'750	-261'450
<b>(820 03) Constructions des bâtiments de démonstration</b>						
<b>Bazazaga</b>						
Maître-maçons	1	30	2'250	67'500	67'500	0
Maçons formés	1	37	1'400	51'800	44'800	7'000
			sous-total	119'300	112'300	7'000
<b>Enkouregao</b>						
Maître-maçons	1	21	2'250	47'250	49'500	-2'250
Maçons formés	1	28	1'400	39'200	28'800	10'400
			sous-total	86'450	78'300	8'150
<b>Souloulou</b>						
Maître-maçons	1	21	2'250	47'250	22'400	24'850
Maçons formés	1	28	1'400	39'200	19'200	20'000
			sous-total	86'450	41'600	44'850
<b>Kourmasawa</b>						
Maçons formés	2	14	1'400	39'200	32'000	7'200
<b>Myrriah</b>						
Maçons formés	1	35	1'500	52'500	39'150	13'350
<b>Ouallam</b>						
Maître-maçons	2	21	2'250	94'500	0	94'500
Maçons formés	2	28	1'400	78'400	0	78'400
			sous-total	172'900	0	172'900
<b>Makalondi</b>						

PROGRAMME CONSTRUCTION SANS BOIS, 1994

Maçons formés	1	(contract)	15000/piece	15'000	15'000	0
<b>N'doungou</b>						
Maître-maçons	1	28	2'250	63'000	28'000	35'000
Maçons formés	2	35	1'400	98'000	21'000	77'000
			sous-total	161'000	49'000	112'000
			sous-total indemnités constructions	717'800	367'350	350'450
			<b>Total indemnités</b>	<b>2'694'100</b>	<b>2'605'100</b>	<b>89'000</b>
<b>(820 05) OUTILS</b>						
			<b>Unités</b>	<b>Prix/unité</b>	<b>Total</b>	
<b>Formations des maçons</b>						
Structure de formation	1		50'000	50'000	0	50'000
Guides mobiles	32		8'000	256'000	224'000	32'000
Moules des petites briques	32		8'000	256'000	272'000	-16'000
Moules des grandes briques	2		8'000		16'000	-16'000
Piquets en fer	300		150	45'000	0	45'000
			sous-total outils formations	607'000	384'000	223'000
<b>Constructions des bâtiments de demonstration</b>						
Planches en bois	8		2'000	16'000	19'000	-3'000
Piquets en fer #8	20		50		1'000	-1'000
			<b>Total Outils</b>	<b>623'000</b>	<b>403'000</b>	<b>220'000</b>
<b>Transport</b>						
(328 02) Péages					13'155	-13'155
(820 08) Transport des maçons					166'100	-166'100
(328 01) Entretien des vehicules					3'300	-3'300
			<b>Total Transport</b>	<b>60'000</b>	<b>182'555</b>	<b>-122'555</b>
<b>Divers</b>						
(Voir 'suivdivr')						
T-shirts	50		1'800	90'000	90'000	0
Photos	32		1'000	32'000	26'200	5'800
Autres				30'000	58'510	-28'510
			<b>Total Divers</b>	<b>152'000</b>	<b>174'710</b>	<b>-22'710</b>
<b>(820 03) Maçon Conseiller</b>						
			<b>Nb.Jours</b>	<b>Taux/jour</b>	<b>Total</b>	
Indemnité	56		2'500	140'000	172'500	-32'500
Per diem	45		500	22'500	35'750	-13'250
Deplacement					5'500	-5'500
			<b>Total Maçon Conseiller</b>	<b>162'500</b>	<b>213'750</b>	<b>-51'250</b>
<b>(820 01) Per Diem , Coordinateur</b>						
Chef lieu/dep./arr.	8		5'000		40'000	-40'000
Ailleurs	24		2'500		60'000	-60'000
			<b>Total Per Diem Coordinateur</b>		<b>100'000</b>	<b>-100'000</b>
<b>Grand total pour le Programme Constuction Sans Bois, 1994</b>				<b>3'691'600</b>	<b>3'679'115</b>	<b>12'485</b>

PROGRAMME CONSTRUCTION SANS BOIS

ACTIVITE	LIEU	DECEMBRE	JANVIER	FEVRIER	MARS	AVRIL	MAI	MAÇONS FORMATEURS
Formation des Maçons	Balleyara		12-15					HASSAN, KADIRI
Formation des Maçons	Torodi		17-25					MOUNKAILA, ABDOU
Formation des Maçons	Gotheye				17-30			HASSAN, KADIRI, MODE
Recyclage des Maçons	Ouallam				28-30			MOUNKAILOU, ABDOU
Construction de Demonstration	Bazagaza (Konni)		11-14					MOUDE, Abdou Moumouni
Construction de Demonstration	Myrriah		21-18	28-1				ALHASSAN, Tidjani
Construction de Demonstration	Enkouregao			11-4				MOUDE, Hamisou, Abdou
Construction de Demonstration	Souloulou				23-4			ALHASSAN, Hamisou, Abdou
Construction de Demonstration	Kourmasawa					15-25		HAMISOU, ABDOU
Construction de Demonstration	N'Doungou						10-27	HASSAN ISSA, Zada Salley
Construction de Demonstration	Makalondi					2-10		MOUSSA ABDOULAYE, Sitou Mous
Construction hors du Programme	Korougoungou				25-2			ABDOU(Moumouni), Zachary?
Construction hors du Programme	Kirtachi					2-16		ABDOU, Zachary?
Construction hors du Programme	Balleyara					14-30		HASSAN Issa, Zada, Boureima,
Construction hors de Programme	Hamdallaye (Chez Ibro)				28-4			ISSAKA, Bagio Issa, Zada
"Workshop" (volontaires et maçons)	Hamdallaye						19-27	Monkaila Alhassan, Issaka Moussa, S, Abdou Moumouni, Alio Djibril

## PROGRAMME CONSTRUCTION SANS BOIS--NIGER,1994

<b>SUIVI DES PIECES DE BANQUE RECUS</b>					
<b>No. Ref.</b>	<b>Date</b>	<b>Bénéficiaire</b>	<b>Montant Reçu</b>	<b>Montant Dépensé</b>	<b>Solde</b>
2790	07-01-94	Daniel McCormick, PCSB	750'000		
2791	07-01-94	Siddo Adamou, forgerone	384'000		
2464	12-02-94	Daniel McCormick, PCSB	700'000		
2498	22-02-94	Guy Bidé, 'T-shirts'	40'000		
2551	24-02-94	Daniel McCormick, PCSB	360'000		
001208	07-03-94	Guy Bidé, 'T-shirts'	110'000		
2901	16-03-94	Daniel McCormick, PCSB	100'000		
2937	23-03-94	Daniel McCormick, PCSB	100'000		
2957	29-03-94	Daniel McCormick, PCSB	500'000		
2994	06-04-94	Daniel McCormick, PCSB	150'000		
3351	18-04-94	Daniel McCormick, PCSB	350'000		
3468	09-05-94	Daniel McCormick, PCSB	150'000		
3577	6.06.94	Daniel McCormick, PCSB	200000		
		<b>Total</b>	<b>3'894'000</b>	<b>3'895'853</b>	<b>-1'853</b>

## PROGRAMME CONSTRUCTION SANS BOIS--NIGER, 1994

<b>SUIVI DES DEPENSE GLOBAL</b>				
<b>Poste</b>	<b>Date</b>	<b>Montant</b>	<b>Montant Reçu</b>	<b>Solde</b>
Indemnités		2'605'100		
Matériaux		403'000		
Transport		182'555		
Divers		174'710		
Maçon-conseiller		213'750		
Per Diem, Coordinateur		100'000		
Logement		216'738		
	<b>TOTAL</b>	<b>3'895'853</b>	<b>3'894'000</b>	<b>-1'853</b>

## PROGRAMME CONSTRUCTION SANS BOIS, 1994

<b>SUIVI DES DEPENSES</b>				
<b>POSTE 820 04</b>				
<b>INDEMNITES--FORMATIONS</b>				
<b>Designation</b>	<b>Date</b>	<b>Nb. Jours</b>	<b>Taux/jour</b>	<b>Total</b>
<b>Formations des maçons</b>				
Balleyara	20.01.94	7		97'300
	25.01.94	7		97'300
	01.02.94	7		97'300
	08.02.94	7		97'300
	15.02.94	7		87'500
(Après la formation formelle)	22.04.94	10	800	8'000
	22.04.94	10	800	8'000
	29.03.94	'contrat'		20'000
	08.04.94	14	750	10'500
	sous-total			523'200
Torodi	24.01.94	7		94'300
	31.01.94	7		97'300
	07.02.94	7		97'300
	14.02.94	7		97'300
	21.02.94	7		97'300
	25.02.94	5		69'500
	sous-total	40		553'000
Gotheye	23.03.94	7		146'650
	30.03.94	7		146'650
	06.04.94	7		146'650
	13.04.94	7		146'650
	20.04.94	7		146'650
	27.04.94	7		146'650
	04.05.94	7		146'650
	sous-total	42		1'026'550
Ouallam (recyclage)	04.04.94	8	(formateurs)	18'000
	10.04.94	5		11'250
	21.04.94	10		22'500
	12.05.94	4		9'000
	18.05.94	3	(conseiller)	7'250
	18.05.94	2	(stagiaires)	2'000
	18.05.94	7'5		7'500
	01.06.94	11'5		11'500
	02.06.94	11		11'000
	02.06.94	12		12'000
	02.06.94	12		12'000
	02.06.94	11		11'000
	sous-total			135'000
<b>Total pour les formations</b>				<b>2'237'750</b>

## PROGRAMME CONSTRUCTION SANS BOIS, 1994

SUIVI DES DÉPENSES				
POSTE 820 03				
INDEMNITES-CONSTRUCTIONS				
Designation	Date	Nb. Jours	Taux/jour	Total
<b>Constructions de bâtiments de demonstration</b>				
Bazazaga				
Maître maçon	09.01.94	7	2250	15'750
	25.01.94	7	2250	15'750
	02.02.94	7	2250	15'750
	10.02.94	9	2250	20'250
	sous-total	30		67'500
Maçon formé	15.02.94	32	1400	44'800
sous-total Bazazaga				112'300
Myrriah				
Maçon formé	27.01.94	4	1450	5'800
	06.02.94	10	1450	14'500
	12.02.94	7	1450	10'150
	19.02.94	6	1450	8'700
sous-total Myrriah				39'150
Enkouregao				
Maître maçon	02.03.94	7	2250	15'750
	05.03.94	15	2250	33'750
	sous-total	22		49'500
Maçon formé	02.03.94	24	1200	28'800
sous-total Enkouregao				78'300
Souloulou				
Maçon formé (1)	04.04.94	16	1400	22'400
Maçon formé (2)	04.04.94	16	1200	19'200
sous-total, Souloulou				41'600
Kourmasawa				
	13.04.94		'avance'	2'000
Maçon formé	25.04.94		'contrat'	15'000
Maçon formé	25.04.94		'contrat'	15'000
sous-total, Kourmasawa				32'000
Makalondi				
Maçon formé	15.03.94	10	'contrat'	15'000
sous-total, Makalondi				15'000
N'Dounga				
Maçon formé (1)		16	1750	28'000
Maçon formé (2)		14	1500	21'000
sous-total, N'Dounga				49'000
<b>Total pour les constructions</b>				<b>367'350</b>
<b>TOTAL INDEMNITES</b>				<b>2'605'100</b>

## PROGRAMME CONSTRUCTION SANS BOIS--NIGER, 1994

<b>SUIVI DES DEPENSES</b>					
<b>1 JANVIER au 1 JUIN</b>					
<b>POSTE 328 02</b>					
<b>TRANSPORT--PEAGES ROUTIERES</b>					
<b>No.</b>	<b>Designation</b>	<b>Date</b>	<b>Bénéficiaire</b>	<b>Objet</b>	<b>Montant</b>
1	Bac Farié (Gotheye)				700
2	Bac Farié				700
3	Niamey--Filingué	30.12.93			220
4	Niamey--Konni (A/R)	09.01.94			1'040
5	Niamey--Balleyara	12.01.94			120
6	Niamey--Torodi	15.01.94			80
7	Niamey--Hamdallaye	16.01.94			70
8	Niamey--Balleyara	20.01.94			120
9	Niamey--Balleyara (A/R)	23.01.94			240
10	Niamey--Torodi	24.01.94			80
11	Niamey--Zinder (A/R)	02.02.94			2'240
12	Niamey--Torodi (A/R)	12.02.94			160
13	Niamey--Torodi (A/R)	19.02.94			160
14	Niamey--Torodi (A/R)	25.02.94			160
15	Bac Farié	11.03.94			700
16	Bac Farié	16.03.94			700
17	Niamey--Balleyara (A/R)	15.03.94			240
18	Niamey--Filingué	21.03.94			220
19	Niamey--Balleyara	29.03.94			120
20	Bac Farié	31.03.94			700
21	Bac Farié	02.04.94			700
22	Niamey--Hamdallaye (A/R)	03.04.94			70
23	Niamey--Torodi (A/R)	11.04.94			160
24	Niamey--Kollo	14.04.94			40
25	Kollo--Niamey	14.04.94			40
26	Niamey--Gotheye	16.04.94			90
27	Bac Farié	16.04.94			700
28	Bac Farié	17.04.94			700
29	Niamey--Hamdallaye(A/R)	22.04.94			70
30	Niamey--Hamdallaye	29.04.94			35
31	Niamey--Torodi	30.04.94			160
32	Bac Farié	03.05.94			700
33	Bac Farié	05.05.94			700
34	Niamey--Hamdallaye (A/R)	05.05.94			70
35	Niamey--Kollo	06.05.94			40
36	Kollo--Niamey	06.05.94			40
37	Niamey--Hamdallaye (A/R)	08.05.94			70
				<b>Total péages routiers</b>	<b>13'155</b>

## PROGRAMME CONSTRUCTION SANS BOIS--NIGER, 1994

POSTE 820 08					
TRANSPORT DES MACONS					
No.	Designation	Date	Bénéficiaire	Objet	Montant
	Balleyara--Niamey	09.01.94	Maître maçon	Construction, Bazazaga	1'500
	Balleyara--Niamey	14.01.94	Maçon-formateur	Formation, Torodi	1'500
	Filingué--Birni N'Konni	14.01.94	Maçon formé	Construction, Bazazaga	5'000
	Balleyara--Chikal	20.01.94	Abdou Karimou	Formation, Balleyara	1'500
	Myrriah--Niamey	08.02.94	Maçon-conseiller	Construction, Myrriah	10'000
	Tondi Ciré--Nya Beri	15.02.94	Maçon-stagiaire	Formation, Balleyara	1'500
	Niamey--Ouallam (x2)	15.02.94	Maçon-Formateur(2)	Formation, Balleyara	2'100
	Bazazaga--Filingué	15.02.94	Maçon formé	Construction, Bazazaga	5'000
	Niamey--Myrriah	26.02.94	Maçon-conseiller	Construction, Myrriah	20'000
	Niamey--Ouallam	26.02.94	Maçon-formateur	Formation, Torodi	1'500
	Niamey--Tondi Ciré	05.03.94	Maçon-formateur	Formation, Torodi	2'000
	Zinder--Niamey	16.03.94	Maçon-conseiller	Construction, Myrriah	18'000
	Niamey--Maradi	23.03.94	Maçon-conseiller	Construction, Souloulou	15'000
	Tondi Ciré--Hamdallaye(x2)	29.03.94	Maçon-stagiaire(2)	Formation, Balleyara	3'000
	Souloulou--Niamey	01.04.94	Maçon-conseiller	Construction, Souloulou	15'000
	Hamdallaye--Tondi Ciré(x2)	03.04.94	Maçon-stagiaire(2)	Formation, Balleyara	3'000
	Niamey--Torodi	07.04.94	Maçon-conseiller	Suivi/appui, Torodi	1'500
	Kirtachi--Boulla	12.04.94	Maçon-stagiaire	Formation, Balleyara	2'500
	Niamey-- Agadez (x2)	13.04.94	Maçon-conseiller		40'000
	Niamey--Ouallam	07.05.94	Maçon-formateur	Formation, Gotheye	2'500
	Tondi Ciré--Niamey	08.05.94	Maçon formé	Construction, N'Dounga	2'000
	N'Dounga--Tondi Cirè (A/R)	17.05.94	Maçon formè	Construction N'dounga	5'000
	N'Dounga--Tondi Cirè (A/R)	17.05.94	Maçon formè	Construction N'Dounga	5'000
	Ouallam--Hamdallaye	15.05.94	Maçon formè	Hamdallaye workshop	2'000
				<b>Total transport maçons</b>	<b>166'100</b>

## PROGRAMME CONSTRUCTION SANS BOIS--NIGER, 1994

POSTE 328 01				
ENTRETIEN DES VEHICULES				
Reparation d'un pneu	12.03.94	'Alam' Pajero		500
Reparation d'un pneu	13.02.94	'Alam' Pajero		600
Reparation d'un pneu	14.03.94	'Alam' Pajero		600
Changement d'un pneu	28.03.94	'Alam' Pajero		500
Reparation d'un pneu	29.03.94	Suzuki		500
Reparation d'un pneu	02.04.94	Suzuki		600
			<b>Total entretien des vehicules</b>	<b>3'300</b>
			<b>TOTAL TRANSPORT</b>	<b>182'555</b>

<b>SUIVI DES DEPENSES</b>					
<b>POSTE 820 05</b>					
<b>OUTILS</b>					
<b>No.</b>	<b>Designation</b>	<b>Date</b>	<b>Unités</b>	<b>Bénéficiaire</b>	<b>Montant</b>
<b>Formations des maçons</b>					
	Matériel divers	09.12.93		Siddo	
	moules des petites briques		18		144'000
	moules des grandes briques		2		16'000
	guides mobiles		28		224'000
	Piquets en fer #8 (1m)				
				<b>Sous-total formations</b>	<b>384'000</b>
<b>Constructions de bâtiments de demonstration</b>					
<b>Bazazaga</b>					
	planches en bois (1,5m)	20.01.94	2		2'000
	planches en bois (3m)	24.01.94	4		16'000
	piquets en fer #8	09.01.94	20		1000
				sous-total	19'000
				<b>Sous-total constructions</b>	<b>19'000</b>
				<b>TOTAL MATERIAUX</b>	<b>403'000</b>

## PROGRAMME CONSTRUCTION SANS BOIS--NIGER, 1994

<b>SUIVI DES DEPENSES</b>					
<b>DIVERS</b>					
<b>No.</b>	<b>Poste</b>	<b>Designation</b>	<b>Date</b>	<b>Bénéficiaire</b>	<b>Montant</b>
	391	Photocopies,papeterie	12.01.94	Lipac Filingué	2750
	352	Papeterie	18.01.94	Boutique Torodi	1000
	352	Planche en bois pour maquettes	19.01.94	Boukoci, Niamey	1500
	352	Petite caisse en metal	19.01.94	Boukoci, Niamey	1000
	352	Papeterie/Pedagogique	31.01.94	Buropa	4805
	352	Papeterie	01.02.94	Buropa	2100
	352	Carnet reçus	15.02.94	Peyrissac	575
	822	T-shirts	07.03.94	Ets Bidé et fils	90000
	303	Adaptateur pour l'ordinateur	07.03.94	Peyrissac	670
	395	Film Kodak 135/24p	16.03.94	Maurice Asconi	4100
	352	Papeterie	17.03.94	Boutique Gotheye	2800
	395	Photos	07.04.94	Maurice Ascani	17000
	391	Photocopies en couleur	07.04.94	Espace Copieurs	15500
	395	Photos (retirages)	15.04.84	Maurice Ascani	5100
	352	Classeurs diapos	23.04.94	Maurice Ascani	6000
	395	Photos	27.04.94	Maurice Ascani	4250
	395	Photos	28.04.94	Maurice Ascani	4000
	352	Classeur	29.04.94	Buropa	1560
	395	Photos	01.05.94	Maurice Ascani	8500
	352	Classeur diapos	01.05.94	Maurice Ascani	1500
				<b>TOTAL DIVERS</b>	<b>174710</b>

## PROGRAMME CONSTRUCTION SANS BOIS--NGER, 1994

<b>SUIVI DES DEPENSES</b>					
<b>POSTE 820 03</b>					
<b>MACON CONSEILLER</b>					
No.	Designation	Date	Nb. Jours	Taux/jour	Total
	Indemnités	27.01.94	8	2500	20'000
		26.02.94	8	2500	20'000
		23.03.94	32	2500	80'000
		15.04.94	21	2500	52'500
				sous-total	172'500
	Per Diem (1)	26.02.94	20	500	10000
		23.03.94	20	500	10000
	Per Diem (2)	15.04.94	21	750	15750
				sous-total	35'750
	Deplacement*	23.03.94	8	500	4000
		15.04.94	3	500	1500
				sous-total	5500
<b>TOTAL MACON-CONSEILLER</b>					<b>213'750</b>
	(1) Avant la devaluation				
	(2) Après la devaluation				
	*Les dimanches				

## PROGRAMME CONSTRUCTION SANS BOIS--NIGER, 1994

SUIVI DES DEPENSES			
POSTE 820 01			
Per Diem, Coordinateur			
No.	Date	Lieu	Montant
1	9.Jan.94	Doundaye (Konni)	2500
2	12.Jan.94	Tondi Ciré (Balleyara)	2500
3	15.Jan.94	Torodi	2500
4	16.Jan.94	Torodi	2500
5	17.Jan.94	Torodi	2500
6	20.Jan.94	Tondi Ciré	2500
7	26.Jan.94	Tondi Ciré	2500
8	28.Jan.94	Torodi	2500
		sou-total, Janvier	20000
1	2.Fév.94	Doundaye	2500
2	3.Fév.94	Maradi	5000
3	4.Fév.94	Zinder	5000
4	5.Fév.94	Zinder	5000
5	6.Fév.94	Zinder	5000
6	9.Fév.94	Maradi	5000
7	12.Fév.94	Torodi	2500
8	18.Fév.94	Torodi	2500
9	22.Fév.94	Ouallam	5000
10	25.Fév.94	Torodi	2500
		sous-total, Fevrier	40000
1	11.Mar.94	Gotheye	2500
2	12.Mar.94	Ouallam	5000
3	16.Mar.94	Gotheye	2500
4	17.Mar.94	Gotheye	2500
5	18.Mar.94	Gotheye	2500
6	19.Mar.94	Gotheye	2500
7	31.Mar.94	Gotheye	2500
		sous-total, Mars	20000
1	1.Avr.94	Gotheye	2500
2	16.Avr.94	Gotheye	2500
3	18.Avr.94	Gotheye	2500
		sous-total, Avril	7500
1	3.Mai.94	Gotheye	2500
2	4.Mai.94	Gotheye	2500
3	10.Mai.94	Balleyara	2500
		sous-total, Mai	7500
1	3.Jun.94	Ouallam	5000
		sous-total, Juin	5000
		<b>TOTAL PER DIEM</b>	<b>100000</b>