System Design : NSS 65th Round

6.1. INTRODUCTION

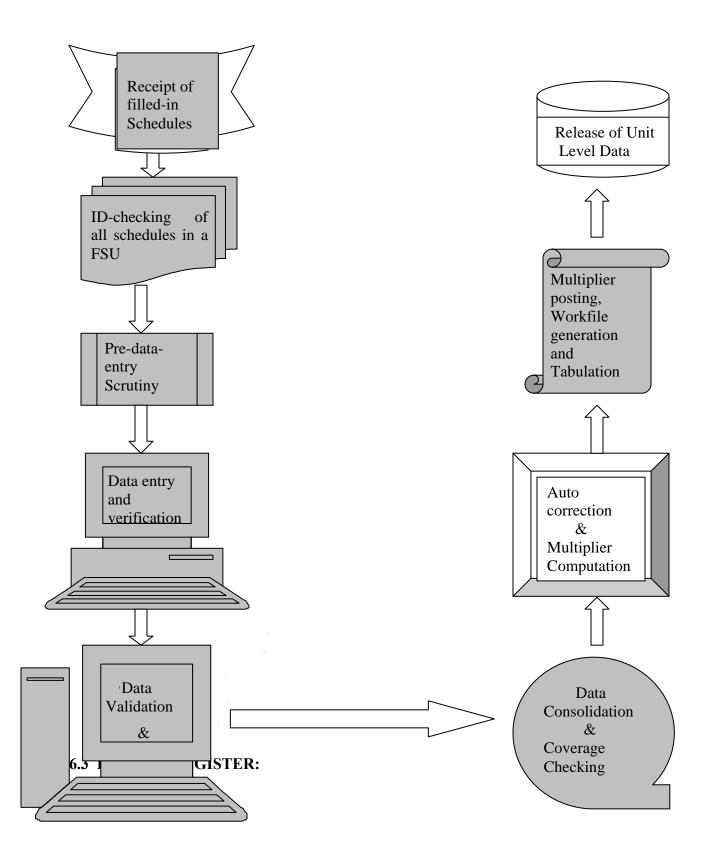
The NSS will start its sixty-fifth round from 1st July 2008. The survey will continue upto 30th June 2009. During this round, the following schedules of enquiry will be canvassed:

Srl.	Sch.	Description of Subject	Unit for	No. of	FSUs	SSUs
No.	No.		Canvassing Schedule	Central Sample	State Sample	per FSU
1.	0.0	List of Households	Village & Urban Block	12928	13996	
2.	21.1	Domestic Tourism	Household	12928	13996	12
3.	1.2	Housing Condition	Household	12928	13996	12
4.	0.21	Particulars of Slum	Slums in the Urban Block	4756	5444	

6.2 SOFTWARE FOR DATA PROCESSING

In 65th Round, like previous NSS rounds, screen-based data entry will be made using **data-entry software called DPDSYS65 developed in-house by DPD**. The software is fully menu-driven and user-friendly. Use of this software will greatly reduce and simplify the steps of data processing.

The following chart shows basic steps of data processing in NSS 65th Round:



In the Document Control Section (DCS) of each D.P.Centre, 'Receipt-Registers' will be opened to record and monitor receipt position of different types of schedules. The format of the Receipt Register is given in **Annexure-...**.

The following checks are to be exercised at DCS at the time of making entry in Receipt Register on receipt of schedules of an FSU.

- > All the schedules should bear the **same FSU Serial Number** and correct state code.
- Number of schedules received for different type of schedules (i.e. total surveyed and total casualty) should tally with the information given in Summary Block of Sch.0.0.
- In the ID-block of all schedules, Hamlet-group/Sub-block number, Second Stage Stratum (SSS) and Sample household number should be invariably correct.

6.4 HOT SCRUTINY:

An adequate number of schedules of sub-round-1 will be scrutinized by officers of the D.P.Centres before these schedules are sent to Scrutiny Section (SS) for regular scrutiny. Any mistake in the filled-in schedules which may affect a large number of schedules, should be brought to the notice of ADG(DPD) immediately.

6.5 LOT PREPARATION:

In 65th round, schedules will not be segregated for the purpose of LOT preparation. One LOT will consist of all the schedules of one FSU. Hence, FSU serial number will be same as LOT number.

6.5.1 FLY SHEET:

Each LOT will accompany a FLY-SHEET indicating its composition. A MOVEMENT-REGISTER (format is given in **Annexure-....**) is to be maintained by DCS to keep an account of the movement of LOTs to/ from different sections. Format of the LOT Register is given in **Annexure-.....** After the LOTs are entered in the Receipt Register, these will be sent to Scrutiny Section for '**Pre-data-entry scrutiny**' and thereafter to the Data Entry Section for data-entry & verification. After data entry & verification of each LOT, following information should be incorporated in the FLY-SHEET accompanying the LOT.

- □ number and type of Schedules data-entered
- □ name of data entry operator who entered the data
- □ number and type of Schedules data-verified
- □ name of data entry operator who verified the data

6.6 INSTALLATION OF DPDSYS PACKAGE:

The installation of DPDSYS software is fully automatic. One has to insert the installation CD into its CD-ROM drive and then run SETUP programme. A detail instruction for installation of DPDSYS is given in **Annexure –**

After installation of the package is complete, the software can be run either by typing the command

dpdsys65

from C:\ent> prompt or by creating a shortcut for DPDSYS65 on desktop and double-clicking on the icon of DPDSYS65 on the desktop.

6.7 BATCHFILE NAMING CONVENTION:

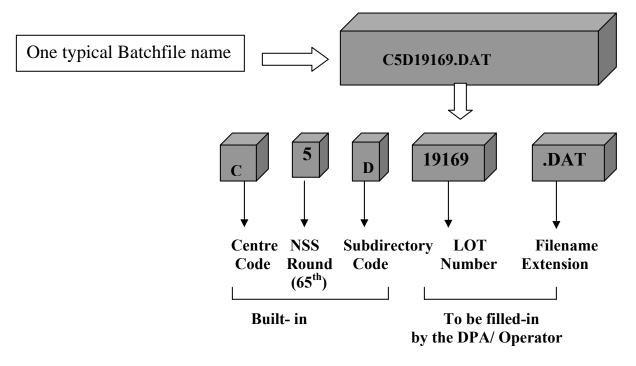
The resultant data file after completion of data entry of one single LOT is called a batchfile. The naming convention of a batchfile is structured as explained below:

(i) The first letter of the batchfile represents the Data Processing Centre.

Α	—	Ahmedabad
В	—	Bangalore
С	—	Kolkata, HQU-III
D	—	Delhi
Ε	—	Kolkata, HQU-I
F	—	Kolkata, HQU-II
G	—	Giridih
Ν	—	Nagpur
S	—	State Sample

- (ii) Subdirectory for storing the batchfile in a PC is fixed by the system. It is "C:\r65\data" for NSS 65th Round. This subdirectory is automatically created by the DPDSYS65 when it is run for the first time in a PC.
- (iii) In the opening screen of DPDSYS65 software, the user has to enter LOT number (i.e. FSU Srl. No.) as Dnnnn, where nnnnn stands for the LOT number (same as FSU number) and "D" indicates the subdirectory data (C:\r65\data) where batchfile is stored.
- (iv) DPDSYS65 constructs the batchfile name in the format "C5D19169.DAT",say where
 - 'C' is the code for Data Processing Centre (viz. KOLKATA, HQU-III),
 - **'5'** stands for 65th round (fixed for all batchfiles of 65th Round),
 - 'D' represents 'data subdirectory'(C:\r65\data),
 - '19169' represents the LOT number (same as FSU No.),

'.DAT' is the file name extension name used by DPDSYS package.



6.8 SCOPE OF DATA ENTRY:

A particular Data Processing Centre will be allowed to enter data of only those FSUs which are allocated to them as per the **sample list**. The sample list file to be used in DPDSYS package, **SAMPLE65.LST** will be provided in the installation CD. The identification fields will be checked by the software against their respective values stored in "LST" file for their validity.

6.9 ORDER OF DATA ENTRY:

In NSS 65th round, there are four schedules of enquiry. All the screens of all schedules are integrated in single software.

At first, the data entry and verification work for Sch.0.0 will be completed. The Batchfile created in this process will contain coverage information of all the schedules as given in the Summary Block of Sch. 0.0. Next, data entry and verification work of other schedules may be completed in any order using the DPDSYS65 software.

The basic principle of data processing in 65th round is that, all the data entry and verification works relating to the schedules of a single FSU have to be finished in a single go, before taking up another FSU. Similarly, the scrutiny, validation and updation work will be taken up FSU by FSU.

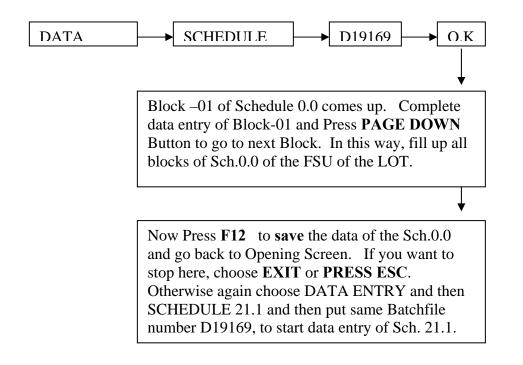
As for the online coverage check supplied with the DPDSYS65 software, for each type of schedule, coverage information will be shown in the opening screen, separately for each schedule of that FSU. However, there will be a separate coverage check programme to be run, for the entire data generated for each DPC (or, may be statewise, as required).

6.10 BASIC OPERATIONS UNDER DPDSYS :

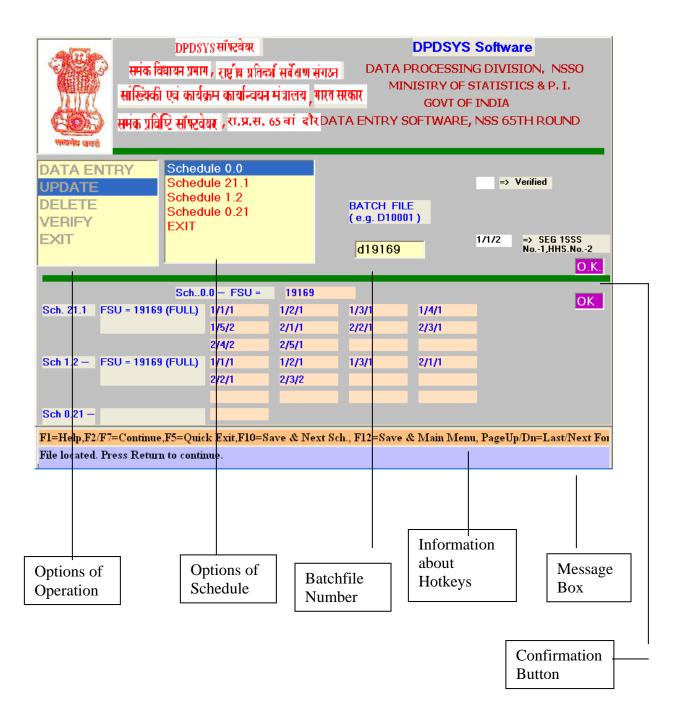
6.10.1 DATA ENTRY

When DPDSYS is run, an opening screen (as shown in the next page) will come up.

In case of a new batchfile, where data is to be entered for the first time, the correct choices of menus will be as follows :



This figure (as shown in the next page) shows different parts of the Opening screen which will come up when you enter the command C:> dpdsys65 in the command prompt of the data entry PC.



6.10.2 DATA VERIFICATION

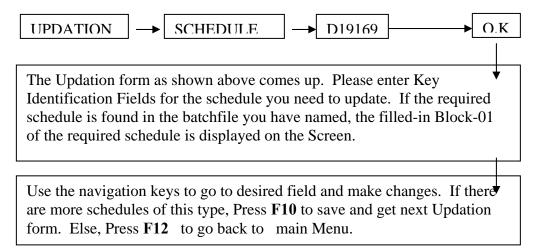
After completion of data entry, verification of each schedule has to be done by selecting **VERIFY** option from the Opening Screen. In case there is a verify mismatch in a particular field, the background colour of the field turns **blue**, and the cursor halts there. The user should **re-enter the correct figure of the field twice successively.** The entry will then be accepted as final, provided it does not fail any other validation rule imposed in the field. **Unverified schedules will not be accepted for subsequent stages of processing.**

6.10.3 DATA UPDATION

While data entry is in progress in respect of any particular schedule and it is not yet saved using F10 or F12 keys, one can go back to any field of any previous block by using PAGEUP and UP/DOWN ARROW keys, and content of the field can be changed. But once the data is saved, changes in the already entered data can be effected only in UPDATION mode. The following figure shows the Updation Form, which comes up when UPDATION option is selected in the Opening Screen.

Upda	Jpdation Opening Form							
Please	e Enter Sche	dule la	lentification					
FSU	Segment no.	SSS	Hhs/Ent. no(SSU).					
19169	1	1	01	0.K.				
				(1) T14				
FI=Hell	F1=Help,F2/F7=Continue,F5=Quick Exit,F10=Save & Next Sch., F12=Save & Main Menu, PageUp/Dn=Last/Next For							

For Updation, the mode of operation will be as follows :



The key identification fields for updation of different types of schedules are as follows:

Schedule				
No.				
0.0	FSU No.	Χ	Χ	Χ
21.1	FSU No.	Sample h.g./s.b. no.	Second stage stratum	Sample household no.
1.2	FSU No.	Sample h.g./s.b. no.	Second stage stratum	Sample household no.
0.21	FSU No.	Χ	X	Х

6.10.4 DATA DELETION

Just as in the case of UPDATION procedure, one has to select DELETION menu from the Opening Screen and the **Deletion Form** will come up. It is exactly the **same as updation form**. By entering the Key Identification fields, one can **delete complete data of one schedule at a time**. By repeating this process, more schedules of any particular type can be deleted. Now, if some schedules of some other type are also to be deleted, then go back to the main Menu by pressing ESC, and choose the appropriate Schedule type.

Deletion of only one or more Blocks or any other type of **'part deletion' of the content of a schedule is not possible**. If such need arises, it has to be done in UPDATION mode.

It may be noted that, deletion of schedules will automatically attract data integrity and coverage checks. For example, deletion of one Schedule 0.0 is not permitted if there are data of other detailed schedules related to this FSU.

6.10.5 DATA VALIDATION

Considering the speed of data entry, it is not desirable to include all validation checks online with data entry operation. Therefore, when data-entry and verification of one LOT has been completed, a separate **'batch validation'** is to be exercised on the batchfiles.

Data Validation is performed through different phases of operations. First we go for Content Check(Ph-I Validation) then Coverage Check(Ph-II Validation) and finally finding out abnormally high or low values (Ph-III Validation). All the phases of validations mentioned here are performed using computer programmes in **DOS environment.** After running these programmes, doubtful records are printed in the form of error list and checked thoroughly consulting the live filled-in schedules.

The basic steps involved in validation process are -

- Conversion of DAT files(generated by DPDSYS65) into text data.
- Sorting of text data with appropriate sorting keys (e.g. FSU.X HHD-ID X PERSON SRL. No.)
- > Running of Computer Scrutiny Programme & generating error list.
- ➢ Furnished output FSU by FSU.

Detail instructions for running the programmes are given as under.

6.10.5.1 PHASE-I VALIDATION

The following programmes are required for phase-I Validation of NSS 65th Round :-

Srl.No.	Executable	Supporting files	Scrutiny Check
	Programme		Points
1.	scr00065.exe	s00065.fmt	CSP00065.doc
2.	scr21165.exe	s21165.fmt	CSP21165.doc
3.	scr12065.exe	s12065.fmt,	CSP12065.doc
3.	scr02165.exe	s02165.fmt,	CSP02165.doc
4.	mkdata65.exe		
5.	mkbat65.exe		
6.	shell65.bat	ret, tmp	
7.	pool65.bat		
8.	tabsort.exe*	sortky0, sortky1, sortky2,sortky3	
9.	merge.exe*		
10.	sort_xp.exe*		
11.	sort_window98.exe*		
12.	pathcr.bat*		

* These programmes are put in a separate folder(directory) called dostab.

Scheme of operation.

1. First, copy the folder dostab in "C:\" directory. This contains tabsort.exe, merge.exe, pathcr.bat and sort_xp.exe & sort_windows98.exe files. If one works in windows 98 environment, sort_windows98.exe is to be renamed as sort.exe. If one works on windows XP environment, sort_XP.exe is to be renamed as sort.exe. Then run the following command in the Command Prompt

C:\dostab\pathcr<return>

This ensures the path setting for running the validation programme in DOS environment from any directory..It is advisable to run this programme before execution of any validation programme.

- 2. The entire set of software supplied should be loaded in a suitable directory.
- 3. A fairly large number of VB-dat files may be kept in this directory, and shell program **SHELL65** may be run on all those as given below -

SHELL65 outputfilename <return>

The Shell65 automatically runs a series of programmes and finally one gets validation output for all the schedules of one FSU at a single place. The programme **mkdata65** converts VB-DAT files to standard textdata files. Then all data of a schedule are pooled, separately, giving appropriate filename extensions. Next, the schedule-wise textdata files will be automatically sorted on the appropriate Key Identification and Item code fields. Appropriate validation programmes will be run on the sorted files to generate validation error-print file. Next, validation output of another FSU will be printed. The validation outputs for each FSU may be separated, and distributed to the Scrutiny Officials along with the LOT(i.e.filled-in schedules of a single FSU. Hence, with this arrangement, the running of the validation software has been made fully automatic, and the user need not remember the required sorting order, or even name of the concerned validation software.

Let us suppose that we have given output file name as **xx**. Then after executing the shell65 programme following files will be generated:-

(i) xx.s00 - text data of Schedule 0.0
(ii) xx.s21 - text data of Schedule 21.1
(iii) xx.s12 - text data of Schedule 1.2
(iv) xx.s02 - text data of Schedule 0.21
(iv) xx - error list.

One can take the print out of xx file for scrutinizing the errors.

6.10.5.2. Ph-II Validation (Coverage Check)

Coverage checking is done to ensure complete coverage of all schedules surveyed as per the sample list. Under this stage-

- (a) Coverage of data vis-a-vis the directory file(Sch. 0.0, Block-6), in respect of each FSU and SSU are checked.
- (b) Duplication of FSU or SSU data are checked.

The following programmes are required for phase - I Validation of NSS 65 th Round:-

Srl.No.	Executable	Supporting files	Remarks	
	Programme			
1	dirmch65.exe		Coverage	Check
			Programme	
2	mkdata65.exe			
3	mkbatc65.exe			
4	shellc65.bat	ret, tmp		
5	poolc65.bat			
6	tabsort.exe*	sortky0, sortky1, sortky2,sortky3		
7	merge.exe*			
8	sort_xp.exe*			
9	sort_window98.exe*			
10	pathcr.bat*			

* These programmes are put in a separate folder(directory) called dostab

Scheme of operation

The programme for coverage check of NSS 65th round is DIRMCH65.exe. For running this programme ,the Ph-I validated VB-dat files are to be converted into **text data** using shellc65.Next , schedule-wise textdata will be sorted by TABSORT program with the appropriate sorting keys for a particular schedule. Then DIRMCH61.exe is to be run separately for each schedule against directory file(i.e Sch.0.0).

To sort schedule-wise textdata, run the command

TABSORT -r127 -O<outputfile> <text converted file> < SORTKY

Let us suppose that the output file (sorted) names for different schedules are **zz00**(Sch.0.0), **zz21**(Sch21.1),**zz12**(Sch.1.2) and **zz02**(Sch.0.2). Then following the above command syntax we will sort the data schedule wise as follows -

i) For Sch. 0.0
TABSORT -r127 -Ozz00 xx.s00 < SORTKY0
ii) For Sch. 21.1
TABSORT -r127 -Ozz21 xx.s21 < SORTKY1

iii) For Sch. 1.2 TABSORT -r127 -Ozz12 xx.s12 < SORTKY2
iv) For Sch. 0.2 TABSORT -r127 -Ozz02 xx.s02 < SORTKY3

Schedule-wise sorted files will be zz00, zz21, zz12 and zz02. Then Schedule wise execution of the coverage programme will be as follows:-

dirmch65 zz.s21 zz.s00 - for Sch.21.1. dirmch65 zz.s12 zz.s00 - for Sch.1.2. dirmch65 zz.s12 zz.s00 - for Sch.0.21

This will generate printfile with .p extension. These output files should be renamed according to the Schedule name. The error print out of the Coverage check program is self explanatory. Unlike the Ph-I validation, coverage check programme should be run on sufficiently large no. of FSU, preferably sub-round X sector wise.

6.10.5.3 <u>Ph-III (Howler Check)</u>

Howler checks are basically range checks meant for detecting the abnormally high or low values which affect the data badly. These programmes attempt to shape the data bulk within some predetermined limits fixed on the basis of experience of previous rounds as well as through scrutiny of the current round data after Phase -I validation.

The following programmes are required for phase - I Validation of NSS 65 th Round-

Srl.No.	Executable	Supporting files	Scrutiny Check
	Programme		Points
2.	how21165.exe	s21165.fmt	HSP21165.doc
3.	how12065.exe	s12065.fmt,	HSP12065.doc
3.	how02165.exe	s02165.fmt,	HSP02165.doc
4.	mkdata65.exe		
5.	mkbath65.exe		
6.	shellh65.bat	ret, tmp	
7.	poolh65.bat		
8.	tabsort.exe*	sortky0, sortky1, sortky2,sortky3	
9.	merge.exe*		
10.	sort_xp.exe*		
11.	sort_window98.exe*		
12.	pathcr.bat*		

* These programmes are put in a separate folder(directory) called dostab

Scheme of operation.

Execution of howler checking programme and generation of error list using SHELL(meant for howler) is exactly same as that of Ph-I Validation. Therefore, follow all the steps mentioned in Ph - I with the programmes and supporting files supplied for howler validation.

6.10.5.3 Directory File Checking

The data of Sch.0.0 (Listing Schedule) is known as directory file. It provides the basic material for multiplier calculation. Therefore, it should be thoroughly checked using some special computer checking programmee.

: The following programmes are required for phase - I Validation of NSS 65 th Round

Srl.No.	Executable	xecutable Supporting files S	
	Programme		
1.	spldos65.exe	s61000.fmt	DCP65.doc

Scheme of operation

Let xx.s00 be the sorted text data of sub-round – 1 directory file Run the program as follows :

spldos65 xx.s00

This will generate xx.p00 as error-list.

The layouts of textdata for all the schedules of 65th Round are given separately in subsequent chapter of this manual.

6.11. DESPATCH OF BATCHFILES TO CPU OF DPD(HQ) :

On completion of data entry, verification, validation and coverage checking in respect of all the LOTs, the Officer-in-charge of the DP Centre will send all the processed batchfiles to the CPU of DPD(HQ), along with the coverage-checked textdata files and a complete list of Batchfile names. An authentic copy of the batchfiles thus completed and sent should be kept in the custody of the Officer-in-Charge of the DP Centre.

6.12. MISCELLENEOUS INFORMATION:

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- □ Validation Bypass -- If provision of bypassing validation checks is kept with any particular field, background colour of that field will change to WHITE as soon as the check fails. (For example, check on number of Hamlet Groups formed in Sch.0.0, Block-01). This is to distinguish it from other 'hard checks' where the background colour will change to RED if the check is not satisfied. When the colour changes to white, one can either correct the entry or press Escape and Return to bypass the check, if no suitable correction is known at that moment.
- □ Continuation of a Form -- In case there are large number of rows in a block (e.g. Block of Demographic particulars of Household members in Sch.1.0, etc.), one can requisition another block of the same type in continuation of the current block, by pressing F2 at data entry stage. One has to press F7 for continuation form of a block during updation stage. This facility will be made available wherever there is such requirement.
- □ Emergency Exit -- While doing data entry, if it so happens that one can not come out of a particular field or Form due to any reason whatsoever, the Hotkey F5 for emergency Exit is to be pressed. It may be noted that, this will get back to the Opening Screen, without saving the content of the current schedule.
- □ Online Help -- Press F1 (except in the Opening Screen) for more detailed information on operations of DPDSYS.

RECEIPT REGISTER: NSS 65th ROUND July 2008 – June 2009 (DOCUMENT CONTROL SECTION)

Page No.:

D.P.Centre :

State / U.T. :	FOD Region :
Sector : RURAL / URBAN	Sub Round :

FSU NO.			f Schedules or Schedule	Date of despatch	Date of receipt at	Remarks	
	0.0	21.1	1.2	0.2	by FOD	DPD	

MOVEMENT REGISTER: NSS 65th ROUND DOCUMENT CONTROL SECTION

D.P.Centre :

Activity: PDES & DE/ DV

Page No.:...

State:.....

Sector : RURAL/URBAN

FOD Region:..... Sub Round :

FSU No. / Lot No.	Date of Despatch to SS	Date of Receipt from SS	Date of Despatch to DES	Date of Receipt from DES	Remarks

MOVEMENT REGISTER: NSS 65th ROUND DOCUMENT CONTROL SECTION

D.P.Centre :

Activity: PH-I/ HOWLER

Page No.:....

State:.....

Sector : RURAL/URBAN

FOD Region:..... Sub Round :.....

FSU No. / Lot No.	Date of Receipt from DES	Date of Despatch to SS	Date of Receipt from SS	Date of Despatch to DES for updation	Date of Receipt from DES after updation	Remarks

LOT REGISTER: NSS 65th ROUND <u>DATA ENTRY SECTION</u>

D.P.Centre :

Activity: DE/DV

Page No.:

Sector : RURAL/URBAN

Sub Round :

FSU No. / Lot No.	Date of Receipt from DCS	Name of DPA for DE/DV	Date of Allotment for data entry	Date of DE	Date of DV	Date of despatch to DCS for PH-I	Remarks

LOT REGISTER: NSS 65th ROUND <u>DATA ENTRY SECTION</u>

D.P.Centre :

Activity: Updation

Page No.:

Sector : RURAL/URBAN

Sub Round :

FSU No. / Lot No.	Date of Receipt from DCS	Name of DPA for Updation	Date of Allotment	Date of despatch to DCS	Remarks