California Department of Pesticide Regulation
Environmental Hazards Assessment Program
830 K Street
Sacramento, CA 95814

STANDARD OPERATING PROCEDURE
Sample Tracking Procedures

KEY WORDS

Sample Tracking, Sample Tracking Database, Chain-of custody, Sample

APPROVALS

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APPROVED BY: _____ DATE: 7/15/99
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Environmental Hazards Assessment Program (EHAP) organization and personnel such as management, senior scientist, quality assurance officer, project leader, etc. are defined and discussed in SOP ADMIN002

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1.0 INTRODUCTION

1.1 Purpose

This Standard Operating Procedure (SOP) discusses sample check-in and check-out procedures; the recording of chemistry data; sample disposal procedures; and the Sample Tracking Database.

1.2 Definitions

1.2.1 **Sample** is any environmental substance collected and analyzed for chemical content, toxicity, soil texture analysis, etc.

1.2.2 **Sample Tracking Database** is a relational database designed in Microsoft Access to trace a sample from the time it is checked into the storage facility until the sample is submitted to a laboratory for analysis or disposed of after a study is completed.

1.2.3 **Chain-of-custody** is a record describing in detail all pertinent information specific to each sample, including dates and signatures of persons handling the sample.

1.2.4 **Sample Custodians** are personnel, under direction of the lab liaison, responsible for receiving samples from field staff, delivering samples to the laboratory, and tracking samples in the Sample Tracking Database.

2.0 SAMPLE TRACKING

2.1 Sample Tracking Codes

Sample tracking codes are abbreviations for fields in the database that refer to specific information about each sample. The study number in combination with the sample number is identified as the key field and all information specific to the sample is referenced by the following codes back to the key field.

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SAMPLE CODES:

P= Primary	R= Replicate	B= Backup	FB= Field Blank
* = Split	S= Spike	BG= Background	BM= Blank Matrix
A= Acidified	U= Unacidified	RB= Rinse Blank	

STORAGE LOCATION CODES refer to the storage location of each sample and the storage facility.

F= Fresno	R= Refrigerator	SR10= Sacramento Refrigerator #10
S= Sacramento	F= Freezer	SF05= Sacramento Freezer #05
W= Warehouse	A= Air Temp	SF06= Sacramento Freezer #06
L= Lab	I=Ice Chest	SF07= Sacramento freezer #07
D= Deep Freeze	FZ= Freezesafe	

SAMPLE TYPE CODES refer to the sample matrix collected.

FRU= Fruit	DVEG= Dislodgeable Vegetation	TWG= Twigs
SOI= Soil	SSS= Stainless Steel Sheets	EXT= Extract
WAT= Water	STD= Standard	VEG= Vegetation
SUR= Surrogate	SED= Sediment	FILT= Filtrate
TUR= Turf	TAN= Tank	KIM= Kimbie
SAN= Sand	AIR= Air	TRP= Air Cassettes
BRA= Branch		

SAMPLE CONTAINER CODES refer to the type of container each sample is placed in during storage.

QMSJ= Quart Mason Jar	1LAMBR= 1 Liter Amber Bottle
PMSJ= Pint Mason Jar	HPMSJR= Half Pint Mason Jar
PBAG= Plastic Bag	HIVJAR= Hi-Vol Jar
FOIL= Aluminum Sheets	P500mL= Plastic Bottle (500 mL)
CAS= Air Cassettes	1LPC= 1 Liter Polycarb. Bottle

1LPP= 1 Liter Polyprop. Container
XADT= XAD Tube (small)
Summa= Summa Canister
HIV= High Volume Air Sampler_
500mLPC= 500mL Polycarb. Container
250mLAMBR= 250mL Amber Bottle
500mLAMBR= 500mL Amber Bottle
500mLHDPP= 500mL High Density Polyprop.
VIAL= Small Standard Vial
XAD4= Large XAD 4 Tube
LOV= Low Volume Air Sampler

LABORATORY CODES refer to the specific laboratory each sample is shipped to for analysis.

QUAN= Quanterra Laboratory
ATL= Aquatic Toxicology Lab
FMC= FMC Corporation
ZEN= Zeneca Ag Products
APPL= Apple Labs
NCL= North Coast Labs
FRES= Fresno Soils Lab
CDFA= CA Dept. of Food & Agr.
CDFG= CA Dept. of Fish & Game
ALTA= ALTA Analytical Laboratory
VAL= Valent Dublin Laboratory
MOR= Mores Laboratories Inc.
UCD= University California Davis
WSAC= W. Sacramento Soils Lab

ANALYSIS TYPE refers to the type of test method to be performed on each sample.

C= Chemical
O= Organic
T= Texture
F= Tracer
P= pH
B= Bulk Density
E= Elisa
M= Moisture
V= Various

CHEMICAL ANALYSIS refers to the chemical analysis to be performed on each sample, if applicable.

OP=Organophosphate Screen
CB= Carbamate Screen
DI= Diazinon
EN/DI= Endosulfan/ Diazinon Screen
TOX= Biotoxicity
HEX=Hexazinone
TRI= Triclopyr
GLY= Glyphosate
TRIAZ= Triazine Screen

TDM= Triclopyr, 2,4-D, MCPA
PIC= Chloropicrin
MOL= Molinate
CARBO= Carbofuran
MeBr= Methyl Bromide
PROP= Propanil
THIO= Thiobencarb
MP/MN= Methyl Parathion/Malathion

COMMENTS refers to any additional information regarding samples.

BS= Blind Spike
ACT TOX= Acute Tox
CHN TOX= Chronic Tox
RB= Rinse Blank
GF= Golden Fleece
BB=Buck Brush
BF= Bracken Fern
MB= Manzanita Berry
SR= Soap Root
DB= Deer Brush
EB= Elderberry
DG= Deergrass
RD= Redbud
PE= Pearly Everlasting

2.2 Sample Check-in Procedures

All samples received at the storage facility are immediately put in a refrigerator or freezer depending on the matrix specific storage requirements. The field crew fills out a three part check-in sheet (Figure A) using the sample tracking codes (Section 2.1).

The check-in sheet must be complete in order to properly track environmental samples. The following is a description of each key component of the check-in sheet.

Portion Filled Out By Field Staff

Project ID: The study number or name.
Date Received: The date the sample was received from the field crew.
Checked-in by: The initials of the person who fills out the check-in sheet.
Remarks: List ice chest number where samples were stored, Hobo Temp® temperature logger number (if necessary), and any additional or necessary information regarding the samples listed on the check-in sheet. For GLP studies, the ice chest number along with the maximum temperature samples were stored at in the ice chest must be marked on Hobo Temp® print-out as noted in SOP EQOT001.01. If temperature exceeded 6° C for refrigerated samples or 0° C for frozen samples, this must be documented on the sample check-in sheet in the comments section.
EHAP Sample No.: The number assigned to a labeled sample container.
Sample Code: List sample code (Section 2.1 for codes).

Date Sample Collected: Note the sample collection date from the Chain-of-Custody.
Sample Type: Specify the type of sample collected (Section 2.1).
Container Type: What the sample is stored in (Section 2.1).
Analysis Type: The type of analysis the sample is intended for (Section 2.1).
Analysis: List the type of chemical or screen the sample is to be analyzed for.
Comment: Space provided for additional information regarding individual samples (Section 2.1).

Portion Filled Out By Sample Custodian

Date/Logged in by: The date and person who enters information into the Sample Tracking Database.
Storage Location: List where the sample is being stored (Section 2.1).

After the check-in sheet is completed, the white and yellow copy are used to enter the information into the Sample Tracking Database and then filed with the QA/QC officer. The pink copy is given to the project leader in order to track ice chests and corresponding samples entering the storage facility (GLP studies only).

Each field sample is compared against it's corresponding Chain-of-custody (COC), then the COC is signed and dated by the person receiving the sample at the storage facility. The white and yellow copy of each COC is removed and sent with it's corresponding field sample to the laboratory. The pink COC copy is given to the Project Leader. Any remaining samples held at the storage facility are stored under their required storage conditions with the white and yellow copy of their corresponding COC's.

2.3 Sample Check-out Procedures

A three part check-out sheet is filled out for any sample leaving the storage facility (Figure B). The check-out sheet must be complete in order to properly track environmental samples leaving the storage facility. The check-out sheet is filled out by the sample custodian only.

The check-out sheet is similar to the check-in sheet but differs in three components.

> **Date Delivered:** The date the sample is taken to the laboratory.
> **Checked-out by:** The initials of the person filling out and transporting the sample to the laboratory.
> **Laboratory Delivering to:** Specify the destination code for the sample scheduled for analysis (Section 2.1).

A pink copy of the check-out sheet and the white and yellow copies of each COC are placed in a plastic bag and accompany samples transported to the laboratory. The samples are placed in ice chests and maintained at their required temperatures during transport using blue ice, wet ice or dry ice. The white and yellow copies of the check-out sheet are retained by the QA/QC officer and are used to enter information into the Sample Tracking Database.

2.4 Chemistry Results

After results are received from the laboratory, the laboratory sample number, and the extraction and analysis date for each sample are entered into the Sample Tracking Database using the appropriate Microsoft Access query.

2.5 Sample Disposal

After each study is completed, and with the approval of the Project Leader, all remaining samples stored in the storage facility may be disposed of by the sample custodian. A two part Sample Disposal Sheet is completed and includes information similar to the check-out sheet (Figure C). This information is then entered into the Sample Tracking Database using the appropriate Microsoft Access query. The white copy of the Sample Disposal Sheet is retained by the QA/QC officer while the yellow copy is used to enter the information into the database.

3.0 Sample Tracking Database

All the information reported on the check-in, check-out, and sample disposal sheets is entered in the Sample Tracking Database using tables in Microsoft Access. Queries, forms and reports are designed specifically for each study to access fields for summarizing data.

3.1 Computer Generated Backups

Weekly backups are conducted by copying the database to a zip drive disk.

FIGURE A

SAMPLE **CHECK-IN** SHEET ENVIRONMENTAL HAZARDS ASSESSMENT PROGRAM

Study Number (Project ID):_____

Date Received (Warehouse):_____

Checked-In By:_____

Page ____ of ____

Sample Tracking Staff Only:

Logged In By (data entry):_____

Data Entry Date:_____

Storage Location Code:_____

Remarks:

Samples were stored in ice chest # _____ at check-in.

EHAP Sample #	Sample Code	Date Sample Collected	Sample Type	Container Type	Analysis Type	Analysis	Comments

(3/99) White copy-Lab Liaison, Yellow-Sample Tracking Staff, Pink-Project leader

FIGURE B

STATE OF CALIFORNIA

DEPARTMENT OF PESTICIDE REGULATION
ENVIRONMENTAL HAZARDS ASSESSMENT PROGRAM
West Sacramento Field Office
3971 Commerce Drive, Suite D
West Sacramento, CA 95691 (916) 322-3082

SAMPLE **CHECK-OUT** SHEET

Study Number (Project ID):_____ Logged Out By (data entry):_____

Date Delivered:_____ Data Entry Date:_____

Checked-Out By:_____ Storage Location Code:_____

Laboratory Delivering To:_____ Page ____ of ____

Remarks:

EHAP Sample #	Sample Code	Date Sample Collected	Sample Type	Container Type	Analysis Type	Analysis	Comments

(5/98)

White copy-Lab Liaison, Yellow-Sample Tracking Staff, Pink-Laboratory

FIGURE C

California Dept. of Pesticide Regulation
Environmental Hazards Assessment Program
3971 Commerce Drive, Suite D
West Sacramento, CA 95691
(916) 322-3082

Today's Date:_____

Sample Disposal Sheet

Project ID (Study no.): _____ Disposed by: _____

Date Disposed: _____ Storage location: _____

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Remarks:

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EHAP Sample #	Sample Code	EHAP Sample #	Sample Code	EHAP Sample #	Sample Code	EHAP Sample #	Sample Code