NEIC

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NEIC PROCEDURES MANUAL FOR THE EVIDENCE AUDIT OF ENFORCEMENT INVESTIGATIONS BY CONTRACTOR EVIDENCE AUDIT TEAMS

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National Enforcement Investigations Center, Denver

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Office of Enforcement

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICE OF LEGAL COUNSEL AND ENFORCEMENT

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CHAPTER I

The Environmental Protection Agency (EPA), through its Office of Legal Counsel and Enforcement (OLCE), Regional Enforcement Divisions. National Enforcement Investigations Center, Regional Surveillance and Analysis Divisions, and contractors, executes a program of enforcement of environmental statutes and regulations. The statutes upon which this program is based include: The Federal Water Pollution Control Act (FWPCA), as amended by the Clean Water Act (CWA) of 1977; the Clean Air Act (CAA) as amended; the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as amended; the Resource Conservation and Recovery Act of 1976 (RCRA); the Safe Drinking Water Act as amended (SDWA); and the Toxic Substances Control Act (TSCA). Implementing regulations have been, and continue to be, promulgated according to timetables established by law, a variety of court decisions and consent decrees, and administratively established schedules.

The Agency deploys in-house and contractor technical teams to conduct evidence-gathering investigations and inspections and other enforcement related technical evaluations in support of the enforcement program. These teams include engineers, scientists, technicians, and attorneys, functioning as individual investigators or groups, in offices, laboratories, and field sites. In addition, the Agency performs an oversight and/or shared operating role where enforcement programs have been fully or partially delegated to State agencies.

Technical data, operating and process information, production data, and related information produced or obtained in the course of enforcement inspections, investigations, and evaluations are potential evidence. As such, they must be (a) reliable, (b) gathered with constitutional safeguards, and (c) maintained with integrity. The potential evidence may take any of several forms including such items as a simple field notebook, film, computer tape, a sample tag, a degradable sample, etc. Typically, a case preparation investigation may generate large volumes of file material, samples, data tabulations, and reports. Security and accountability (i.e., chain-of-custody) must be maintained even while the evidence is in shipment.

EPA has developed and adopted uniform chain-of-custody [Appendix A] and document control [Appendix B] procedures that are designed to ensure the integrity of evidence as it is developed and the security thereof, pending, during, and after litigation. These procedures are complex and exacting, and even minor departures therefrom can have serious implications for the success of enforcement cases.

EPA has developed evidence audit procedures that provide project and program managers with assurance that the evidence developed in specific cases will withstand the procedural rigors of the courtroom or, alternatively, detect lapses in the integrity and/or security of evidence prior to its introduction. The Agency fields an Evidence Audit Unit (EAU) which is operationally assigned to the Deputy Director, National Enforcement Investigations Center (NEIC), Denver, Colorado. The EAU has been charged with the conduct of evidence audits of nationally managed cases, cases in which NEIC has provided evidence, and, on request, cases developed by Regional Enforcement Division staffs.

The advent of a large contractor investigative effort, in support of the hazardous waste site program, together with recent directives requiring implementation of uniform chain-of-custody and document control procedures, has made it necessary to extend the capabilities of the EAU. A contract to obtain such services was concluded on September 1, 1980. This contract was initially directed toward evidence audits of hazardous waste site investigations, but has been reoriented to provide evidence audits of any/all enforcement investigations, as required. The Contractor Evidence Audit Team (CEAT) will now be available to Regional Enforcement Directors and State Enforcement Programs to perform evidence audits and to assist EPA, state, or contractor staffs in establishing chain-of-custody and document control procedures. Points of contact between EPA and the CEAT, for administrative matters, will be EPA's Contracting Officer and the contractor's Project Manager. For operational assignments, direction, and delivery of completed work, contacts will be EPA's Project Officer or Deputy Project Officer and the CEAT Leader.

This manual is intended to provide operational guidance to the CEAT; the Project Officer, Deputy Project Officer and their technical staffs; users of the service; and other agencies having related needs.

CHAPTER II THE EVIDENCE AUDIT FUNCTION

The work of the CEAT is to investigate adherence to EPA procedures for chain-of-custody, document control, and security of evidence by enforcement investigators and laboratories. The audits performed usually consist of collecting raw data pertaining to field investigations and laboratory activities; recording the data and observations on checklists; preparating of a summary report; and testifying in support of the authenticity of evidence presented by the contract personnel. EPA employees may analyze the data supplied and may spot check the performance of the team.

Work assignments will be issued, in written form, by the Project Officer or Deputy except in urgent situations requiring immediate response by the contractor. Any oral assignment will be followed by written confirmation at the earliest practicable time.

Assignments will normally be made in terms of:

- a. Field investigations audit
- b. Laboratory operations audit and/or
- c. Document control audit
- d. Enforcement case preparation assistance or
- e. combinations of the above.

Field investigation audits and laboratory operations audits are to be conducted according to the checklists and criteria provided in Appendices A through E and include document control audit procedures. A document control audit is a "desk top" audit of field notebooks, chain-of-custody records, and other accountable documents conducted in the EPA Regional office, Contractor's Field Offices, or appropriate State agency offices, once the documents have been called in.

Checklists will be submitted to the Project Officer within ten (10) working days following completion of the audit. The checklist submission

will be accompanied by a narrative report, which will summarize findings, provide observations not covered by the checklists, identify all audit documents, and contain a statement of opinion by a Certified Public Accountant (CPA) member of the CEAT. A sample narrative report is included as Appendix F.

Audit teams will be tailored to meet the needs of the EPA enforcement programs and priorities. A field investigations audit may require the services of an engineer or technician while a laboratory operations audit will require a chemist or person familiar with laboratory procedures. Teams of two or three persons may be formed to conduct the more complex audits.

The composition of audit teams will be determined by the Project Officer or the Deputy Project Officer (DPO) in consultation with the CEAT Leader. The contract requirement for a CPA was included to ensure that the CEAT embodies a credible internal quality control mechanism. EPA does not expect that each auditor be a CPA, nor that each team include a CPA; however, the CPA(s) is expected to exercise internal controls and participatory oversight such that the CPA(s) can certify to EPA that the work of the CEAT meets EPA requirements. Each set of checklists and the summary report will include an opinion to that effect by the CPA(s) [Appendix G].

At the conclusion of each audit, the audit plan, checklists, logbooks, summary report, and CPA statement, together with any related data or documents, will be submitted to the Project Officer. After review by the Project Officer, copies will be provided to the Regional Enforcement Division Director for inclusion in the case files. Any material for which a claim of confidentiality has been made will be transferred to the appropriate Document Control Officer. All audit material is evidence, and CEAT members are subject to call as witnesses. They must comply with discovery requests, warrants, subpoenas, or court orders for any case which they audit.

CHAPTER III AUDIT PLANNING

The Project Officer will maintain continuing liaison with Regional and Headquarters Enforcement Division Directors to identify investigations most likely to proceed to litigation and will prioritize those cases for auditing. When possible, the audits will be scheduled to minimize travel time and expenses. The Project Officer will confer frequently with the CEAT Leader to establish schedules and review progress.

As audits are scheduled, the Project Officer will arrange for the CEAT to receive a copy of the plan of investigation. The project plan details the project's scope, logistics, and schedules. Items addressed in the project plan are:

- 1. Objectives
- 2. Background information
- 3. Survey methods, including sampling locations, schedules and procedures, analytical requirements, quality control program, etc.
- 4. Process data to be collected
- 5. Personnel and equipment requirements
- 6. Safety program and equipment
- 7. Chain-of-custody and document control procedures

Accountable documents, including logbooks, field data records, sample tags, and chain-of-custody records, will be used by investigators. These documents will be labeled with a project code number and a unique serial number prior to issuance. All accountable field documents are assigned to the project coordinator. The coordinator distributes them to appropriate project personnel and documents the transfer in a logbook. The CEAT will check the list of accountable field documents to see that the proper forms are used during the field investigation, and that entries in and on forms and logbooks are made in accordance with EPA-prescribed procedures. Laboratory audits will be scheduled for laboratories analyzing samples collected during the investigation.

With the exception noted below, the Audit Plan is developed by the CEAT Leader in coordination with the project coordinator assigned to the investigation that is to be audited. The Project Officer may, on occasion. direct that an unannounced audit be performed. The CEAT Leader must, insofar as possible, cause the audit schedule to conform to the schedule of the investigator(s) being audited. The evidence audit should not cause inordinate delays or otherwise inhibit the execution of the investigation, laboratory operation, etc.

The CEAT personnel must conform to the safety regime imposed by the project coordinator (i.e., same safety clothing, equipment, and procedures are to be used). The audit plan should include the statement of clothing, equipment, and procedures to be employed.

The Audit Plan will be reviewed by the Project Officer or DPO and, when approved and attached to the work order, will become the authorization for the CEAT to proceed. Verbal authorization, may be given by the Project Officer or DPO, followed by a written authorization.

CHAPTER IV FIELD INVESTIGATIONS AUDIT

The CEAT member(s) assigned to a particular audit will contact the project coordinator in the field and proceed with the schedule for conducting the field investigation audit. The audit is the evaluation of sample identification and control, chain-of-custody procedures, field documentation, security of evidence, and sampling operations. The evaluation is based on the project plan and directions given by the CEAT Leader and the Project Officer. Specifics regarding the audit in progress are contained in the Audit Plan.

The CEAT will maintain a log of all activities performed during the field investigation audit. The log will consist of work papers and checklists. The checklists are included herein as Appendices C through E. The auditor must accurately track the dates and times of audit activities and the document numbers that have been reviewed. Included in the log will be the project codes, the project location, identification of the investigators assigned to the project, and the auditor's name. The checklists must be completed in their entirety and any other pertinent information should be recorded in the "comments" section.

Pre-audit communication between the CEAT and the project coordinator is necessary to determine if any special safety considerations or entry problems exist. The CEAT member(s) arriving at the field investigation site should follow entry procedures identical to those of the investigation team. If possible, the auditor should enter the site with the team. The CEAT should give the project coordinator ample time to arrange for their entry. If the auditor arrives at the investigation site unannounced, the facility should be entered in the following manner:

1. The plant premises should be entered through the main gate or through the entrance designated by the source, if in response to an inspection notification letter.

- 2. The CEAT member should introduce himself/herself in a dignified, courteous manner to a responsible plant official and briefly describe the purpose of the visit. Identification credentials should always be shown. A responsible plant official may be the owner, operator, officer, or agent in charge for the facility, including the plant environmental engineer.
- 3. If a guard is present at the entrance, the CEAT member should present credentials and suggest that the guard call his/her superior on the phone. When the name is known, the member may request that the guard call the responsible official directly.
- 4. If the Company provides a blank sign-in sheet, log, or visitors register, it is acceptable to sign it. CEAT members must adhere to the directives of the CEAT Leader regarding signing a release of liability (waiver) when entering a facility under the authority of Federal law.
- 5. If entry is refused, the CEAT member should not contest the issue with the facility representative, but should immediately do the following:
 - a. Obtain name and title of the individual denying entry and record the date and time;
 - b. State that he/she is a member of a technical investigative team under contract to EPA, ask if he/she heard and understood the reason for the visit, record the answer and any reasons given for denial of entry:
 - c. Leave the premises and notify the appropriate CEAT Leader who, in turn, must notify the Project Officer or DPO.

SAMPLE CONTROL

A sample is physical evidence collected from a facility or from the environment. Evidence control is an essential part of all enforcement

investigations. A sample must be properly identified. Sample identification documents must be carefully prepared in order that (a) identification and chain-of-custody can be maintained, and (b) that sample disposition can be controlled. The sample identification documents are:

- 1. Sample Tags [Figure 1]
- 2. Chain-of-Custody Record [Figure 2]

Contractor Field Investigation Teams (FIT) conducting investigations for the Hazardous Waste Site program use two additional forms for samples shipped to contractor laboratories. These are:

- 3. Organic Traffic Report (VIAR) [Figure 3]
- 4. Inorganic Traffic Report (VIAR) [Figure 4]

Data from onsite measurements are recorded directly into the field logbook or Field Data Records (FDR). Examples of onsite measurements are pH, temperature, conductivity, radiological measurements, etc.

Sample Tags

All necessary serialized sample tags are distributed to field investigators by the project coordinator (or designated participant) and the serial numbers are recorded in a logbook. Individuals are accountable for each tag assigned to them. A tag is considered in their possession until it has been filled out, attached to a sample, and transferred to another individual with the corresponding chain-of-custody record. At no time are any sample tags to be discarded and if any tags are lost, voided, or damaged, the facts are noted in the appropriate FDR or logbook immediately upon discovery, and the project coordinator is notified. At the completion of the field investigation activities, all unused sample tags are returned to the project coordinator who checks them against the list of assigned tag serial numbers. Tags attached to those samples which are split with the source or another government agency shall be accounted for by recording the serialized tag numbers.

Samples are removed from the sample location and transferred to a laboratory or other location for analysis. Before removal, however, a sample is often separated into portions depending on the analysis to be performed. Each portion is preserved in accordance with prescribed procedures and the sample is identified with a sample tag. The information recorded on the sample tag includes:

Project Code - An assigned number

Station Number - A two-digit number assigned by the FIT Leader and listed in the project plan

Date - A six-digit number indicating the year,

month, and day of collection

Time - A four-digit number indicating the military

time of collection - for example: 0954

Station Location - The sampling station description as specified

in the project plan

Samplers - Each sampler's name is listed

Tag Number - A unique serial number is stamped on each

tag

Remarks - The samplers record pertinent observations

The sample tag contains an appropriate place for designating the sample as a grab or composite and identifying the type of sample collected for analysis. The sample tags are securely attached to each sample.

After collection, separation, identification, and preservation, the sample is maintained under chain-of-custody procedures discussed later. If the composite or grab sample is to be split, it is aliquoted into similar sample containers. Identical information is recorded on the tag of each split. This identifies the split sample for the appropriate government agency, facility, laboratory, or company. In a similar fashion, all tags on blank or duplicate samples will be marked "Blank" or "Duplicate", respectively, unless otherwise directed.

The CEAT will examine a selected number of sample tags for completeness and accuracy. The team member will determine if the station number and location are identified; the date and time collected are indicated; the type of sample and analysis are specified; the preservative, if used, is identified; and the samplers' signatures appear on the tag. The tag numbers will be checked to ensure that they are the ones issued to the project. The auditor will also determine if the station location accurately identifies where the sample was actually taken and if the sampling methods used were as directed by the project coordinator.

CHAIN-OF-CUSTODY RECORD

Possession of samples collected during enforcement investigations must be traceable from the time collected until introduced as evidence in legal proceedings. Serialized chain-of-custody records are assigned and accounted for in a manner similar to that used for sample tags.

A sample is in your custody if the following criteria are met:

- 1. It is in your possession, or
- 2. It is in your view, after being in your possession, or
- 3. It was in your possession and then locked up to prevent tampering, or
- 4. It was in your possession and then transferred to a designated secure area.

Custody Procedures

1. In collecting samples for evidence, only that number which provide a good representation of the media being sampled are to be collected. To the extent possible, the quantity and types of samples and sample locations are determined prior to the actual field work. As few people as possible should handle samples.

- 2. The team member actually accomplishing the sampling is personally responsible for the care and custody of the samples collected until they are transferred or dispatched properly.
- 3. Sample tags must be completed for each sample, using waterproof ink unless prohibited by weather conditions. For example, a logbook notation would explain that a pencil was used to fill out the sample tag because a ballpoint pen would not function in freezing weather.
- 4. The project coordinator must review all field activities to determine whether proper custody procedures were followed during the field work and decide if additional samples are required.

To maintain and document sample possession, chain-of-custody procedures are followed.

Transfer of Custody and Shipment

- 1. Samples are accompanied by a chain-of-custody record [Figure 2]. When transferring the possession of samples, the individuals relinquishing and receiving will sign, date, and note the time on the record. This record documents sample custody transfer from the sampler, often through another person, to the analyst.
- 2. Properly packaged samples are dispatched to the appropriate laboratory for analysis, with a separate custody record accompanying each shipment. Shipping containers will be locked or secured with evidence tape for shipment to the laboratory. The method of shipment, courier name(s), and other pertinent information is entered in the "Remarks" section.
- 3. Whenever samples are split with a source or government agency, a separate chain-of-custody record or sample receipt form is prepared for those samples and marked to indicate with whom the samples are being split. The sample tag serial numbers from all splits are recorded on the custody record. The person relinquishing the samples to the facility or agency should request the signature of a representative of the appropriate party

acknowledging receipt of the samples. If a representative is unavailable or refuses to sign, this is noted in the "received by" space. When appropriate, as in the case where the representative is unavailable, the custody record should contain a statement that the samples were delivered to the designated location and the date and time recorded.

- 4. All shipments will be accompanied by the chain-of-custody record identifying its contents. The original record will accompany the shipment, and a copy will be retained by the project coordinator.
- 5. If sent by mail, the package will be registered with return receipt requested. Freight bills, post office receipts, and bills of lading will be retained as part of the permanent documentation.

The CEAT will select a predetermined number of the chain-of-custody records to be audited in the field. The records must be reviewed to determine if the station number and description corresponds to the sample tag, if the date and time correspond, if the parameters to be analyzed have been appropriately identified, and if all custody transfers have been documented and the date and time of transfer recorded.

The audit team will also determine if samples are kept in custody at all times and are locked up to prevent tampering. Sampling equipment should also be checked for security and to detect tampering.

VIAR Traffic Forms

The firm VIAR and Company of Alexandria, Virginia, has been awarded a contract by EPA to manage the shipment of samples from hazardous waste site investigations and to allocate workloads to the participating contractor laboratories. The Organic and Inorganic Traffic Reports [Figures 3 and 4] are to be executed by Field Investigation Teams and are subject to audit as are the previously discussed documents. This portion of the audit is to ensure that the information recorded upon the forms is correct and that

it coincides with the information on the sample tags and on the chain-of-custody record.

FIELD DOCUMENTATION

Observation and measurements during field investigations must be documented in accountable logbooks or field data records. These records are intended to provide sufficient data and observations to enable participants to reconstruct events that occurred during the project and to refresh the memory of the investigators if called upon to give testimony during legal proceedings.

Logbooks

Project logbooks will be reviewed by the CEAT during the field investigation audit to see that each is signed and all entries are dated. It should also have a document control number on the inside cover.

Logbook entries must be legible, written in ink, and contain accurate and inclusive documentation of an individual's project activities. Because the logbook forms the basis for reports written later, it must contain only facts and observations. Language should be objective, factual, and free of personal feelings or other terminology which might prove inappropriate. Entries made by individuals other than the person to whom the logbook was assigned must be dated and signed by the individual making the entry.

The logbook of the project coordinator will document the transfer of logbooks to the individuals who have been designated to perform specific tasks on the survey. All pertinent information should be recorded in these logbooks from the time each individual is assigned to the project until the project is completed.

Field Data Records

Where appropriate, serialized Field Data Records (in the form of individual sheets or bound logbooks) are maintained for each survey sampling station or location and the project code and station number are usually recorded on each page. The project coordinator also numbers the FDR covers with the appropriate project code and station number. All in-situ measurements and field observations are recorded in the FDRs with all pertinent information necessary to explain and reconstruct sampling operations. Each page of a Field Data Record is dated and signed by all individuals making entries on that page. The coordinator and the field team on duty are responsible for ensuring that FDRs are present during all monitoring activities and are stored safely to avoid possible tampering. Any lost, damaged, or voided FDRs are reported to the project coordinator.

The CEAT will review field data records in the same manner as the logbooks.

Photographs

Photographs may be taken for evidentiary purposes and these must also be controlled. The CEAT will review the logbooks to determine if the photographs are properly documented. When movies, slides, or photographs are taken which visually show sampling sites or provide other documentation, they are numbered to correspond to the logbook entries. The name of the photographer, date, time, site location, and site description are entered sequentially in the logbook as photos are taken. Chain-of-custody procedures depend upon the type of film and the processing it requires.

Corrections to Documentation

As previously noted, unless prohibited by weather conditions, all original data recorded in logbooks, FDRs, sample tags, custody records, and other data sheet entries are written with waterproof ink. None of the accountable serialized documents listed above are to be destroyed or thrown

away, even if they are illegible or contain inaccuracies which require a replacement document.

If an error is made on an accountable document assigned to one individual, that individual may make corrections simply by crossing a line through the error and entering the correct information. The erroneous information should not be obliterated. Any subsequent error discovered on an accountable document should be corrected by the person who made the entry. All subsequent corrections must be initialed and dated.

SAMPLING OPERATIONS

The CEAT will review sampling operations to determine if they are performed as stated in the project plan or as directed by the project coordinator. The proper number of samples should be collected at the assigned locations. The CEAT should check to determine that the samples are in proper containers and are properly preserved.

The CEAT will determine if the required field measurements and quality assurance checks are being performed and documented as directed.

CHAPTER V LABORATORY OPERATIONS AUDIT

The CEAT will perform audits in laboratories supporting investigations. Evidence audits may be conducted for EPA, State, or contractor laboratories supporting an enforcement investigation. The audit assignment will be made by the Project Officer. The audit will address sample control, laboratory documentation, security of evidence, and document numbering and inventory. The evaluation will be based on the project plan, directions from laboratory contract Project Officers, and instructions provided the laboratory personnel by the laboratory director.

The auditor's worksheets used for the field investigation audit will be continued so that all project audit information will be recorded in one set of records. Checklists for laboratory activities [Appendix D] will be filled out. The auditor will record the project number, laboratory location, and date, and sign the checklist.

SAMPLE CONTROL

The CEAT will determine the number of samples that were collected during the field investigation and verify that all have arrived at the laboratory. Each sample will have an identification tag and be recorded on a chain-of-custody record. The auditor will examine tags and chain-of-custody records to see that descriptions, dates, and times match. All transfers of custody of samples should be documented and the auditor will review a predetermined representative number and trace custody from time of collection to the laboratory. The auditor will determine from laboratory documentation whether or not the samples were received under custody.

Laboratory Custody Procedures

The following laboratory custody procedures will be followed:

- l. A designated sample custodian accepts custody of the shipped samples and verifies that the information on the sample tags matches that on the chain-of-custody records. Pertinent information as to shipment, pick-up, courier, etc., is entered in the "Remarks" section. The custodian then enters the sample tag data into a bound logbook which is arranged by project code and station number. The samples are then stored in a secure area. The auditor will determine if the laboratory follows protocols established by EPA for sample storage and preservation.
- 2. The custodian distributes samples to the appropriate analysts. The names of individuals who receive samples are recorded in internal laboratory records. Laboratory personnel are responsible for the care and custody of samples from the time they are received until they are exhausted or returned to the custodian.
- 3. When sample analysis and necessary quality assurance checks have been completed, the unused portion of the sample must be disposed of properly and according to schedule established by the project coordinator or case attorney. All identifying tags, data sheets, and laboratory records shall be retained as part of the permanent documentation.

LABORATORY DOCUMENTATION

All sample data, laboratory observations, and calculations will be recorded in logbooks or on serialized bench sheets. All documentation will be accountable once project information is recorded on it. Each document will show the project code, dates, name(s) of analyst(s), and other pertinent information concerning the identification of the sample or laboratory results. Instrument printouts, graphs, and other documents will be labeled in a similar manner. All other documentation concerning the project such

as correspondence, report notes, methods, documents, references, sample inventories, checkout logs, etc. will become part of the permanent record and will be serially numbered and inventoried.

The logbook needs to contain information sufficient to recall and describe succinctly each step of the analysis performed because it may be necessary for the analyst to testify in subsequent enforcement proceedings. Moreover, sufficient detail is necessary to enable others to reconstruct the procedures followed, should the original analyst be unavailable for testimony. Any irregularities observed during the analytical process need to be noted. If, in the technical judgment of the analyst, it is necessary to deviate from a particular analytical method, the deviation shall be justified and the rationale shall be fully documented.

The auditor will review selected examples from each document type to determine if they are being handled in an approved manner. Recording shall be done in ink and all corrections to documentation shall be done in the manner previously described.

Before a final laboratory report is sent out, the laboratory will assemble and cross-check information on corresponding sample tags, custody records, bench sheets, analyst logbooks, and sample entry logbooks to ensure that data pertaining to each particular sample is consistent throughout the record. A statement that all project evidentiary data has been accounted for and an explanation of any deviations from established procedures should be included in the laboratory project file.

CHAPTER VI QUALITY ASSURANCE

Laboratories must follow specified quality assurance procedures to assure that high-quality data are produced. Environmental Protection Agency policy requires participation in a centrally managed quality assurance (QA) program by all EPA regional offices, program offices, EPA laboratories, and States, as stated in the Administrator's memorandum of May 30, 1979. This requirement applies to all environmental monitoring and measurement efforts mandated or supported by EPA through regulations, grants, and contracts. The Office of Research and Development (ORD) develops, directs, and implements this program through the Quality Assurance Management Staff (QAMS).

Each laboratory generating data has the responsibility to implement procedures which assure that precision, accuracy, completeness, and representativeness of its data are known and documented. Each laboratory must have a written QA project plan for each monitoring or measurement activity.

All quality assurance data and observations shall be recorded in logbooks or on bench sheets.

Quality assurance for contract laboratories performing analyses for the Hazardous Waste Site (HWS) Investigation program will be monitored by the Environmental Monitoring and Support Laboratory-Las Vegas (EMSL-LV). The CEAT will coordinate audit activities for these laboratories with EMSL-LV.

Quality control is the documentation and evaluation of methods, personnel training, and routine performance checks integral to each measurement process. Examples of routine checks are instrument maintenance and calibration and blank, duplicate, and spiked sample determinations.

Quality assurance is a system of independent checks performed to verify that the quality control system is effective and adequate. An example is use of laboratory reference standards. Quality assurance also consists of accuracy and precision of data. Accuracy is the degree of agreement between a measured value and the true value. It is difficult to determine accuracy of a measurement on an environmental sample because the true value is unknown. Therefore, the accuracy of an individual measurement procedure is usually determined by analyzing a standard reference material or by spiking a sample with a known quantity of material and re-analyzing.

Precision is the degree of agreement between repeated measurements using the same method or technique.

The primary responsibility for the proper performance of a measurement which includes QC checks lies with the analyst making the measurement. The analyst evaluates the QC results as soon as possible after the measurement is performed. When QC results are determined to be outside accepted limits, the measurement process is stopped, problems are corrected and documented, and the measurement is continued.

The CEAT will determine that quality assurance documentation is consistent with the laboratories' quality assurance program plans and project plans.

CHAPTER VII DOCUMENT CONTROL AUDIT

Once the field and laboratory operations have been completed, the individual files must be assembled, organized, and securely stored. The CEAT will review the assembled file and make an evaluation based on file organization and format, accountability of documents according to the document numbering system and inventory procedure, and separation and control of any confidential information or confidential business information claimed under the Toxic Substances Control Act.

The investigation teams and laboratories must establish orderly filing and inventory systems. The following describes the filing and document control system used by NEIC in preparing project files. This system will serve as a basis for comparison with other systems.

File Format

The file is assembled in the following order:

- a. Project plan
- b. Project logbooks
- c. Field data records
- d. Sample identification documents
- e. Chain-of-custody records
- f. Analytical logbooks, lab data, calculations, bench sheets, graphs, etc.
- g. Correspondence
 - 1. Interoffice
 - 2. EPA
 - 3. Industry
 - 4. Record of confidential material
- h. Report notes, calculations, etc.
- i. Reference literature
- j. Sample (on hand) inventory
- k. Check-out logs
- 1. Litigation documents

- m. Miscellaneous photos, maps, drawings, etc.
- n. Final report

No confidential material should be included in this file. Draft reports should be disposed of and only the final report should appear in the file. Confidential material must be maintained in a separate file under custody of a Document Control Officer in the EPA Regional office. Confidential material may be checked out from the DCO on a need-to-know basis.

A central element of the document control audit, to be performed by the CEAT, will be a determination that filing systems ensure document accountability and file security.

Document Numbering System and Inventory Procedure

To provide accountability to the appropriate individuals, each document features a unique serialized number which is assigned when the file is assembled. This number consists of a three-digit project code, the Branch initials, and a two-digit document number. For example, the first item in the Chemistry Branch file for project 123 would have the number 123-CB-01.

The inventory list consists of the serialized document number and a brief description of the item. Examples are:

123-CB-01	5/15/76 Memo from Mary Smith to John Doe re Toxicity and Health Effects Data
123-CB-02	Computer Printouts, Blank #2, Air GC/MS, 20 pages
123-CB-03	6/1/76 Handwritten notes of John Doe. 3 pages

Two copies of the inventory list accompany the files. One copy is put in the evidentiary file, and one copy is maintained by the Enforcement Division in the regional office or appropriate office in delegated state agencies. The file is now accountable and any documents removed from it must be checked out through the person maintaining the file.

The document control audit specifically consists of checking each document submitted for accountability. All documents used for the field investigation should be checked against the list of field documents issued to the project coordinator. A written explanation must be prepared for any documents unaccounted for. Documents other than those issued will be reviewed to ensure that they all appear on an inventory and that all documents listed on the inventory are accounted for. The auditor will check the documents for the proper numbering system.

The documents will be examined to determine that all necessary items such as signatures, dates, and project code are included.

Confidential Information

The CEAT will examine any documents marked "confidential" and determine if they are handled and stored in the proper manner.

Any information received with a request of confidentiality is handled as "confidential."

When confidential material is received, it shall be marked as such and placed in a locked filing cabinet or safe. Only personnel authorized by the Regional Administrator or Enforcement Division Director shall be allowed access to the file.

Reproduction should be kept to an absolute minimum. If it is essential that a copy be made, the person who maintains control of the file will make the copy.

No confidential information may be entered into a computer or data handling system.

Requests for access to confidential information by any member of the public or a state, local, or Federal agency shall be handled according to

the procedures contained in the Freedom of Information Act Regulations (40 CFR 2). All such requests shall be referred to the responsible regional organizational unit.

TOXIC SUBSTANCES CONTROL ACT CONFIDENTIAL BUSINESS INFORMATION

During the course of an evidence audit, the CEAT may be confronted with documents which a company has declared confidential under the Toxic Substances Control Act. If such claim has been made, the project coordinator should advise the CEAT during the pre-audit discussions.

In 1976 Congress enacted PL 94-469, the Toxic Substances Control Act (TSCA). This Act gives the U.S. Environmental Protection Agency a mandate to protect public health and the environment from unreasonable chemical risks.

Several product categories which fall under the jurisdiction of other Federal laws have been exempted from this law. These categories are: pesticides, tobacco, nuclear material, food, food additives, drugs, cosmetics, and firearms and ammunition.

A Company may claim confidentiality for any or all information collected by EPA during an inspection if it meets <u>all</u> of the following criteria:

- 1. The Company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.
- 2. The information is not, and has not been, reasonably obtainable without the Company's consent by other persons (other than government bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding).

- 3. The information is not publicly available elsewhere.
- 4. Disclosure of the information would cause substantial harm to the Company's competitive position.

Once confidentiality has been claimed, there are stringent procedures that must be followed. Each person who will have access to TSCA Confidential Business Information must have special clearance. Procedures for obtaining clearance and how to handle the information received are outlined in the TSCA Confidential Business Information Security Manual and the TSCA Confidential Business Information Security Briefing Booklet.

Some examples of the requirements for handling TSCA confidential information are listed below.

You are responsible for the control and security of all TSCA Confidential Business Information you receive. Specifically, you shall:

- 1. Discuss TSCA Confidential Business Information only with authorized persons.
 - 2. Safeguard the information when actually in use by:
 - a. Keeping it under constant surveillance and being in a position to exercise direct physical control over it.
 - b. Covering it, turning it face down, placing it in approved storage containers, or otherwise protecting it when unauthorized persons are present.
 - c. Returning it to approved storage containers when not in use and at close of business.
- 3. Not reproduce TSCA Confidential Business Information documents. Copies must be obtained through a Document Control Officer (DCO).
- 4. Not destroy TSCA Confidential Business Information documents except upon approval by and under the supervision of a DCO.

5. Not discuss TSCA Confidential Business Information over the telephone.

The penalties for violating the required procedures are severe. A "violation" is the failure to comply with any provision in the TSCA Confidential Business Information Security Manual, whether or not such failure leads to actual unauthorized disclosure of TSCA Confidential Business Information.

Violators of the procedures outlined in the manual may be removed from the authorized access list and be subject to disciplinary action with penalties up to and including dismissal.

Willful unauthorized disclosure of TSCA Confidential Business Information may subject the discloser to a fine of not more than \$5,000 or imprisonment for not more than one (1) year or both.

The foregoing is a brief summary of the requirements imposed for handling of TSCA Confidential Business Information. It is essential that personnel be familiar with these requirements. TSCA confidential files are subject to inspections by personnel from the EPA Security and Inspection Division, as well as personnel from the Office of the Inspector General, to ascertain that all procedures are being followed.

Personnel should not accept or assume custody of material or data declared "TSCA Confidential" unless (a) the matter has been thoroughly discussed with the Document Control Officer, (b) the recipient(s) have been cleared for "TSCA Confidential" by the EPA Regional Administrator, and (c) approved procedures for handling the data have been implemented.

CHAPTER VIII CASE PREPARATION ASSISTANCE

The CEAT will assist EPA, state environmental agencies, and contractors conducting enforcement investigations in development of internal policies and procedures for chain-of-custody, document control, file assembly, and evidence security.

Regional and Headquarters Enforcement Divisions will implement a uniform chain-of-custody procedure and prepare a document control system to account for enforcement records. Evidence audits will be performed to verify completeness of an enforcement case file.

CHAIN-OF-CUSTODY

The CEAT will assist enforcement personnel regarding the completion of custody records and maintenance of custody of samples or documents transferred or shipped to laboratories.

Consistency of information recorded on sample tags, custody records, and logbooks is essential. Samples must be locked up or sealed to prevent or detect tampering. All samples must be identified with a tag and listed on a custody record. The custody of samples must be documented from the time of collection until final disposition. Documentation associated with sample identification and custody must be maintained for the Evidentiary File. Establishing the integrity of samples is paramount to the success of any enforcement case.

DOCUMENT CONTROL

The goal of the document control program is to assure that all project documents issued to or generated by investigative personnel are accounted for when the project is completed. Litigation may not occur until months or years after the field and laboratory investigations have been completed.

The document files are the only records of events. The files must be complete, accurate, and organized to be able to reconstruct all activities, observations, measurements, and conclusions. The documents will be used to refresh investigators' memories if expert testimony is required. The files may be reproduced in part or total to respond to a discovery process. The agency must be able to respond quickly and effectively in these situations.

The document control program includes a document numbering and inventory system, an evidentiary filing system, and evidence audits. Field documents such as sample tags, custody records, field data records, and logbooks are serially numbered and accountable. All accountable documents checked out for a project must be returned or accounted for. Other documents such as laboratory records, correspondence, photographs, maps, drawings, calculations, litigation records, and reports are assembled and inventoried at the branch level. All completed files are submitted for inclusion in the Evidentiary File.

File Assembly

The Evidentiary File is an assembly of all project records and is under the control of the Document Control Officer. Records are available on a check-out basis. The file should be set up as described in Chapter VII.

The CEAT will assist with setting up the Evidentiary Files.

APPENDIX A

ENVIRONMENTAL PROTECTION AGENCY SAMPLE CONTROL PROCEDURES CHAIN-OF-CUSTODY

SAMPLE CONTROL PROCEDURES CHAIN-OF-CUSTODY

INTRODUCTION

A sample* is physical evidence collected from a facility or from the environment. An essential part of all enforcement investigations is the control all of evidence gathered. To accomplish this, the following sample identification and chain-of-custody procedures have been established.

Sample Identification

The method of identification of a sample depends on the type of measurement or analyses performed. When in-situ measurements are made, the data are recorded directly in logbooks or Field Data Records (FDRs), with identifying information (project code, station numbers, station locations, date, time, samplers), field observations, and remarks. Examples of insitu measurements are pH, temperature, conductivity, flow measurement, continuous air monitoring, and stack gas analysis.

Samples, other than in-situ measurements, are identified by a sample tag (Exhibits C and D) or other appropriate identification (hereinafter referred to as a sample tag).

These samples are removed from the sample location and transported to a laboratory or other location for analysis. Before removal, however, a sample is often separated into portions, depending on the analyses to be performed. Each portion is preserved in accordance with applicable procedures, and the sample container is identified by a sample tag. Sample tags shall be completed for each sample, using waterproof ink, unless prohibited

^{*} For purposes of this manual, the term 'sample' includes remote sensing imagery.

by weather conditions. For example, a logbook notation would explain that a pencil was used to fill out the sample tag because a ballpoint pen would not function in freezing weather. The information recorded on the sample tag includes:

Project Code	-	A number assigned by S&A
Station Number	-	A number assigned by the Project Coordinator and listed in the project plan or the NPDES permit number if used for NPDES inspections
Date	-	A six-digit number indicating the year, month, and day of collection
Time	-	A four-digit number indicating the military time of collection (e.g., 0954)
Station Location	-	The sampling station description as specified in the project plan
Samplers	-	Identification of each sampler
Tag Number		A unique serial number stamped on each tag that identifies Region with consecutive number (e.g., 8-1239)
Remarks	-	The samplers pertinent observations

The tag used for water samples (also soil, sediment, and biotic samples) contains an appropriate place for designating the sample as a grab or a composite and identifying the type of sample collected for analyses and preservative, if any. The tag used for air samples requires the sampler to designate the sequence number and identify the sample type. The Project Coordinator will detail procedures for completing tags used for soil, water, sediment, and biotic samples. The sample tags are attached to or folded around each sample.

After collection, separation, identification, and preservation, the sample is maintained under chain-of-custody procedures discussed below. If the composite or grab sample is to be split, it is aliquoted into similar sample containers. Identical sample tags are completed and attached to each split and marked "______Split". The tag identifies the split

sample for the appropriate government agency, facility, laboratory, or company. In a similar fashion, all tags on blank or duplicate samples will be marked "Blank" or "Duplicate", respectively.

Chain-of-Custody Procedures

Due to the evidentiary nature of samples collected during enforcement investigations, possession must be traceable from the time the samples are collected until they are introduced as evidence in legal proceedings. To maintain and document sample possession, chain-of-custody procedures are followed.

1. <u>Sample Custody</u>

A sample is under custody if:

- a. It is in your possession, or
- b. It is in your view, after being in your possession, or
- c. It was in your possession and then you locked it up to prevent tampering, or
- d. It is in a designated secure area

2. Field Custody Procedures

- a. In collecting samples for evidence, collect only that number which provides a good representation of the media being sampled. To the extent possible, the quantity and types of samples and sample locations are determined prior to the actual field work. As few people as possible should handle samples.
- b. The field sampler is personally responsible for the care and custody of the samples collected until they are transferred or dispatched properly.
- c. The Project Coordinator determines whether proper custody procedures were followed during the field work and decides if additional samples are required.

3. Transfer of Custody and Shipment

- a. Samples are accompanied by a Chain-of- .stody Record (see Exhibit E). When transferring the possession of samples, the individuals relinquishing and receiving will sign, date, and note the time on the record. This record documents sample custody transfer from the sampler, often through another person, to the analyst in a mobile laboratory or at the laboratory.
- b. Samples will be packaged properly for shipment and dispatched to the appropriate laboratory for analysis, with a separate custody record accompanying each shipment (e.g., one for each field laboratory, one for samples driven to the laboratory). Shipping containers will be padlocked or sealed for shipment to the laboratory. The method of shipment, courier name(s), and other pertinent information are entered in the "Remarks" section.
- c. Whenever samples are split with a source or government agency, it is noted in the "Remarks" section. The note indicates with whom the samples are being split and is signed by both the sampler and recipient. If the split is refused, this will be noted and signed by both parties. The person relinquishing the samples to the facility or agency should request the signature of a representative of the party acknowledging receipt of the samples. If a representative is unavailable or refuses to sign, this is noted in the "Remarks" section. When appropriate, as in the case where the representative is unavailable, the custody record should contain a statement that the samples were delivered to the designated location at the designated time.
- d. All shipments will be accompanied by the Chain-of-Custody Record identifying its contents. The original record will accompany the shipment, and a copy will be retained by the Project Coordinator.

e. If sent by mail, the package will be registered with return receipt requested. If sent by common carrier, a Government Bill of Lading will be used. Air freight shipments are sent collect. Freight bills, Postal Service receipts, and Bills of Lading will be retained as part of the permanent documentation.

Field Forms

Appropriate field sheets must be completed at the time of sample collection. These would include an NPDES Compliance Inspection Report form (EPA Form 3560-3, Exhibit F) and Region VIII Record of Sample Collection form (Exhibit G).

In addition to sample tags and field sheets, a bound field notebook must be maintained by the survey leader to provide a daily record of significant events. All entries must be signed and dated. All members of the survey party must use this notebook. Keep the notebook as a permanent record. In a legal proceeding, notes, if referred to, are subject to cross-examination and admissible as evidence.

APPENDIX B PROPOSED* DOCUMENT CONTROL PROCEDURES

* Presently undergoing EPA review

DOCUMENT CONTROL

The goal of the Region VIII Document Control Program is to assure that data collected in inspections with a high probability of judicial review will be accountable when the project is completed. The high probability decision will be made only by the Enforcement Division Director or, in his or her absence, the person acting in that capacity. This program includes a serialized document number system, a document inventory procedure, and an evidentiary filing system, all controlled by the Document Control Officer (DCO).

Accountable documents used or generated by Regional employees include logbooks, field data records, laboratory service requests, correspondence, sample tags, graphs, chain-of-custody records, certain laboratory records and reports, photographs, etc. Each appropriate document bears a serialized number and is listed, with its number, in the evidentiary file assembled by the Enforcement Division at the project's completion. Unused accountable documents may be disposed of after they are returned to the appropriate branch. Unless prohibited by weather, waterproof ink is used in recording all data on serialized accountable documents.

SERIALIZED DOCUMENTS

The DCO is responsible for assigning the necessary serialized documents for the project. Once a Project Coordinator is appointed, the field log-book, field data records, sample tags, and chain-of-custody records are assigned by the DCO to this person. The Coordinator is responsible for ensuring that a sufficient supply of documents is properly distributed to the appropriate personnel.

PROJECT LOGBOOK

Logbook entries should be dated, legible, and contain accurate and inclusive documentation of an individual's project activities. Because the

logbook forms the basis for the later written reports, it must contain only facts and observations. Language should be objective, factual, and free of personal feelings or other terminology which might prove inappropriate. Entries are dated and signed by the individual making the entry.

FIELD SAMPLE RECORDS

Where appropriate, serialized Field Sampling Records (FSRs) are maintained for each survey sampling station or location, and the project code and station number are usually recorded on each page. The Project Coordinator also numbers the FSR covers with the appropriate project code and station number. All in-situ measurements and field observations are recorded on the FSRs with all pertinent information necessary to explain and reconstruct sampling operations. Each page of a Field Sample Record is dated and signed by all individuals making entries on that page. The Coordinator and the field team on duty are responsible for ensuring that FSRs are present during all monitoring activities and are stored safely to avoid possible tampering. Any lost, damaged, or voided FSRs are reported to the Project Coordinator.

SAMPLE IDENTIFICATION DOCUMENTS

The DCO assigns serialized sample tags to the Project Coordinator. These sample tags are then distributed to field personnel by the Project Coordinator and the serial numbers are recorded in the Project Coordinator's logbook. For case preparation inspections, the serial number will be entered in the inspector's logbook. Individuals are accountable for each tag assigned to them. A tag is considered in their possession until it has been filled out, attached to a sample, and transferred to another individual with the corresponding Chain-of-Custody Record. At no time are any sample tags to be discarded and if any tags are lost, voided, or damaged, this is noted on the appropriate FSR or logbook immediately upon discovery and the Project Coordinator is notified. At the completion of the field investigation activities, all unused sample tags are returned to the DCO who checks

them against the list of assigned tag serial numbers. Tags attached to those samples split with the source or another government agency are accounted for.

CHAIN-OF-CUSTODY RECORDS

Serialized Chain-of-Custody Records are assigned and accounted for in a manner similar to that used for sample tags. When samples are transferred to laboratory personnel, the sample custodian, after signing, retains the white (original) custody record and files it in a safe place. The courier returns a copy of the custody record to the Project Coordinator. A similar procedure is followed when dispatching samples via common carrier, mail, etc., except that the original accompanies the shipment and is signed and retained by the receiving laboratory sample custodian.

When samples are split with the source or another government agency, it is noted in the field logbook, on the field Sheet, and on the Chain-of-Custody Record. The tag serial numbers from all splits are recorded on the custody record. A copy of the custody record will be provided to the source or agency upon request, and the orginals are returned to the Project Coordinator.

OTHER CONTROLLED DOCUMENTS

Data sheets that are used for various purposes such as chemical, bacteriological, and biological analyses; equipment calibration; etc. within the S&A laboratories are not distributed. These documents are accountable by the procedures discussed in the following paragraphs.

Bench sheets, laboratory service request forms, and other similar documents will be kept. Each document will show the project number, dates, name(s) of analyst(s), and other pertinent information. Instrument printouts and other separate documents will be labeled in a similar manner. These documents will be stored to support the Evidentiary File and, when and if required, special observations, notes, etc. will be entered on the bench sheet or instrument printout.

Sufficient detail is necessary to enable others to reconstruct the procedures followed should the original analyst be unavailable for testimony. All analyses will be done in accordance with EPA procedures and in compliance with Agency quality assurance requirements. Any irregularities observed during the testing process need to be noted on the bench sheet or instrument printout. If, in the technical judgment of the analyst, it is necessary to deviate from the particular analytical method, the deviation shall be justified and properly documented.

PHOTOGRAPHS

Whenever photographs are to be used as evidence in an enforcement proceeding, they are to be handled in such a way that chain-of-custody can be established. This chain-of-custody includes the handling of the film before, during, and after development. Also, before the services of a film processing laboratory are contracted, the laboratory must sign a statement which guarantees that all film will be processed using film developing techniques which will not alter the undeveloped film in any way.

A photographic log should be maintained for all photographs taken during the inspection, and the entries are to be made at the time the photograph is taken. The log entries are to be numerically identified so that, after the film is developed, the prints can be serially numbered corresponding to the logbook descriptions and, if necessary, pertinent information can be easily transferred to the back of the photograph. The log entries are to include:

- 1. Signature of the photographer
- Description of film used (i.e., its expiration date, ASA number, origin, etc.)
- 3. Focal length of the lens being used
- 4. F-stop and shutter speed at which the camera is set, if appropriate
- 5. Lighting conditions encountered
- 6. Time of day
- 7. Date
- 8. Location
- -9. A brief description of the subject being photographed

Photographs should be keyed to the plot plan, flow diagram, or location map, whenever possible.

CORRECTIONS TO DOCUMENTATION

Unless prohibited by weather conditions, all original data recorded in logbooks, sample tags, custody tags, and other data sheet entries are written with waterproof ink. None of the accountable serialized documents listed above are to be destroyed or thrown away, even if they are illegible or contain inaccuracies which require a replacement document.

If an error is made on an accountable document assigned to one individual, that individual may make corrections simply by crossing a line through the error, entering the correct information, and dating and initialing the new entry. Any subsequent error discovered on an accountable document should be corrected by the person who made the entry.

If a sample tag is lost in shipment, or a tag was never prepared for a sample(s), or a properly tagged sample was not transferred with a formal chain-of-custody tag, the following procedure applies: A written statement is prepared detailing how the sample was collected, air-dispatched, or hand-transferred to the S&A laboratory. The statement should include all pertinent information such as entries in the field logbook regarding the sample, whether the sample was in the sample collector's physical possession or in a locked compartment until hand-transferred to the laboratory, etc. Copies of the statement are distributed to the Project Coordinator and the appropriate Branch project files.

CONSISTENCY OF DOCUMENTATION

Before release of a final project report, the Chemistry and/or Biology Sections assemble and cross-check information on corresponding sample tags, custody records, bench sheets, and instrument printouts to ensure that data pertaining to each particular sample is consistent throughout the record. The Project Coordinator concurrently performs a cross-check of evidentiary

data in his possession (FSRs. logbooks, custody records, etc.) to ensure that information recorded corresponds with that of the S&A laboratories and is consistent throughout the project record. A statement that all project evidentiary/technical data has been accounted for accompanies the transfer of the evidentiary file to the Enforcement Division.

The DCO is responsible for correlating accountable documents for a project when there has been a change in the project number.

DOCUMENT NUMBERING SYSTEM AND INVENTORY PROCEDURE

To provide document accountability to the appropriate individuals, each of the document categories discussed above features a unique serialized number for each item within the category. Logbook, FSRs, sample/custody tags are serially numbered by the DCO before assignment to project personnel. The logbook and FSRs are usually given a five-digit number, with the project code as the first three digits followed by a two-digit document number. Sample/custody tags are labeled with a four-digit document number and the project code. All Branch documentation not covered by the above (logbbook, data sheets, graphs, etc.) are uniquely and serially numbered using the project code as part of the number.

All other documents (such as recorder graph paper, data calculation sheets, memorandum, correspondence, photos, etc.) which are generated during a project, are sequentially numbered with the project code, Branch initials, and a serialized number (e.g., 707-CB-01), usually at the time the Branch file is assembled.

BRANCH FILES

After a Branch has completed its work for a particular investigation, all documents generated from that project assembled. Individuals may retain <u>clean</u> (no handwritten comments) copies of documents for their personal files but only after <u>personally verifying</u> that the original or similar copy is in the Branch file. The Chief of each Branch is responsible for assuring the

for assuring the collection, assembly, and inventory of all documents relative to a particular project at the time the project objectives are completed. The file then becomes accountable. Any records leaving the file must be signed out.

EVIDENTIARY FILE

When the S&A Division or other appropriate Division has completed the project objectives, all inventoried Branch file documents are reviewed and submitted to the DCO by each Branch Chief. By this time each document will have been labeled with a unique serialized number as specified above. The format of the Evidentiary File is to arrange each project by Branch documents and includes the following document classes:

- a. Project Plan
- b. Field Logbooks
- c. Field Sample Records
- d. Sample Tag/Chain-of-Custody Record
- e. Analytical Report
- f. Correspondence
 - 1. Intraoffice
 - 2. EPA
 - 3. Industry
 - 4. Record of Confidential Material
- g. Sample (on hand) Inventory
- h. Checkout Logs
- i. Miscellaneous photos, maps, drawings, etc.
- j. Final Report
- k. Litigation Documents

The Evidentiary File will then be forwarded to the Enforcement Division for final retention and disposition. Documents may only be checked out through the designated Enforcement representative. The Evidentiary File will be kept locked at all times.

APPENDIX C FIELD INVESTIGATIONS AUDIT CHECKLIST

FIELD CHECKLIST

Briefing with Project Coordinator

PROJECT NO.	DATE OF AUDIT
	SIGNATURE OF AUDITOR
PROJECT LOCATION	
TYPE OF INVESTIGATION	
(authority, agency)	
Yes No N/A 1	. Has a project coordinator been appointed?
	Comments:
Yes No N/A 2	. Was a project plan prepared?
	If yes, what items are addressed in the plan?
	Comments:
Yes No N/A 3	. Was a briefing held with project participants?
	Comments:
Yes No N/A 4	. Were additional instructions given to project par- ticipants (i.e., changes in project plan)?
	Comments:
	· · · · · · · · · · · · · · · · · · ·
•	
Yes No N/A 5	. Is there a written list of sampling locations and
	descriptions?
	Comments:

Yes No N/A	6.	Is there a map of sampling locations? Comments:
Yes No N/A	7.	Do the investigators follow a system of accountable documents? If yes, what documents are accountable? Comments:
Yes No N/A	8.	Is there a list of accountable field documents checked out to the project coordinator? If yes, who checked them out? Comments:
	,	
Yes No N/A	9.	Is the transfer of field documents (sample tags, chain-of-custody records, logbooks, etc.) from the project coordinator to the field participants documented in a logbook? Comments:
,		

FIELD CHECKLIST

Field Observations

Yes	No_	N/A_	1.	Was permission granted to enter and inspect the facility?
				Comments:
Yes	No_	N/A	2.	Is permission to enter the facility documented?
				Comments:
Yes	No	N/A	3.	Were split samples offered to the facility?
		•		If yes, was the offer accepted or declined? Comments:
				Commences.
Yes	No	N/A	4.	If the offer to split samples was accepted, were
		· -		the split samples collected?
				Comments:
				<u> </u>
Yes	No	N/A	5.	Is the offering of split samples recorded?
				Comments:
Vac	No	N / A	6.	If colit camples are collected, are they decumented
162	140	N/A	0.	If split samples are collected, are they documented? If yes, where are they documented?
				Comments:

Yes	No	N/A	7.	Are the number, frequency, and types of field measurements and observations taken as specified in the project plan or as directed by the project coordinator? Comments:
Yes	No	N/A	8.	Are field measurements recorded (pH, temperature, conductivity, etc.)? Where? Comments:
Yes	No	N/A	9.	Are samples collected in the types of containers specified in the project plan or as directed by the project coordinator? Comments:
Yes	No	N/A	10.	Are samples preserved as specified in the project plan or as directed by the project coordinator? Comments:
Yes <u>.</u>	No	N/A	11.	Are the number, frequency, and types of samples collected as specified in the project plan or as directed by the project coordinator? Comments:
Yes	No	N/A	12.	Are samples packed for preservation as per the sample plan (i.e., packed in ice, etc.)? Comments:

Yes No	N/A	13.	Ιs	sample	custody	maintained	at	all	times?	
			Соп	nments:						
				_						
										

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FIELD CHECKLIST

Document Control

Yes	No	N/A	1.	Have all unused and voided accountable documents been returned to the coordinator by the team members?
				Comments:
Yes	No	N/A	2.	Have document numbers of all lost or destroyed accountable documents been recorded in the project coordinator's logbook? Comments:
				onimetros.
•				
Yes	No	N/A	3.	Are all samples identified with sample tags? Comments:
Yes	No	N/A	4.	Are all sample tags completed (e.g., station no., location, date, time, analyses, signatures of samplers, type, preservatives, etc.)? Comments:
				,
Yes	No	N/A	5.	Are all samples collected listed on a chain-of-custody record? If yes, describe the type of chain-of-custody record used. Comments:

Yes_	_ No	N/A	6.	Are the sample tag numbers recorded on the chain-of-custody documents? Comments:
				Comments:
Yes_	No	N/A	7.	Does information on sample tags and chain-of-custody records match? Comments:
Yes	_ No	N/A	8.	Does the chain-of-custody record indicate the method of sample shipment? Comments:
Yes _	No_	_ N/A	9.	Is the chain-of-custody record included with the samples in the shipping container? Comments:
Yes	_ No	N/A	10.	Do the sample traffic reports agree with the sample tags? Comments:
Yes_	_ No	N/A	11.	If required, has a receipt for samples been provided to the facility? Comments:
Yes	_ No	N/A	12.	If required, was the offer of a receipt for samples documented? Comments:
	-			

Yes	No	N/A	13.	If used, are blank samples identified? Comments:
Yes	No_	N/A	14.	If collected, are duplicate samples identified on sample tags and chain-of-custody records?
				Comments:
Yes	No	N/A	15.	If used, are spiked samples identified? Comments:
Yes	No	N/A	16.	Are logbooks signed by the individual who checked out the logbook from the project coordinator? Comments:
Yes	No	N/A `	17.	Are logbooks dated upon receipt from the project coordinator? Comments:
Yes	No	N/A	18.	page)? Comments:
Yes	No	N/A	19.	Are logbook entries dated and identified by author? Comments:

•

Yes	No	N/A	20.	Is the facility's approval or disapproval to take photographs noted in a logbook?
				Comments:
Yes	No	N/A	21.	Are photographs documented in logbooks (e.g., time, date, description of subject, photographer, etc.)?
				Comments:
			•	
Yes_	No	N/A	22.	If a Polaroid camera is used, are photos matched with logbook documentation?
			•	Comments:
		•		
Yes	No_	N/A	23.	Are sample tag numbers recorded in the project co- ordinator's logbook?
				Comments:
		٠		
				•
Yes <u>.</u>	No	N/A	24.	Are Quality Control checks documented (i.e., calibration of pH meters, conductivity meters, etc.)?
				Comments:
Yes_	No	N/A	25.	Are amendments to the project plan documented (on the project plan itself, in a project logbook, elsewhere)?
				Comments:

FIELD CHECKLIST

Debriefing with Project Coordinator

after the audit was	ld with project participants completed?
· <u>······</u>	
pants during the deb If yes, briefly desc made.	tions made to project partici- oriefing? cribe what recommendations were
·	

APPENDIX D LABORATORY OPERATIONS AUDIT CHECKLIST

LABORATORY CHECKLIST

FIELD PROJECT NO	DATE OF AUDIT		
FIELD PROJECT LOCATION _			
LABORATORY			
	·		
CONTRACTS IN EFFECT			
	(List Contract Numbers)		
·			
Yes No N/A 1.	Is a sample custodian designated? If yes, name of sample custodian. Comments:		
Yes <u>.</u> No <u>N/A</u> 2.	Are the sample custodian's procedures and responsibilities documented? If yes, where are these documented? Comments:		
·			
Yes No N/A 3.	Are written Standard Operating Procedures (SOP) developed for receipt of samples? If yes, where is the SOP documented (laboratory manual, written instructions, etc.)? Comments:		
	Commences.		
Yes No N/A 4.	Is the receipt of chain-of-custody record(s) with samples being documented? If yes, where is this documented? Comments:		

Yes No N/A	5.	Is the nonreceipt of chain-of-custody record(s) with samples being documented? If yes, where is this documented?
•		Comments:
Yes No N/A	6.	Is the integrity of the shipping container(s) being documented (custody seal(s) intact, container locked or sealed properly, etc.)? If yes, where is security documented?
		Comments:
Yes No N/A	7.	Is the lack of integrity of the shipping container(s) being documented (i.e., evidence of tampering, custody seals broken or damaged, locks unlocked or missing, etc.)? If yes, where is nonsecurity documented?
		Comments:
Yes No N/A	8.	Is agreement among Sample Management Office forms, chain-of-custody records, and sample tags being verified? If yes, state source of information.
		Comments:
Yes No N/A	9.	Is the agreement or nonagreement verification being documented? If yes, where is this documented?
		Comments:

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Yes	No	N/A	10.	Are sample tag numbers recorded by the Sample Custodian? If yes, where are they recorded? Comments:
Yes	No	N/A	11.	Are written Standard Operating Procedures (SOP) developed for sample storage? If yes, where is the SOP documented (laboratory manual, written instructions, etc.)? Comments:
Yes	No	N/A	12.	Are samples stored in a secure area? If yes, where and how are they stored? Comments:
Yes	No	N/A	13.	Is sample identification maintained? If yes, how? Comments:
Yes	No	N/A	14.	Is sample extract (or inorganics concentrate) identification maintained? If yes, how? Comments:
Yes	No	N/A	15.	Are samples that require preservation stored in such a way as to maintain their preservation? If yes, how are the samples stored? Comments:

Yes No N/A	16.	Based on sample records examined to determine holding times, are sample holding times limitations being satisfied? List sample records used to determine holding-times. Comments:
Yes No N/A	17.	Are written Standard Operating Procedures (SOP) developed for sample handling and tracking? If yes, where is the SOP documented (laboratory manual, written instructions, etc.)? Comments:
Yes No N/A	18.	Do laboratory records indicate personnel receiving and transferring samples in the laboratory? If yes, what laboratory records document this? Comments:
Yes No N/A	19.	Does each instrument used for sample analysis (GC, GC/MS, AA, etc.) have an instrument log? If no, which instruments do not? Comments:
Yes No N/A	20.	Are analytical methods documented and available to the analysts? If yes, where are these documented? Comments:

Yes No	N/A	21.	Are quality assurance procedures documented and available to the analysts? If yes, where are these documented? Comments:
Yes No	N/A	22.	Are written Standard Operating Procedures (SOP) developed for compiling and maintaining sample document files? If yes, where is the SOP documented (laboratory manual, written instructions, etc.)?
Yes No	N/A	23.	Are sample documents filed by case number? If no, how are documents filed? Comments:
Yes No	N/A	24.	Are sample document files inventoried? Comments:
Yes No	N/A	25.	Are documents in the case files consecutively numbered according to the file inventories? Comments:
Yesno	N/A	26.	Are the laboratory document files stored in a secure area? If yes, where and how are they stored? Comments:

Yes	No	N/A		Has the laboratory received any confidential documents? Comments:
Compl	ete q	uestions	28 and	29 ONLY if the response to question 27 was <u>yes</u> .
Yes	No	N/A		Are confidential documents segregated from other laboratory documents? If no, how are they filed? Comments:
Yes	No	N/A		Are confidential documents stored in a secure manner? If yes, where and how are they stored? Comments:

LABORATORY CHECKLIST

Debriefing with Laboratory Personnel

Yes No N/A	1.	Was a debriefing held with laboratory personnel after the audit was completed? Comments:
Yes No N/A	2.	Were any recommendations made to laboratory personnel during the debriefing? If yes, briefly describe what recommendations were made in presence of EMSL representative.
	·	Briefly describe what recommendations were made to laboratory personnel in absence of EMSL representative.

LABORATORY EVIDENCE AUDIT DOCUMENT WORKSHEET

CASE NO		··		CE	AT PROJECT NO		
FIELD PROJECT NO.							
FIELD PROJECT LOCATION_							
REGION						pageof	
LABORATORY NAME						T = 3 =	
√indicates yes; X in	dicates no; O indic	ates copy	′ (3); n	/a nonap	plicable (5); N indicate	s no errors (4)	
DOCUMENT TYPE	DOCUMENT NUMBER	SIGNED	2 3 13 13 13 13 13 13 13 13 13 13 13 13 1	4/5/	REMARKS		
						,	

APPENDIX E DOCUMENT CONTROL AUDIT CHECKLIST

DOCUMENT AUDIT CHECKLIST

PROJECT NO		DATE OF AUDIT
PROJECT LOCATIO	N	SIGNATURE OF AUDITOR
FILE LOCATION		
Yes No	1.	Have individual files been assembled (field investigation, laboratory, other)? Comments:
Yes No	2.	Is each file inventoried?
		Comments:
		
Yes No	3.	Is there a list of accountable documents? Comments:
Yes No	4.	Are all accountable documents present or accounted for?
		Comments:
Yes No	5.	Is a document numbering system used?
		Comments:

Yes [®] N	0	6.	Has each document been assigned a document control number? Comments:
Yes N	lo	7.	Are all documents listed on the inventory accounted for? Comments:
Yes N	lo	8.	Are there any documents in the file which are not on the inventory? Comments:
Yes N	lo	9.	Is the file stored in a secure area? Comments:
Yes N		10.	Are there any project documents which have been declared confidential? Comments:
Yes N	lo	11.	Are confidential documents stored in a secure area separate from other project documents? Comments:

Yes No	12.	Is access to confidential files restricted? Comments:
Yes No	13.	"Confidential"? Comments:
Yes No	14.	Is confidential information inventoried? Comments:
Yes No	15.	Is confidential information numbered for document control?
Yes No	16.	Have any documents been claimed confidential under TSCA? Comments:

APPENDIX F
SAMPLE NARRATIVE EVIDENCE AUDIT REPORT

ENVIRONMENTAL PROTECTION AGENCY OFFICE OF ENFORCEMENT NATIONAL FIELD INVESTIGATIONS CENTER—DENVER BUILDING 53, BOX 25227, DENVER FEDERAL CENTER DENVER, COLORADO 80225

TO .: C.G. Wills, Chief, Enforcement Specialists' Office DATE: October 4, 1979

FROM : Robert Laidlaw, Evidence Audit Unit 🔑

SUBJECT: Project Review, ABM-Wade Disposal Site, Philadelphia, PA (616)

Attached for your review is the draft evidence audit report for project 616, ABM-WADE Disposal Site, Philadelphia, PA.

EVIDENCE AUDIT REPORT ABM-WADE DISPOSAL SITE, PHULADELPHIA, PA. PROJECT 616 OCTOBER 4, 1979

An evidence audit was conducted on project documents for project 616 during September, 1979. All accountable documents charged to the project are accounted for. Project documents generated within the individual branches are complete as listed on each branch inventory. These documents have been reviewed and are in accordance with NEIC policies and procedures. Field and laboratory operations were not audited.

The following accountable documents were issued to the project coordinator on February 5, 1979

logbooks 616-01 through 616-07 custody tags 2805-2854 chain of custody records 0474-0485

In addition, six custody locks and two keys were issued on the same date.

Custody tag numbers 2805 through 2826 are attached to sample containers that are located in the chemistry regulated laboratory. These tags are accounted for as follows:

2805-Sta 01 3/14/79 @ 0848 2806-Sta 02 3/14/79 @ 0855 2807-Sta 03 3/14/79 @ 0900 2808-Sta 04 3/14/79 @ 0905 2809-Sta 05 3/14/79 @ 0910 2810-Sta 06 3/14/79 @ 0915 2811-Sta 07 3/14/79 @ 0938 2812-Sta 18 3/14/79 @ 0940 2813-Sta 19 3/14/79 @ 0945 2815-Sta 09 3/14/79 @ 0950

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2816-Sta 10 3/14/79 @ 0955

2817-Sta 11 3/14/79 @ 1000

2818-Sta 12 3/14/79 @ 1005

2819-Sta 13 3/14/79 @ 1030

2820-Sta 22 3/14/79 @ 1035

2821-Sta 20 3/14/79 @ 1040

2822-Sta 14 3/14/79 @ 1045

2823-Sta 21 3/14/79 @ 1051

2825-Sta 15 3/14/79 @ 1054

2826-Sta 17 3/14/79 @ 1100
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Once the samples and containers have been disposed of, the tags will be removed and placed in the evidentiary file. Accountable documents that were charged to the project but which were not used, had the project number removed or were disposed of and are not included in the project evidentiary file. These unused documents are listed below.

logbook		616-02	
logbook		616-03	
logbook		616-04	
logbook		616-05	
logbook	•	616-06	
custody	tags	2835 through	2854
custody	records	0477. through	0485

In addition, all custody locks and keys were returned.

The ABM-WADE Disposal Site file consists of the following individual inventoried branch files:

Central file Field Operations Branch file Process Control Branch file Technical Services Branch file Chemistry Branch file

Each of these files were evaluated to determine if the documentation contained any significant deviations from accepted NEIC policies and procedures. In my opinion, there were no significant deviations in the documentation that would compromise the evidence for this project.

The review of the Central File demonstrated that all documents were inventoried and numbered with the project number and serialized document number. All of the documents listed on the inventory are present in the file. There was one document, (616-CF-15), that pertains to project 618, this was removed and placed in the project file for 618.

The Central File did not contain an official written request for work to be performed. However, the request for work is discussed in a memo from Mr. Benson to the Director, NEIC, on January 26, 1979 (616-CF-16) and further discussed in a memo from the Deputy Assistant Director, Operations, on February 2, 1979 (616-CF-12). These memos did detail the objectives of the project and related these objectives to an enforcement action under section 7003 (RCRA).

The Field Operations Branch file demonstrated that all dcouments are accounted for and are inventoried. All of the documents are properly identified and numbered with the exception of the photographs.

The photographs are described on the back of the prints and in the logbook, but are not individually numbered.

The Process Control Branch file contains properly identified and organized documents. These documents were handled in a manner consistent with NEIC policies and procedures. All documents listed on the inventory are accounted for.

The Technical Services Branch file is inventoried and all documents on the inventory are accounted for. The documents are not individually labeled with the project number or a serialized document number.

The Chemistry Branch file contains properly identified and organized documents. The documents listed on the inventory are all accounted for and are labeled with the project number and a serialized document number. All of the documentation appears to be handled consistent with NEIC policies and procedures. The branch file contained references to methods used for metals analysis. Samples were analyzed by ICP-AES. There is no standard method available for analysis of metals from sediment or solid waste samples. Quality assurance work was used to demonstrate the acceptability of this method. It would have been desirable to have described in detail the procedure and the accompanying quality assurance work.

These files are secured in the evidentiary file located in Building 53.

APPENDIX G EVIDENCE AUDIT STATEMENT

	Date
To:	, Project Officer
	EPA, National Enforcement Investigations Center Bldg. 53, Box 25227, Denver Federal Center Denver, Colorado 80225
SUBJ	ECT: EVIDENCE AUDIT - CPA STATEMENT
	ve examined the audit worksheets and logbooks completed by the CEAT durthe audit of
ards	xamination was made in accordance with generally accepted auditing standand and included such tests of the documentation, and such other auditing edures as I considered necessary in the circumstances.
	y opinion, the chain-of-custody, document control, and evidence security edures followed by
meet	or exceed evidence audit requirements. Exceptions to this statement noted below.