National Human Exposure Assessment Survey (NHEXAS)

Arizona Study

Quality Systems and Implementation Plan for Human Exposure Assessment

The University of Arizona
Tucson, Arizona 85721

Cooperative Agreement CR 821560

Standard Operating Procedure **SOP-UA-D-13.0**

Title: Coding: Arizona Lab Data

Source: The University of Arizona

U.S. Environmental Protection Agency
Office of Research and Development
Human Exposure & Atmospheric Sciences Division
Human Exposure Research Branch

Notice: *The U.S. Environmental Protection Agency (EPA), through its Office of Research and Development (ORD), partially funded and collaborated in the research described here. This protocol is part of the Quality Systems Implementation Plan (QSIP) that was reviewed by the EPA and approved for use in this demonstration/scoping study. Mention of trade names or commercial products does not constitute endorsement or recommendation by EPA for use.*

Coding: Arizona Lab Data

1.0 Purpose and Applicability

This procedure defines the coding strategy for the coding of Arizona Lab Data. This questionnaire was developed for use in NHEXAS, the Border Study, and other Health and Environment Projects.

2.0 Definitions

2.1 BORDER STUDY : An alias for "Total Human Exposure Arizona: A Comparison of the Border Communities and the State" conducted in Arizona by the University of Arizona/Battelle/Illinois Institute of Technology consortium.

2.2 CODE, GLOBAL: A set of standard codes used in data within the project designating the status of a data field in three cases: datum refused, datum non-applicable, and datum missing.

2.3 HEALTH AND ENVIRONMENT PROJECTS (or H & E) : An umbrella title for all projects funded to M. D. Lebowitz and/or M. K. O'Rourke (or their designees) which examine purported or real relationships among environmental factors and any aspect of human health.

2.4 HRP SITE: The **H**ealth **R**elated **P**rofessions building, located at 1435 North Fremont Avenue; Tucson, AZ 85719. This is an annex of the Arizona Prevention Center and the primary site of NHEXAS Arizona.

2.5 NHEXAS Arizona: Acronym for **N**ational **H**uman **EX**posure **A**ssessment **S**urvey, a research project conducted in Arizona by the University of Arizona/Battelle/ Illinois Institute of Technology Consortium.

3.0 References

Teleform 5.0, Copyright 1991-1996 by Cardiff Software, Inc., San Marcos, CA.

4.0 Discussion

These Laboratory forms are all scanable. They were developed as either primary data forms or secondary "back-up" system forms for data that will be downloaded electronically from specific types of equipment.

The forms were developed using the Teleform program package. This program has a dictionary feature and a feature that prints out the characteristics of each created form.

The overall coding scheme will follow SOP# UA-D-31.x: Global Coding for Scanned Forms. The data will be re-coded according to EPA's coding scheme when it is ready to be submitted to EPA.

The current Laboratory Forms are presented in the attached Figures. A description of all fields and variables may be found in UA-D-24.x Appendix B. Appendix B contains an information sheet defining all abbreviations and a description of each field. Field descriptions contain the name of the field on the form, the variable name, the object id attributes, the constraint level for recognition of the code, the length of the field and the type of the field (i.e., hand writing recognition, and automated Dictionary Correction, etc.).

Special Coding lists will be developed as needed to accommodate unanticipated responses. Such coding lists will be attached to each of the specified appendices as generated.

A summary table of questions needing specific codes and coding lists used are found in Table 1.

5.0 Responsibilities

The Project Data Coordinator is responsible for creating the forms, defining the databases and writing the coding instructions for the Arizona Lab Data form.

6.0 Materials and Reagents

6.1 Codes are to be written with a black felt tip pen only.

6.2 Questionnaires are put into a batch once they are coded and recorded on the Batch Description and Custody Recorded.

6.3 Those coding lists that are not in the Coding Lists notebook can be found on-line in the /rsc53/TrackNHEXAZ/codes/ directory. A copy of each form is listed in section 8.0 Records, and consist of Figures 1 through 3. Food codes for the 24 Hour Food Diary Check are located in the "For Office Use Only" box on the Diet Diary adjacent to the three digit handwriting recognition boxes where coding occurs. (See UA-D-43.x Appendix A).

6.4 Networked Computer Workstation that can access FoxPro.

6.5 Microsoft FoxPro Professional Edition version 2.6, Copyright 1989-1993 Microsoft Corporation.

6.6 Coding Program v1.0, developed in-house using FoxPro 2.6.

7.0 Procedural Coding Steps for Coding of Arizona Lab Data

7.1 Preparation

A. Remove a batch of Vacuum Dust, Soil Characterization or 24 Hour Food Diary Check Questionnaires forms from the Data Coordinator's office.
B. Bring forms to an area where coding can be done.
C. Use only a black felt-tip pen for coding.
D. Find the Coding Lists notebook which contains the coding list specified in Table 1 and bring it to the coding area.

7.2 Coding Forms

A. Begin by checking for missing information, illogical answers, and necessary codes throughout the entire form.
B. Follow the Global Coding scheme (UA-D-31.x) as necessary.
C. If there is no code appropriate to the given response then create a new code and add it to the coding list according to the procedure found in UA-D-31.x.

7.3 Creation of a New Code

A. New codes can be added by the Data Coordinator or his or her designee.
B. See UA-D-31.x for the procedure to create a new code.

8.0 Records

8.1 Coding lists are located in the Data Coordinator's office at the Health and Environment project offices.

8.2 Data Coordinator must review and approve all new codes.

Inclusions:

Figure 1. Vacuum Dust Characterization.
Figure 2. Soil Characterization.
Figure 3. 24 Hour Food Diary Check
Table 1. Questionnaires Needing Codes & Coding Lists

Figure 1. Vacuum Dust Characterization.

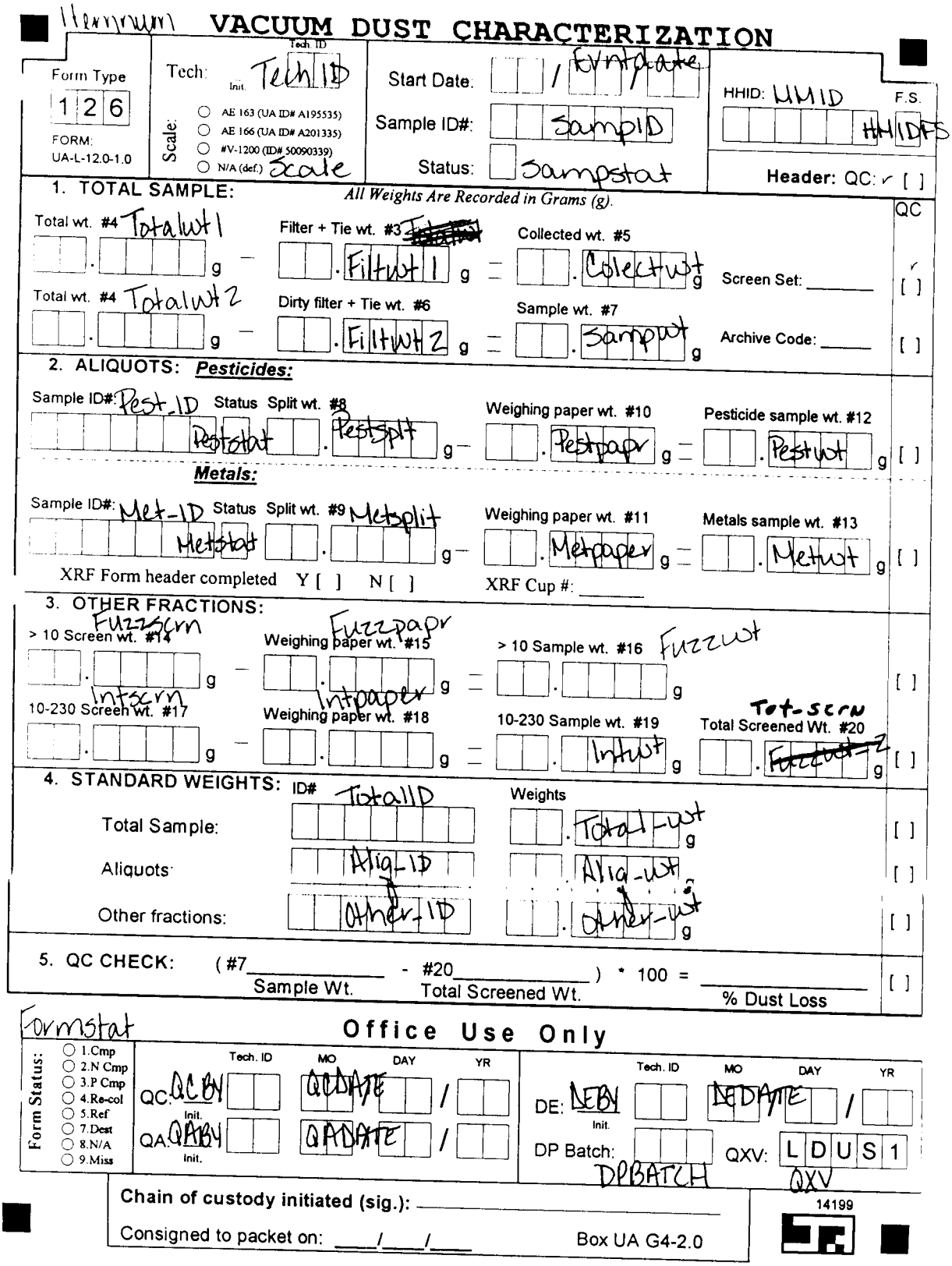

Figure 2. Soil Characterization.

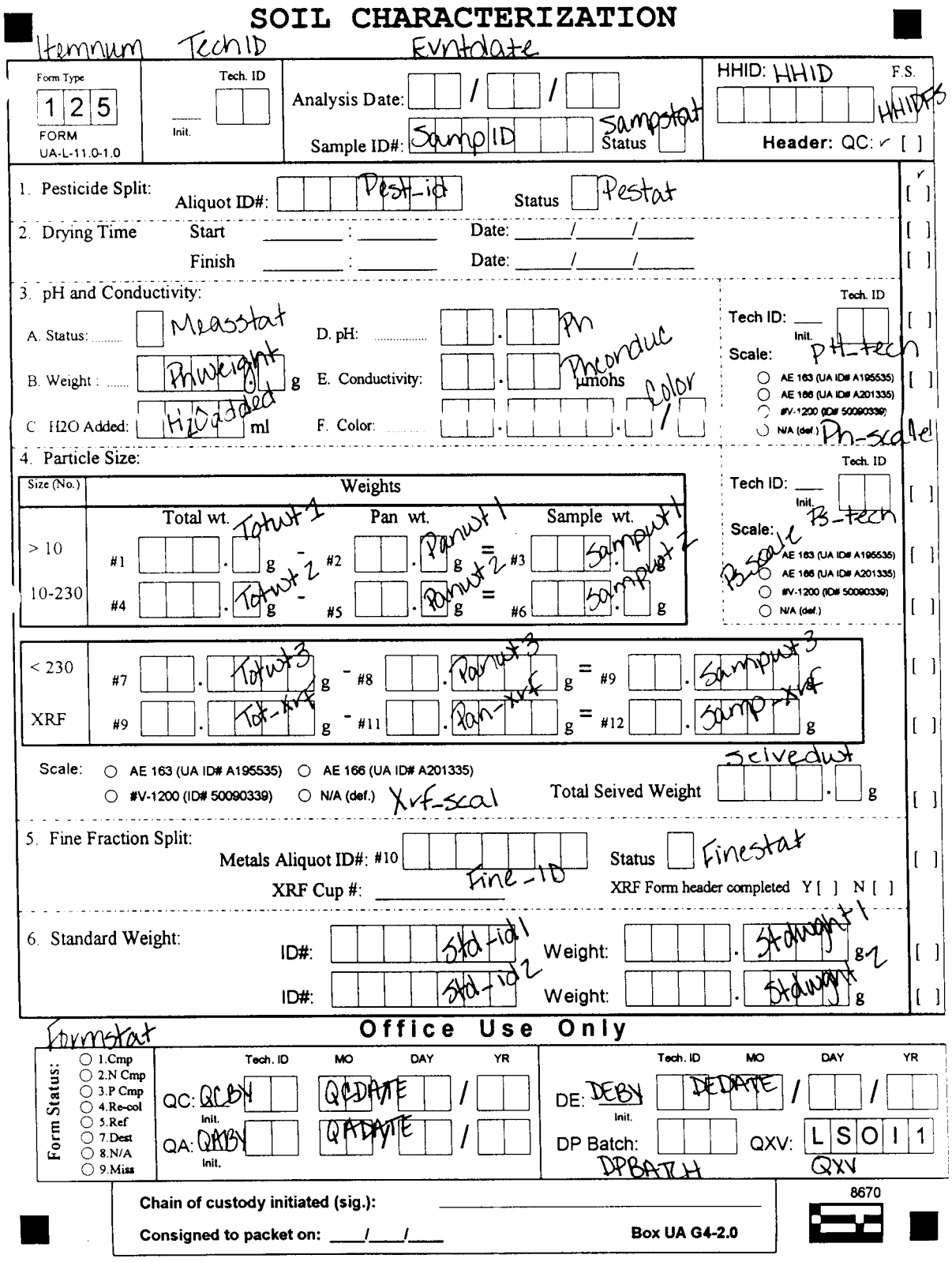

Figure 3. 24 Hour Food Diary Check

24-HOUR FOOD DIARY CHECK

Form Type: 127 (femnum) FORM: UA-L-13.0-1.0

Tech. ID — Tech: ____ Init. Tech ID

Scale: Scale
- ○ AE 163 (UA ID# A195535)
- ○ AE 166 (UA ID# A201335)
- ○ #V-1200 (ID# 50090339)
- ○ N/A (Default code)

Start Date: Evntdate ☐☐/☐☐/☐☐

Sample ID#: ☐☐☐☐☐☐☐☐ Status ☐ (SampID Sampstat)

HHID: HHID F.S. ☐☐☐☐☐☐ ☐ (HHIDF)

Header: QC: ✓ [ ]

All Weights Are Recorded in Grams (g).

	Weight (g)	Volume (ml)	Item Description	Code	In Diary	Compr.	QC
A.	Weight ☐☐☐☐.☐	Volume ☐☐☐☐	[redacted]	Food ☐☐☐	In.diary Y N N/A ○ ○ ○	Comp ○ C ○ N	✓ [ ]
B.	☐☐☐☐.☐	☐☐☐☐	Food data	☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
C.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
D.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
E.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
F.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
G.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
H.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
I.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
J.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
K.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
L.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
M.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]
N.	☐☐☐☐.☐	☐☐☐☐		☐☐☐	Y N N/A ○ ○ ○	○ C ○ N	✓ [ ]

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Figure 3 (Continued). 24 Hour Food Diary Check

PAGE 2
24-Hr Food Diary Check

HHID: HHID (HHIDFS) F.S. Start Date: Evntdate / / Sample ID#: SampID Status Sampstat

1. Liquid Sample ID#: liq_ID Status liq_stat
2. Total Volume: Tot_vol ml

QC: r [ ]

3. Alcohol A. Smell: Y N N/A (def.) Alcsmell ○ ○ ○ B. Diary: Y N N/A (def.) Alcdiary ○ ○ ○ COMMENTS: _____

Comments: _____

Formstat

Office Use Only

Form Status: ○ 1.Cmp ○ 2.N Cmp ○ 3.P Cmp ○ 4.Re-col ○ 5.Ref ○ 7.Dest ○ 8.N/A ○ 9.Miss

	Tech. ID	MO	DAY	YR	Tech. ID	MO	DAY	YR
QC: ____ Init.	QCBY	QCDATE						
QA: ____ Init.	QABY	QADATE						
DE: ____ Init.					DEBY	DEDATE		

DP Batch: DPBATCH QXV: LFOD1

Chain of custody initiated (sig.): _____

Consigned to packet on [ ]: ___/___/___ Box UA G4-2.0

Table 1. Questionnaires Needing Codes & Coding Lists

Questionnaire Type	Question Number	Coding List Name	Location	SOP # & Table# of Coding List
FOLLOW UP	6C	TYPE OF ANTACID MEDICATION	/rsc53/TrackNHEXAZ/codes/anatacid.dbf	UA-D-11.x / Table 2
FOLLOW UP	6B	TYPE OF CHELATING AGENT	/rsc53/TrackNHEXAZ/codes/chelate.dbf	UA-D-11.x / Table 4
FOLLOW UP	7C	TYPE OF CHROMIUM SUPPLEMENT	/rsc53/TrackNHEXAZ/codes/chromium.dbf	UA-D-11.x / Table 5
FOLLOW UP	7A	TYPE OF CALCIUM SUPPLEMENT	/rsc53/TrackNHEXAZ/codes/calcium.dbf	UA-D-11.x / Table 3
FOLLOW UP	11	TYPE OF DIET	/rsc53/TrackNHEXAZ/codes/diet.dbf	UA-D-11.x / Table 13
FOLLOW UP	6A	DIURETIC MEDICATION	/rsc53/TrackNHEXAZ/codes/diuretic.dbf	UA-D-11.x / Table 6
FOLLOW UP	6A-7D	DOSAGE ACCORDING TO LABELING	/rsc53/TrackNHEXAZ/codes/dosage.dbf	UA-D-11.x / Table 16
FOLLOW UP	1o	OTHER TYPE OF FILTERING DEVICE	/rsc53/TrackNHEXAZ/codes/filter.dbf	UA-D-7.x / Table 14
FOLLOW UP	6D	HORMONE SUPPLEMENT	/rsc53/TrackNHEXAZ/codes/hormone.dbf	UA-D-11.x / Table 7
FOLLOW UP	7D	MULTI VITAMIN SUPPLEMENTS	/rsc53/TrackNHEXAZ/codes/multi.dbf	UA-D-11.x / Table 8
FOLLOW UP	6A-7D	SPECIFIC MEDECINE NAME	/rsc53/TrackNHEXAZ/codes/m_cod.dbf	UA-D-11.x / Table 11
FOLLOW UP	6E	OTHER TYPES OF MEDICATION	/rsc53/TrackNHEXAZ/codes/other.dbf	UA-D-11.x / Table 9
FOLLOW UP	6E	OTHER UNIT OF MEASURE	/rsc53/TrackNHEXAZ/codes/o_unit.dbf	UA-D-11.x / Table 12
FOLLOW UP	7B	SELENIUM SUPPLEMENT	/rsc53/TrackNHEXAZ/codes/selenium.dbf	UA-D-11.x / Table 10
FOLLOW UP	6 & 7	CODING LIST NOTEBOOK - MEDICAL CATEGORY	DATA COORDINATOR'S OFFICE	UA-D-11.x / Table 15
TECHNICIAN QX	11	TYPE OF CARPETING	/rsc53/TrackNHEXAZ/codes/carpet.dbf	UA-D-35.x / Table 10
TECHNICIAN QX	6A	TYPE OF LAND AROUND HOME	/rsc53/TrackNHEXAZ/codes/area.dbf	UA-D-35.x / Table 12
TECHNICIAN QX	11	CLEANING PRODUCT USED	/rsc53/TrackNHEXAZ/codes/cleanmet.dbf	UA-D-35.x / Table 9
TECHNICIAN QX	6G	OTHER DRIPLINE	/rsc53/TrackNHEXAZ/codes/dripline.dbf	UA-D-35.x / Table 2
TECHNICIAN QX	6J	TYPE OF FOUNDATION	/rsc53/TrackNHEXAZ/codes/found.dbf	UA-D-35.x / Table 5
TECHNICIAN QX	6J	YARD MATERIAL	/rsc53/TrackNHEXAZ/codes/material.dbf	UA-D-35.x / Table 1
TECHNICIAN QX	6H	ROOF TYPE	/rsc53/TrackNHEXAZ/codes/roof.dbf	UA-D-35.x / Table 4
TECHNICIAN QX	10C	OTHER TYPE OF SAMPLING	/rsc53/TrackNHEXAZ/codes/o_samp.dbf	UA-D-35.x / Table 8
TECHNICIAN QX	6C	TYPE OF HOUSE SIDING	/rsc53/TrackNHEXAZ/codes/siding.dbf	UA-D-35.x / Table 3
TECHNICIAN QX	9	RELATION	/rsc53/TrackNHEXAZ/codes/relation.dbf	UA-D-35.x / Table 6
BASELINE QX	18B	WHERE TIME SPENT AWAY FROM HOME	/rsc53/TrackNHEXAZ/codes/away.dbf	UA-D-7.x / Table 9
BASELINE QX	37D	WHAT IS BURNED IN THE FIREPLACE	/rsc53/TrackNHEXAZ/codes/burnf.dbf	UA-D-7.x / Table 21
BASELINE QX	36C	WHAT IS BURNED IN THE STOVE	/rsc53/TrackNHEXAZ/codes/burns.dbf	UA-D-7.x / Table 20
BASELINE QX	14F	TYPE OF CLOTHING AT WORK	/rsc53/TrackNHEXAZ/codes/clothing.dbf	UA-D-7.x / Table 5
BASELINE QX	14G	DUST RESPONDENT EXPOSED TO	/rsc53/TrackNHEXAZ/codes/dust.dbf	UA-D-7.x / Table 6
BASELINE QX	31	OTHER FUEL CODES	/rsc53/TrackNHEXAZ/codes/fuel.dbf	UA-D-7.x / Table 19
BASELINE QX	14H	FUMES ENCOUNTERED IN THE WORK PLACE	/rsc53/TrackNHEXAZ/codes/fumes.dbf	UA-D-7.x / Table 7
BASELINE QX	27B	LOCATION OF HOUSE'S GARAGE	/rsc53/TrackNHEXAZ/codes/garage.dbf	UA-D-7.x / Table 17
BASELINE QX	14C	JOB TITLE/CLASSIFICATION	/rsc53/TrackNHEXAZ/codes/job.dbf	UA-D-7.x / Table 3
BASELINE QX	14D	JOB DUTIES	/rsc53/TrackNHEXAZ/codes/jobd.dbf	UA-D-7.x / Table 4
BASELINE QX	14B	BUSINESS	/rsc53/TrackNHEXAZ/codes/jobi.dbf	UA-D-7.x / Table 2
BASELINE QX	38I, 39G	MIX CODES	/rsc53/TrackNHEXAZ/codes/mix.dbf	UA-D-7.x / Table 23
BASELINE QX	30D	TYPE OF COOLER PADS	/rsc53/TrackNHEXAZ/codes/pad.dbf	UA-D-7.x / Table 18
BASELINE QX	43F	FLEA AND TICK PESTICIDES	/rsc53/TrackNHEXAZ/codes/petchem.dbf	UA-D-7.x / Table 24
BASELINE QX	38C	TYPE OF SURFACE TREATED	/rsc53/TrackNHEXAZ/codes/surface.dbf	UA-D-7.x / Table 22
BASELINE QX	19	METHOD OF GETTING TO WORK	/rsc53/TrackNHEXAZ/codes/transport.dbf	UA-D-7.x / Table 7
BASELINE QX	26C,D & E	SOURCE OF WATER	/rsc53/TrackNHEXAZ/codes/wtrsorce.dbf	UA-D-7.x / Table 13
BASELINE QX	26B	MAIN WATER SUPPLIER	/rsc53/TrackNHEXAZ/codes/water.dbf	UA-D-7.x / Table 12
BASELINE QX	H,N,S,V,W	DISEASE CODES NOTEBOOK	DATA COORDINATOR'S OFFICE	UA-D-7.x / Table 11
BASELINE QX	14j,16j,38f,39d	CODING LIST NOTEBOOK - PESTICIDES	DATA COORDINATOR'S OFFICE	UA-D-7.x / Table 8
N/A	N/A	LISTING OF DATABASES (THIS LIST)	/rsc53/TrackNHEXAZ/codes/codelist.dbf	N/A
ALL FORMS HAVING COMMENTS	N/A	COMMENTS MADE BY FIELD TECHS	/rsc53/TrackNHEXAZ/codes/comment.dbf	UA-D-31.x / Table 2
FOOD DIARY FOLLOW UP	12, 14	REASON SOMETHING WAS/WASNT DONE	/rsc53/TrackNHEXAZ/codes/reason.dbf	UA-D-10.x / Table 3
GLOBAL CODE	N/A	RELATION	/rsc53/TrackNHEXAZ/codes/relation.dbf	UA-D-31.x / Table 3
DESCRIPTIVE	P.7	RACE	/rsc53/TrackNHEXAZ/codes/	UA-D-6.x / Table 2
24 HOUR FOOD DIARY CHECK	A-N	DIET DIARY	UA-D-43.x Appendix A	UA-D-13.x / Table 2