Permit Compliance System (PCS) Quality Assurance Guidance Manual

Office of Wastewater Enforcement and Compliance (OWEC)

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Permit Compliance System (PCS)
Quality Assurance Guidance Manual

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SECTION 1

INTRODUCTION

1.1 Purpose of Manual

This *Permit Compliance System (PCS) Quality Assurance Guidance Manual* provides guidance to Environmental Protection Agency (EPA) Regional Offices and states in developing and documenting quality assurance procedures for PCS. If you already have established documented quality assurance (QA) procedures, this manual can help you assess and improve them.

The manual addresses three major questions that should be of concern to all Regional and state PCS users:

- How is "PCS data quality" defined and how is it measured (see Section 1.4 and Section 2)?

- What practices and tools should users employ to ensure that their PCS data meets these quality standards consistently (see Section 3, Section 4, and Appendix C)?

- What steps can users take to assess their current practices and determine how to improve their quality assurance program (see Appendix B)?

A sample QA manual, included in Appendix C of this document, is intended as an example for you to use in documenting your QA procedures. It is based on guidelines presented here and gives you detailed examples of procedures useful in providing for PCS data quality.

1.2 Role of PCS in the Environmental Protection Agency

PCS is the information management system that supports the National Pollutant Discharge Elimination System (NPDES) program, the Congressionally-mandated program for issuing permits to facilities discharging wastewater into navigable waterways. EPA has delegated authority for the NPDES program to environmental agencies in 38 states, while EPA Regional Offices implement the program in the remaining states.

The Office of Wastewater Enforcement and Compliance (OWEC), which oversees the NPDES program nationally, relies on PCS as the primary source of information on state and Regional Office activities in the program. The Regions and delegated states use PCS as a central repository of information on regulated NPDES facilities to track permit compliance and enforcement activities of these facilities. Table 1 describes the management functions supported by PCS. It is very important that the data it contains be complete, accurate, and up-to-date and that all users be consistent in the way they define and use various PCS data elements because the system plays such a central role in program management.

Table 1. Management Functions Supported by PCS

■ Track permit issuance and reissuance
 	
■ Support oversight of NPDES programs by identifying automatically:
 	
    □ Compliance Schedule Violations
    □ Discharge Monitoring Report (DMR) Effluent Limit Violations
    □ Discharge Monitoring Report (DMR) Reporting Violations
    □ Reportable Noncompliance Violations (RNC)
 	
■ Determine compliance statistics at a State or national level
 	
■ Track enforcement actions and the resulting compliance schedules and interim limits
 	
■ Respond to requests for information from Congress, state legislatures, and the general public

1.3 PCS Policy Statement

The PCS Policy Statement, issued in 1985 (Appendix A), designated PCS as the national data base for the NPDES program and established the minimum required standard for data entry -- the Water Enforcement National Data Base (WENDB). The integrity of these elements is essential because they form the core of data used to generate statistics for the NPDES program. In this policy statement, OWEC required all direct PCS users to take steps to ensure the quality of their PCS data. The Policy Statement mandates that each user's QA program shall include:

- monthly measurement of the level of data entered

- appropriate time frames to ensure that data are entered in PCS in a timely manner

- nationally consistent standards of known data quality based on proven statistical methods of quality assurance

- targets for the completeness (for assurance of full data entry) and accuracy of the data entered into PCS.

1.4 PCS Data Quality

The development of your PCS QA program should be guided by a clear definition of what is meant by the term "data quality." It is especially important to recognize that the following key principles underlie the development of quality in PCS data:

- Quality must be built in from the very beginning of the data collection, preparation, and entry process. It is often costly in terms of resources, timeliness, and efficiency to make corrections after the data are entered into PCS.

- Quality is achieved through effective management and commitment. Responsive

management should provide the support and training that is necessary to achieve good data quality and recognize, reward, and encourage quality service and performance.

- Quality must be tracked and performance of the program evaluated at regular intervals. Data quality must be measurable so that the causes of poor data quality can be identified and corrected.

1.5 Organization and Suggested Use of this Document

Following this introduction, Section 2 discusses the components and benefits of a PCS QA program. Section 3 provides an overview of procedures that should be included and Section 4 suggests management practices that will help you administer your program. The PCS Policy Statement is reproduced in Appendix A. Appendix B provides a method to assess your current QA program and Appendix C provides a Sample PCS Quality Assurance Manual.

PCS managers and their staff are encouraged to use this guidance document, in conjunction with Appendix C, when they develop or modify their own PCS QA manual. Appendix B should be used as a reference when you evaluate your PCS QA program.

SECTION 2

PCS QUALITY ASSURANCE PROGRAM

2.0 Overview

Your QA program should be based on a through understanding of the national PCS data quality standards for timeliness, accuracy, completeness, and consistency. Combining this knowledge with well-documented procedures and effective management commitment will produce a successful QA program resulting in better PCS data, smoother PCS operations, and improved operation and management of the NPDES program.

2.1 PCS Data Quality Standards

How well your PCS data meet the definition of quality can be evaluated based on an objective assessment of each of the following four measures:

- **_Timeliness_** --- the extent to which the data covering a specific interval of NPDES program activity are promptly entered into PCS

- **_Accuracy_** --- the extent to which the data recorded in PCS reflect the correct, true, or reported values

- **_Completeness_** --- the extent to which the required data are reported and recorded in the system

- **_Consistency_** --- the extent to which the values of the data elements use the standard definitions or codes and the extent to which these definitions and codes are used in the same way by all users.

2.1.1 Timeliness

Timeliness refers to the "punctuality" of information in the data base -- as measured by the length of time between the actual event (or receipt of information about the event) and its appearance in the data base. PCS targets for timeliness vary by the type of data being entered into the system. Table 2 defines the target for timeliness for each PCS data type. For example, Discharge Monitoring Report (DMR) data should be entered into PCS within ten working days of the receipt of the DMR.

- *Information from DMRs should be entered into PCS within 10 days of receipt; most other data types should be entered into PCS within five working days of the receipt of the information.*

2.1.2 Accuracy

Accuracy refers to the absence of erroneous data resulting from mistakes during any point in the data preparation, entry, or transmission process. Errors sometimes result from mistakes by key-entry personnel, but they can also be introduced by program or facility personnel who prepare the source documents used for data entry. Data entry errors are usually misspellings and incorrectly entered values while transmission errors often result in transpositions of characters and dropped digits.

- *95% of the WENDB elements entered into PCS should be identical with those reported on the DMR, permit or other input document.*

2.1.3 Completeness

Completeness refers to the amount of required data present in the data base at a specific point in time. Completeness is important to assure that all pertinent information is available for

Table 2. PCS Targets for Timeliness	
Data Type	Data Entry Target
■ Permit Facility Data	■ To be entered within five working days of date of receipt of permit application and permit issuance.
■ Pipe-Schedule Data	■ To be entered within 10 working days of permit issuance.
■ Parameter-Limits Data	■ To be entered within 10 working days of permit issuance or issuance of enforcement action.
■ Measurement/Violation Data	■ Measurement data to be entered within 10 working days of receipt of DMR.
■ Compliance Schedule Data	■ To be entered within five working days of schedule establishment or notification of completion.
■ Compliance Schedule Violation Data	■ System generated.
■ Enforcement Action Data / Enforcement Action Key Data	■ To be entered within five working days of the enforcement action.
■ Single Event Violation Data	■ To be entered within five working days of notification of the violation event (e.g. fish kill).
■ Pretreatment Performance Summary Data	■ To be entered within thirty working days of receipt of pretreatment annual report.
■ Inspection Data	■ To be entered within 10 working days of receipt of inspection report.
■ Pretreatment Audit/PCI Data	■ To be entered within 10 working days of receipt of audit or inspection report.
■ Permit Events Data	■ To be entered within five working days of date of receipt of permit application and permit issuance.
■ Evidentiary Hearing Data	■ To be entered within five working days of the appropriate hearing date.

use when it is needed. The PCS Policy Statement has designated the WENDB elements as the minimum set of data elements required for PCS.

Timeliness and completeness are closely interrelated and are often considered together. In particular, completeness must always be evaluated with respect to time -- that is, data are complete (or incomplete) as of today. However, in some instances it is easy to separate these two factors. For example, a report may be received and entered into PCS in a timely manner, but lacks a few WENDB elements; in this case information was received and entered in a timely way, but is not entirely complete.

■ *95% of the WENDB elements should be entered for each facility.*

2.1.4 Consistency

Consistency refers to the extent to which appropriate values are used for a data element as defined nationally (in the case of WENDB data elements). For management reports to be the most effective, data must be comparable over time within the area of interest. Comparable codes or values must be used for the same data elements over time and in different geographical area (state or Region), if valid comparisons are to be made by PCS managers. For example, program managers may want to identify facilities authorized to discharge large amounts of a certain pollutant (i.e. cadmium); this data can be readily complied from PCS, however, only if a consistent code has been used for the pollutant.

Consistency errors usually originate with the program or facility staff who prepare source documents. They differ from accuracy errors in that the value is correct as far as the coder is concerned, but the selection of the code is not consistent with the approved definition of the data element, the data element value, or with the way the code is used by others. An example illustrating this problem is the difficulty of identifying measurement data at the end-of-pipe to be used for loadings. Due to the multiple values in the monitoring location (MLOC) data element used by Regions and states, it is extremely difficult to identify the end-of-pipe. National

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data consistency standards will be developed for the WENDB elements.

- ***100% of the WENDB elements should use appropriate values as defined nationally.***

2.1.5 Summary -- the Four Measures of Quality

Problems in any of these four measures can degrade overall data quality and undermine the confidence users have in PCS. Therefore, in order for the quality of PCS data to be "good", the data must meet each of the four data quality targets for timeliness, accuracy, completeness, and consistency. The failure to meet these targets is especially serious when the WENDB elements are affected due to the use of this data for program decisions and public access. Uncorrected errors in the optional data elements can also pose significant problems to users.

The four measures of data quality and their suggested targets should be incorporated into your objectives for your QA program. While your data quality objectives should be set at an attainable and realistic level, they should be at least as stringent as the national standards summarized below (Table 3). Further, it is important to track your performance against the targets.

Table 3. Summary of PCS Data Quality Targets			
Timeliness	Accuracy	Completeness	Consistency
■ Based on data type. See Table 2 for targets.	■ 95% of the WENDB elements in data base identical to original source document.	■ 95% of the WENDB elements entered for each facility.	■ 100% of the WENDB elements use appropriate value defined nationally.

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2.2 Components of a PCS QA Program

The PCS Policy Statement requires all direct users to develop a QA program that includes monthly tracking of the level of data entered, appropriate time frames for data entry, and nationally consistent standards for PCS data completeness and accuracy. Within these broad guidelines, PCS users have the flexibility to configure their individual program in a manner that best suits their own resources and requirements. Some factors influencing this decision include the extent of optional data elements used, available staff, severity of past data problems, and the cost of developing or implementing new procedures.

OWEC strongly recommends a "prevention oriented" approach for your QA program. You should try to prevent problems through clear procedures, well-defined responsibilities, and understandable instructions -- then catch and correct the few problems that will inevitably occur. This economical approach saves substantial amounts of rework and uses your limited PCS staff and resources most efficiently. Simply put, it is far easier and cheaper to do the work right the first time than it is to redo it.

■ *A successful PCS QA program uses eight simple ingredients.* You will need to draw on each of these points to meet your individual needs. (See Table 4 on the following page)

If you currently have a formal QA program, you may want to evaluate it to determine where and how it may be improved. If so, Appendix B contains a check-list to help you assess your current program. By using this check-list you will be able to measure your program and identify which of the ingredients listed above might be improved upon or incorporated into your existing program.

Table 4.
An 8-point Program for PCS Quality Assurance

Set Your Quality Objectives

- Measurable, well-defined data quality objectives

Document Your Procedures -- and Follow Them

- Well-documented data collection and handling procedures
- Procedures for detecting and correcting errors

Manage for Quality

- Procedures to measure and track performance against goals
- Clearly assigned staff responsibilities and oversight
- Adequate documentation, training, and communication
- Consistent management commitment to data quality
- Periodic review and evaluation of your QA program

2.3 Benefits of a Documented QA Program

A vigorous QA program using the eight points listed above forms the foundation for supporting the many tiers of interrelated functions of PCS (Figure 2.1). In particular, a good PCS QA program will pay off in four areas:

- Better PCS Data

The most immediate and observable effect of a QA program is the improvement in quality of PCS Data. The procedures outlined here, in conjunction with management commitment to the PCS quality targets, will produce PCS data that is timely, accurate, complete, and consistent. High quality data underlies all other system and programmatic benefits.

Figure 2.1

Products of PCS Quality Assurance Program

PCS
Data
Quality

Public Access to
Quality PCS Data

NPDES Program →

Valid and Responsive
Public Policy

NPDES Operations →

| Develop Consistent Permit Criteria | Demonstrate Program Effectiveness | Determine Valid Compliance or Enforcement Actions |

PCS Operations →

| PCS Policy Statement Compliance | Efficient Data Entry | Protection Against Staff Turnover | More Efficient Budget Use |

PCS Data →

| Timely | Accurate | Complete | Consistent |

PCS QUALITY ASSURANCE PROGRAM

Set Your Quality Objectives | Document Your Procedures and Follow Them | Manage for Quality

- Smoother PCS Operations

Benefits to the PCS operations go far beyond satisfying the PCS Policy Statement requirement of establishing a QA program. First, a well-documented QA program will increase the efficiency of PCS data entry by providing clearly defined staff assignments, QA procedures, and ready references to resolve problems. PCS will also more effectively perform program functions, such as identifying limit violations and printing the Quarterly Non-Compliance Report (QNCR). Second, written documentation of the procedures to be followed is the best insurance against staff turnover. With good documentation, you can bring new employees up to speed quickly enough to maintain the program's existing performance. Third, once the key ingredients of the QA program are established and functioning, fewer resources will need to be invested in operations and management, freeing resources to be allocated elsewhere in the office.

- Sounder NPDES Program Operations

Substantial benefits will accrue to NPDES program operations. Improvements to the quality of PCS data will yield timely, reliable data for analysis. By using this data, permit writers will develop more consistent permit criteria and compliance engineers will be able to determine valid compliance and enforcement actions.

Your QA program will also yield benefits to the overall NPDES program. By using quality data, OWEC, Regions, and States will be able to work together to establish valid and responsive public policy. Further, PCS managers will have the ability to demonstrate the validity of their decisions to the regulated community, Congress, courts of law, and other organizations.

- Improved NPDES Program Management

In addition, benefits from your QA program will reach the general public. Hundreds of Freedom of Information Act (FOIA) requests are now received every year. OWEC, Regional,

and State staff respond to these requests by providing access to all requested PCS data, except that which is enforcement sensitive. QA programs will provide the general public with increasingly better information. Quality data will become more and more important as complete public access to PCS data becomes a reality in the future.

SECTION 3

OPERATION AND MANAGEMENT OF A QA PROGRAM FOR PCS

3.0 Overview

This section describes the areas in the PCS data handling process where quality assurance is necessary and identifies the procedures which should be developed in each of these areas in order to implement a successful QA program. A comprehensive QA program should include well-documented procedures for data capture, data transfer, edit and update error correction, and data base quality control. By paying proper attention to data integrity in these four areas, you can dramatically improve the quality of your PCS data.

■ *Data capture*	--	procedures relating to document handling prior to its entry into PCS. An example of data capture is the receipt, logging, sorting, and transfer to data entry personnel of Discharge Monitoring Reports (DMR) from NPDES facilities.
■ *Data transfer*	--	procedures relating to the entry of information from the input documents, such as the DMR, into PCS. Examples include the detailed screening of the input documents, coding the input, resolution of any obvious problems (for example, missing data), and entering the data into PCS using PCS-ADE, PC-Entry, or batch entry.
■ *Edit & update error correction*	--	procedures to correct data errors resulting from the PCS Edit or Update process. Examples include running the PCS Edit to produce PCS Edit Audit reports, running PCS Update to produce the Update Audit report, and correcting any errors that are detected on these reports.
■ *Data base quality control*	--	procedures to correct data errors identified on reports from the Generalized Retrieval or Inquiry. An example is running the PCS QA Retrieval to identify missing or invalid data elements.

Figure 3.1 examines the process of entering DMR data into PCS to illustrate the major events in each of the four QA areas. The DMR originates in the permitted facility and is sent to the EPA regional office (or delegated state office) where it is received, logged, sorted, and given to data entry personnel (*data capture*). Next, the DMR is screened, any obvious problems are resolved, and the DMR data are entered into PCS (*data transfer*). The PCS Edit program may then be run to check the new data, after which the PCS Update is run to place the new data into the PCS data base. Each of these programs produce a report that identifies errors to be corrected (*Edit and update error correction*). After the PCS data base is updated, reports can be produced to help identify and correct existing errors (*data base quality control*). All information flowing into PCS may be quality checked in these four areas, although the details will vary by the type of input being processed.

The remainder of this section provides the principles and procedures that can be applied to each of these areas to improve data quality. Appendix B, *PCS Quality Assurance Program Self-Assessment*, provides guidance on the evaluation of the quality of PCS data and on the assessment of a quality assurance program. Appendix C, *Sample PCS Quality Assurance Manual*, includes specific examples of the procedures suggested here and should be referenced for more detailed information.

3.1 Data Capture

Data capture includes the receipt and sorting of input documents, their preliminary review for missing or inaccurate data, and their submission for data entry. Major events pertaining to data capture include recording the receipt of a particular document, reviewing it for completeness, and routing it to its proper destination for entry into PCS. To ensure that data are properly captured you should:

- *Keep a list of input due dates.*
- *Log in reports when received.*

Figure 3.1

Major Steps Required to Enter DMR Data Into PCS
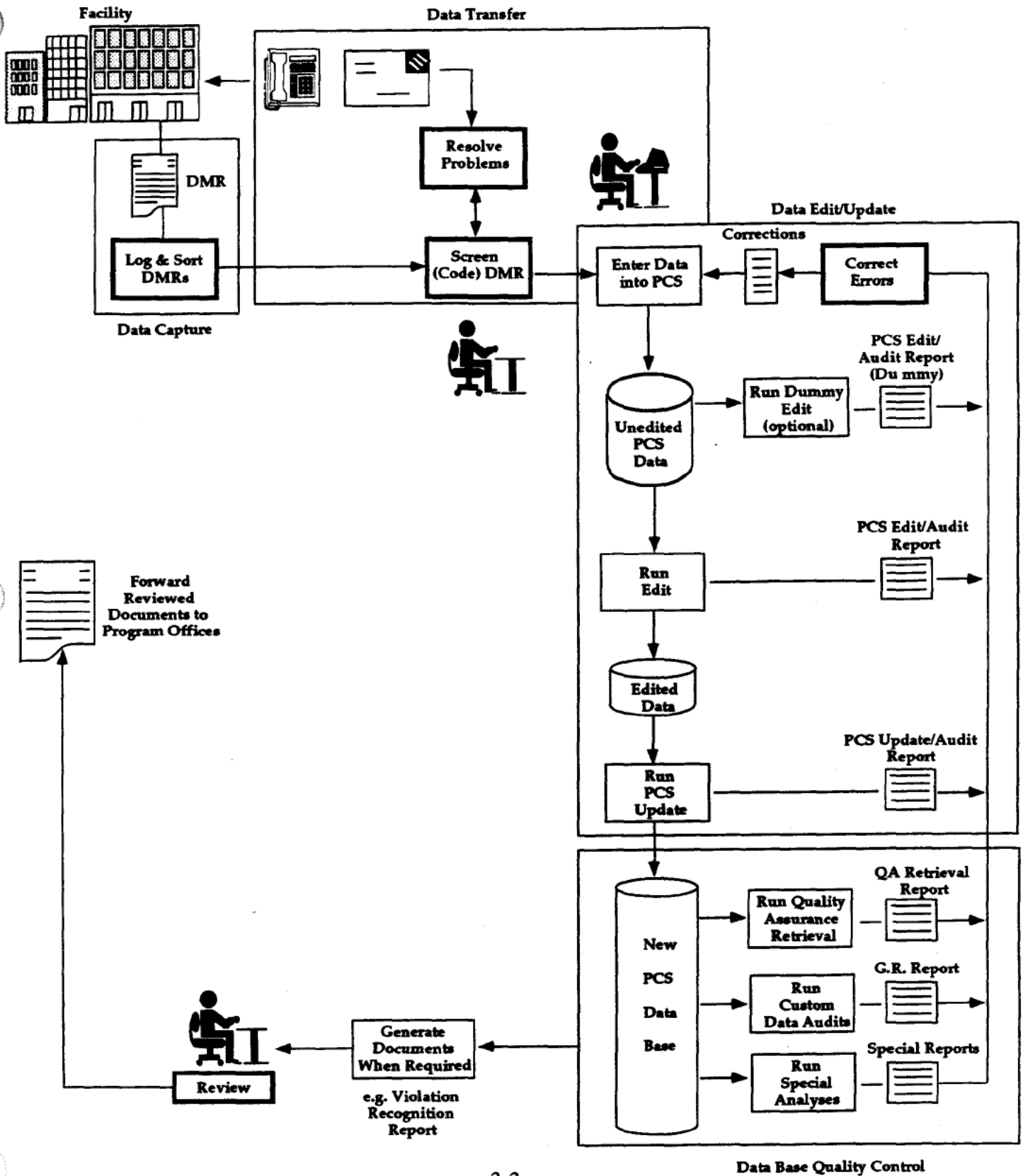
- *Follow-up quickly on non-receipt or missing data.*
- *Ensure input document is properly routed for data transfer.*

Knowing when input documents are due will help you anticipate your expected work load for the short term (e.g. monthly), easily identify facilities that are late submitting their reports, and prepare appropriate follow-up action against tardy permittees (if required). Much of the data is submitted on a regular schedule (for example, the submission of DMRs) or based on a known schedule (for example, permit expiration dates and compliance schedule deadlines). If needed, the PCS Generalized Retrieval can produce several management reports (for example, the DMR Administrative Report and the Compliance Forecast Report) that can help you compile a list of the due dates.

As reports are received, they should be logged-in. This allows you to document their receipt and provides a checkpoint if problems occur in the future. A standard log-in form should be developed (see page 12, Appendix C) for each of the input documents that are routinely handled. These forms will also aid you in identifying the facilities that are late in submitting their required reports.

You should follow-up on the non-receipt of required documents as soon as possible. In some cases, a phone call reminding the appropriate individual that their documents are due will prompt them to be more punctual. A list of common phone numbers may be kept at hand so they may be contacted easily (see page 16, Appendix C). Those problems that cannot be solved quickly should be flagged so they can be pursued more thoroughly later. Care must be taken, however, to ensure that data is NEVER entered or corrected in PCS based on a telephone conversation. For all data entered into PCS there must exist a valid source document to substantiate up the data. Moreover, since phone calls are not valid enforcement actions, written requests must be used in cases of recurrent problems so the escalation of enforcement actions may be documented.

You should also develop procedures to verify that input documents are properly routed for data entry after they are logged in and screened. One method of doing this is to note the transfer of input documents to data entry on the log-in form or to develop and use a separate routing form. This is especially important for PCS input documents that are on a long or irregular submission cycle.

3.2 Data Transfer

Data transfer includes events taking place after the input document has been received and logged-in until the data has been keyed into the system. If pursued carefully and diligently, the screening of PCS data and the timely resolution of the identified problems before data entry will have a significant effect on PCS data quality. During data capture, the input documents were examined to make sure that they were complete. In this step, the examination is more detailed and focuses on the actual data. Major events pertaining to the transfer of PCS data include the detailed screening of reports, resolving obvious problems, coding forms for data entry, and entering data.

Your Quality Assurance program should focus on establishing and documenting standard procedures for each major data transfer event so that data are correctly entered into PCS and any necessary corrections are properly entered. The following procedures should increase the probability that data are correctly taken from the input documents and transferred into PCS.

- *Use check-lists to screen incoming documents and to code documents for data entry (e.g. Sample DMR).*
- *Keep a common problem / solution log.*
- *Develop a step-by-step procedure for all data entry methods.*

The detailed screening of each input document is difficult and time consuming because many documents are very complex. One way to speed up their review, and to increase the

accuracy of the screening at the same time, is to develop a check-list of items to be examined (see Section 2.2, Appendix C). These check-lists will focus the attention of the reviewer on the most important data in an orderly way. This method can also significantly improve the quality and increase the speed of coding data input documents. For example, the Sample Discharge Monitoring Report employs a checklist approach to ensure the quality of permit limits data in PCS by improving communication between the permit writer and the PCS coder (see Section 2.2.3.1, Appendix C). In addition to Sample DMRs, checklists may also be implemented for coding data from Permits, Compliance Schedules, and Enforcement Actions.

Three methods of data entry are employed in PCS -- PCS-ADE, PC-Entry, and Batch. Each method meets a different need in the PCS user community. PCS-ADE is an on-line data system specifically designed to provide extensive edit checking as the data is entered and to enable the user to enter key data as efficiently as possible. PC-Entry is a micro-computer data entry system with a similar format to that found in PCS-ADE. Data are entered using PC-Entry and then the data set is batch submitted to the PCS edit. PC-Entry is especially useful to users entering large amounts of data because it allows rapid data entry. All PCS data base transactions, other than those using the on-line PCS-ADE, are batch-entered. You should establish and document instructions for coding and entering data for each of the data entry methods in use in your Region or state.

3.3 Data Edit and Update

After PCS data has been entered into the system through PCS-ADE or "batch", PCS processes the transactions via two methods. First, the PCS Edit Process evaluates the transactions for correct syntax and stores them in a transaction file until they are updated into the PCS data base. The PCS Edit may be run at any time. Next, the PCS Update Process incorporates the stored transactions into the PCS data base. The PCS Update is run by Headquarter's staff every Monday and Thursday.

After PCS processes the data through the Edit and Update, it is necessary to develop QA procedures to correct transactions that are rejected in the Edit or Update process.

- *Use "Optional" features to check your data.*
- *Develop standard review procedures for the Edit Audit and the Update Audit report.*
- *Develop standard procedures to correct identified errors.*

3.3.1 "Optional" Features

Two optional PCS features can be used to check the data, identify errors, and correct them prior to using the PCS Edit or Update. These features are the PCS Dummy Edit and PCS Range Checking.

The PCS Dummy Edit or test edit allows the user to have the Edit process evaluate each transaction in the batch submittal for the correct syntax. This optional process produces *only* a PCS Edit/Audit Report (Dummy) which can be reviewed, annotated, and used to correct the data before running the "live" Edit. Data are not stored in the transaction file to be updated.

Range-Checking is another optional technique to improve the accuracy of measurement data. It is based on the idea that each valid measurement has a particular "range" within a set of high/low values that are most likely to occur. It then follows that any values outside of this range are quite possibly errors and should be investigated. OWEC is now undertaking the development of range-checking capabilities for PCS. The range-checking capability will be added to batch Edit and PCS-ADE as an optional feature that the user may select. The users will have the option of selecting a national set of default ranges for primary pollutants, or of developing and using their own individual tables covering any parameter. When implemented, this feature will offer PCS users a powerful method of analysis and quality assurance.

3.3.2 Standard Review Procedures

Once the optional features are run, and the identified errors are corrected, the PCS Edit can be run to complete the edit process for batch submission. The PCS Edit automatically rejects transactions with serious errors and places those with no, or minor, errors in a transaction file to be incorporated into the PCS data base when the Update program next executes. This process produces an Edit Audit Report which can be reviewed, annotated, and used to correct the rejected transactions and amend the minor errors.

PCS-ADE offers an efficient, on-line data entry method with immediate edit checking. Data are checked as they are entered for validity and completeness. Transactions that successfully pass the edit checking are placed in a holding file to be processed during the next Update.

The PCS Update is the final step needed to place the transactions into the PCS data base. Completion of this process will produce a new PCS data base. Normally updates to the data base are made twice per week. A PCS Update Audit report is produced when the data are incorporated into the PCS data base. The Rejected Transactions section of this report should be reviewed and corrections made to the data, if necessary.

3.3.3 Standard Error Correction

Each of the PCS Edit and Update audit reports has three sections: an Audit Report of Rejected Transactions, an Audit Report of Accepted Transactions, and an Audit Summary Report. Your QA program can be most effective by developing complete review procedures to examine these reports, and by following through and resolving any errors found (see Section 2.3, Appendix C). If the error rate is high (exceeding 10%), you should evaluate your current input procedures and develop a plan for reducing the error rate.

3.4 PCS Data Base Quality Control

Once the data has been entered and uploaded into the PCS data base, the focus of quality assurance shifts from preventing new errors to identifying and correcting existing errors in the data base. You may produce reports through the PCS Generalized Retrieval subsystem to determine the quality and quantity of data in PCS and to highlight existing errors in the data base which require correction.

- *Use the PCS Quality Assurance report.*
- *Use customized data quality reports to examine questionable data.*
- *Develop special techniques to meet your particular needs.*

The PCS Quality Assurance Retrieval is a new report developed to provide quality assurance of all WENDB elements on a permit by permit basis. This retrieval examines each WENDB element and determines if it, or a related element, has a missing or invalid value. The pre-formatted report produced by this retrieval displays all WENDB elements and their associated error message. The user can specify the data types to be displayed. The report will also print a summary of each of the data types selected. The value of this report is that it provides quality assurance for all WENDB elements in a single easy-to-read report and checks for missing values in related data elements.

You may develop customized data quality reports by using the PCS Generalized Retrieval to examine a particular subset of data. This method is especially effective in reviewing data that is not checked by the Quality Assurance Retrieval (i.e. non-WENDB elements). An example is the Quick Look report which can check the validity of PCS data against input documents. Customized reports could be used to:

- check for completeness and accuracy of DMR data
- check for accuracy of permit data

- identify inconsistent coding of Pipe Schedule Data
- perform limited QA checks to supplement the QA Report (such as the absence of Permit Expiration Date if Permit Issuance Date is present).

Special techniques are a third retrieval method which may also be developed to meet a particular quality assurance need. One useful technique is trend analysis. Trend analysis examines the values of the same data parameters at regular intervals over time, for example, monthly values of dissolved oxygen levels over the course of a facilities permitted history. This method is especially useful in highlighting consistency errors.

A technique useful for trend analysis of data is the Effluent Data Statistical (EDS) software. The EDS software allows DMR effluent data to be either statistically analyzed or graphed over time. In addition, mass loading reports and graphs may be produced. EDS may assist in trend analysis and to identify facilities with DMR data quality problems. In addition to data entry problems, EDS will highlight improper unit conversions and the improper use of monitoring location codes.

When errors are identified using any of the three methods above, errors should be corrected using procedures described in the edit/update section.

SECTION 4

MANAGEMENT INFRASTRUCTURE AND GENERAL PRACTICES

4.0 Overview

A QA program encompasses more than a set of well-documented procedures for avoiding and correcting errors. PCS managers should also administer their programs in such a way as to emphasize the importance of quality assurance and stress the need for continual improvement of PCS data quality. In developing, or enhancing, a QA program the following management activities should be addressed:

- **Assign Staff Responsibilities**   -- Formally establish your staff's duties to demonstrate the importance of PCS data quality.

- **Establish Attainable Goals**   -- Set your PCS data quality targets for timeliness, accuracy, completeness, and consistency.

- **Track Performance Against Goals**   -- Evaluate how well your current PCS data quality meets your data quality goals.

- **Assess Your QA Program**   -- Evaluate how well your Quality Assurance program functions and how to fine-tune it.

- **Manage Your Data Input Personnel**   -- Manage your staff to support and enhance PCS data quality.

- **Show Consistent Commitment**   -- Provide full management commitment to PCS data quality.

- **Promote Communication**   -- Provide adequate documentation and training. Open channels for your PCS staff to talk to each other about common problems.

Two appendices give additional detail of some of the procedures mentioned here. Appendix B, *PCS Quality Assurance Program Self-Assessment*, provides a description of how to go about evaluating your program. Appendix C, *Sample PCS Quality Assurance Manual*, can be used to develop your own QA manual.

4.1 Assign Staff Responsibilities

- *Include responsibility for PCS quality assurance in relevant job descriptions.*
- *Establish performance objectives for quality assurance.*
- *Evaluate quality assurance accomplishments during performance evaluations.*
- *Designate a PCS quality assurance overseer.*

Each person's responsibility for their quality assurance activities must be explicitly assigned for your program to be successful. Because ensuring good data quality usually requires extra diligence and effort, it is often slighted unless the staff knows it is part of their duties. An easy way to make this assignment is to include quality assurance as a required task in job descriptions. This assignment should cover all positions involved with PCS, such as, the PCS coordinator, data-entry personnel, permit writers/coders, and compliance engineers. For example, the PCS coordinator's QA responsibilities could include the oversight of the QA program, the scheduling of staff training, and the monthly measurement of QA performance (see page 88, Appendix C). Formally assigning responsibility demonstrates clearly that you have made a serious commitment to quality assurance and consider it an important objective of the position. An additional benefit of having assigned responsibilities is that new employees learn from the beginning that their job requires attention to PCS data quality. Then, as they master their tasks, they are more likely to use quality assurance procedures routinely.

Once formally assigned, staff will know their expected duties and should adjust their performance accordingly. Their accomplishments in improving data quality should be evaluated fairly and good performance should be rewarded. After quality assurance has been included in

the job description, performance pertaining to data quality can be evaluated during annual performance reviews.

It is also important to designate someone to be responsible for day-to-day oversight of the Quality Assurance program. This person can maintain a broad view of the program from a data quality perspective, coordinate all data quality activities, and act as a resource for problem solving.

4.2 Establish Attainable Goals and Targets

- *Establish attainable goals and strive to meet them.*
- *Publicize your data quality targets and your performance.*

An established set of data quality targets is the measure used to judge a QA program. If you have an ongoing, well-established QA program then your goals should, at a minimum, be the national data quality targets for timeliness, accuracy, consistency, and completeness included in this guidance manual (see page 2-3). Concentrate your efforts on improving your performance in the areas where your program is the weakest.

If you are just now establishing a new quality assurance program, or are altering an existing program that failed to produce quality data, then the national data quality targets for timeliness, accuracy, completeness, and consistency should be used as an ultimate goal for your evolving program. During the development of your Quality Assurance program, set a series of realistic goals (monthly or quarterly) that are both attainable and measurable. Each sequential goal should be nearer the national data quality targets and should require a "stretch" for your staff and resources. Endeavor to achieve these intermediate goals and strive for continual improvement until your data quality targets are as stringent as the national targets.

You should publicize your data quality targets so that all PCS staff know their goals and can judge their performance relative to them. Publicizing your objectives by posting them on

a bulletin board, or by circulating memos, makes them more concrete and provides necessary feedback to your staff about their performance.

4.3 Track Performance Against Goals

■ *Measure your progress regularly to assess your progress.*

The quality of your PCS data should be measured at regular intervals and compared to your program's targets and goals. This evaluation lets you know how well you are doing in terms of your data quality. You should start this evaluation with a clear view of your objectives and use the same, routine method of gauging data quality performance at regular intervals (each month, quarter, or year). Techniques for you to use to gauge your performance are provided in Appendix B. The routine measurement of achievements against your quality targets allows you to track your data quality status over time, identify trends for appropriate managerial oversight, and provides information to use in fine-tuning your program.

The interval between your data quality measurements will depend upon the type of data being evaluated. Since DMRs are submitted monthly, it is appropriate to evaluate DMR data on the same day every month. Other data types with a longer interval between reports should be evaluated on a monthly to quarterly basis.

4.4 Assess Your Quality Assurance Program

■ *Periodically review, evaluate, and fine-tune your Quality Assurance program.*

A periodic review of your Quality Assurance program is necessary for you to judge its effectiveness and to determine how to continuously improve it. Your assessment should first determine the current status of your QA program and measure where you stand relative to the OWEC national standards. Then you should focus on problems that affect PCS data quality and on identifying their causes. Once the cause of a problem is identified possible solutions may be

evaluated and the most appropriate solution implemented. Your review should address all areas of your program. If your program has recently changed, you may want to examine more closely those areas which have been modified. For example, if new staff have recently been hired, examine their training; if changes have been instituted in your program, make sure new problems have not arisen because of them and that they are helping to alleviate the original problem.

The frequency of your review will depend on the features of your particular program, such as the experience of your staff and the number and magnitude of recent changes made to the program. Factors necessitating a frequent review include a high staff turnover and numerous or severe changes made in quality assurance procedures. Less frequent review will be required for established programs operated by an experienced staff. In general, established programs, and those with modest changes, should be reviewed yearly while programs with more severe changes may warrant quarterly reviews.

4.5 Management of Data Input Personnel

- *Allow staff enough time to do a good job.*
- *Reprimand or reassign non-performing staff.*
- *Respond quickly to anticipated staff turnover.*
- *Cross-train existing staff.*

A certain amount of time is required to "do the job right the first time." PCS managers and their supervisors must understand this and allow their staff to devote the time necessary to complete their data quality work and to follow up on problems promptly when they occur.

Once you have established data quality as a key requirement of an employee's performance objective, you must follow through. As mentioned above, staff responsible for good quality data should be rewarded. Conversely, you should also be willing to reprimand or reassign staff who

do not demonstrate a willingness or the ability to perform quality assurance functions adequately.

Staff turnover poses a serious threat to the success of your PCS Quality Assurance program. PCS is a complicated system to learn and it is difficult for new staff to become proficient using the system quickly. Further damage to your program is risked by the long time often needed to complete hiring of new staff. To mitigate damage from staff turnover, try to move quickly to replace PCS staff who are leaving, ideally while the experienced staff member is still on the job to orient the replacement.

Another method may be useful to mitigate the effects of personnel turnover in offices with several PCS staff members. Each existing staff member can be "cross-trained" in a portion of the duties of the other positions. Then, when staff leave unexpectedly, the remaining staff can temporarily fill in. While no single person need know all aspects of PCS, knowing more than just one's assigned duties can help immensely during staff transition periods.

4.6 Show Consistent Commitment to Data Quality

- *Be consistent in your commitment to data quality.*

Unflagging management support is crucial for the success of all quality assurance programs. Understand that every program experiences problems and setbacks. However, through the perseverance of the PCS managers and the dedication of the PCS staff most, if not all, of these problems can be overcome. One method to accomplish this is to issue a statement establishing data quality as a priority and outlining a course of action to achieve it. Be consistent and follow your established policy even when difficulties arise.

4.7 Promote Communication

- *Make sure adequate documentation is available.*
- *Provide PCS staff with helpful training.*
- *Provide resources to enhance communication among PCS staff.*

Communication, including system documentation and staff training, is a vital part of a quality program and should not be neglected. Once you have developed your QA manual, make it accessible to your staff, both for their use as a reference and for them to annotate with their solutions to common problems. Expand on the one-page "summary sheets" included in the sample manual and post them in locations where they are needed. These "quick reference" sheets will save considerable time.

The staff member responsible for the day-to-day operations of the quality assurance program should also be responsible for coordinating PCS QA training. This person knows the problems that could be solved with proper training, learns of changes in PCS first, and knows what training resources are available. PCS QA training should be conducted as frequently as necessary and should be targeted to the staff who can benefit most from it, for example, new staff members. All relevant staff should be included in training programs as major PCS QA procedures change.

Knowing who to contact for help with problems can save much time, effort, and rework. Often solutions to a particular problem have been developed in other regional or state offices. People within your own office or organization have particular expertise that can be of help. It is especially important that all staff members involved with PCS communicate with each other. You should try to open channels for people involved in all aspects of PCS, such as data entry, permit writing, and enforcement, to meet to discuss problems with PCS data quality and their potential solutions.

APPENDIX A

PCS POLICY STATEMENT

PERMIT COMPLIANCE SYSTEM POLICY STATEMENT
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

STATEMENT OF POLICY

It is EPA policy that the Permit Compliance System (PCS) shall be the national data base for the National Pollutant Discharge Elimination System (NPDES) program. All EPA Regions must use PCS directly, and all NPDES States must either use PCS directly or develop and maintain an interface.

As our primary data source, PCS will promote national consistency and uniformity in permit and compliance evaluation. To achieve national consistency and uniformity in the NPDES program, the required data in PCS must be complete and accurate. Facility, permits (i.e., events and limits), measurement, inspection, compliance schedule, and enforcement action data are required. These required data elements are further defined in Attachments 1 and 2. They comprise the Water Enforcement National Data Base (WENDB) which has been redefined as the core of information necessary to enable PCS to function as a useful operational and management tool and so that PCS can be used to conduct oversight of the effectiveness of the NPDES program.

All required data for NPDES and non-NPDES States must be entered into PCS by September 30, 1986 and maintained regularly thereafter. This will require Regions and States to start entering data as early as possible, and not wait until late FY 1986.

By the end of FY 1986, direct users of PCS shall establish, with Office of Water Enforcement and Permits (OWEP) assistance, a Quality Assurance program for data in PCS. The program shall define:

° monthly measurement of the level of data entered;

° appropriate time frames to ensure that data are entered in PCS in a timely manner; and

° nationally consistent standards of known data quality based on proven statistical methods of quality assurance. PCS Quality Assurance shall address the completeness (for assurance of full data entry) and accuracy of the data entered into PCS.

Adoption of PCS by States should be formalized in each State's §106 Program Plan, State/EPA Agreement, or in a separate agreement. Each plan should clearly define EPA's and the NPDES State's responsibilities regarding PCS. The Key Management Practices in this Policy Statement should be incorporated into the §106 Program Plan.

BACKGROUND

When the PCS Steering Committee met in March 1985, EPA
Regional representatives stressed the essential need for a positive
statement from EPA Headquarters management to Regional and State
management specifically requiring the support and use of PCS.
Lack of such support may result in an incomplete and unreliable
data base. With sufficient EPA Headquarters, Regional, and State
support, however, PCS will come to serve several major purposes
for the NPDES program:

* PCS will provide the overall inventory for the NPDES program.

* PCS will provide data for responding to Congress and the
  public on the overall status of the NPDES program. As
  such, it will serve as a valuable tool for evaluating the
  effectiveness of the program and the need for any major
  policy changes.

* PCS will encourage a proper EPA/State oversight role by iden-
  tifying all major permittee violators.

* PCS will offer all levels of government an operational and
  management tool for tracking permit issuance, compliance,
  and enforcement actions.

This PCS Policy Statement is a result of the Steering Committee
meeting. It is a clear message to Regional and State management
that PCS is the primary source of NPDES information, and as
such, it is to be supported wholeheartedly by all users of PCS.

The PCS Steering Committee meeting also resulted in a
redefinition of WENDB and ratification thereof. WENDB is the
minimum standard of data entry which will allow PCS to function
as a useful operational and management tool (see Attachments 1
and 2). EPA Regions agreed that all WENDB elements will be
entered into PCS by September 30, 1986, and maintained regularly
thereafter.

Once the required data are entered into and regularly main-
tained in PCS, PCS will assist permits and compliance personnel
in many of their operational and management responsibilities.
PCS will greatly reduce reporting burdens for such activities
as the Strategic Planning and Management System (SPMS), and it
will reduce efforts needed for effective compliance tracking at
both Regional and State levels. Also, substantial automation of
the Quarterly Noncompliance Report (QNCR) will save time and
resources.

IMPLEMENTATION STRATEGY

Key Management Practices

To effectively implement and uphold this PCS Policy Statement and enhance PCS' capabilities, there are certain key management practices that must be implemented:

- The following milestones have been established to facilitate the entry of all required data by the end of FY 1986:

  - All required National Municipal Policy (NMP) data must be entered into PCS by October 31, 1985 (See Attachment 1).

  - All required data for non-NPDES States must be entered into PCS by March 31, 1986.

- NPDES permits shall be enforceable and tracked for compliance using PCS. The Office of Water Enforcement and Permits (OWEP) recognizes there may be situations where permit limits and monitoring conditions are not initially compatible with PCS data entry and tracking. In these cases, Regions should ensure that appropriate steps are taken by the permit writer to identify difficult permits to the PCS coder, and to mutually resolve any coding issues. The Regions should work closely with their NPDES States using PCS, to address similar data entry problems with State-issued NPDES permits.

- WENDB is the minimum standard of data entry for PCS (see the attached lists of data requirements). If States and Regions wish to enter NPDES data beyond what has been required, they may do so. For example, if States want to enter Discharge Monitoring Report (DMR) data for minor facilities, the option is available in PCS and the States' may use it as their resources allow. EPA will ensure that sufficient computer space is available for the currently projected use of PCS.

- All DMRs submitted to EPA Regional Offices (including DMRs submitted by NPDES States for EPA entry into PCS) must be preprinted using the Office of Management and Budget (OMB) approved DMR form. NPDES States directly using PCS are not required to use the OMB-approved form; however, its use is strongly encouraged. With the continuing demand for more complete information and with stable, if not diminishing, data entry resources, it is to EPA's and NPDES States' benefit to preprint DMRs. The use of preprinted DMRs will greatly reduce PCS' data entry burden, making available resources to be used in other areas (e.g., PCS quality assurance, data entry for other PCS records, etc.).

* The frequency with which DMRs are submitted to the EPA or NPDES State is important for ensuring timely entry of data into PCS and timely review of permittee's compliance status. Quarterly, semi-annual, or annual submission of DMRs creates a major data entry burden and impedes the compliance evaluation process. As a result, the useful-ness of DMR data for compliance evaluation decreases substantially. Monthly submittal of DMRs alleviates this problem and enhances PCS' effectiveness significantly. It is recommended that monthly submittal of DMRs be incorpo-rated into major permits as they are reissued. With approx-imately 20 percent of the permits reissued each year, it will take five years to complete the transition to monthly submittal for all major permittees.

* EPA Regions should coordinate with their respective States to develop strategies that describe each State's plans to either use PCS directly or develop an interface. These strategies should include the rationale for selecting one of these methods of data entry into PCS, an outline of all requirements necessary for implementing the selected method, the mechanisms to be used to supply sufficient resources, and a schedule for attainment not to exceed September 30, 1986. If a State is a current user of PCS via one of these methods, the strategy should describe its needs for enhancing its PCS usage or improving its PCS interface, the mechanisms to be used to supply sufficient resources, and a schedule for attainment not to exceed September 30, 1986.

* When writing or revising a Memorandum of Agreement (MOA), the Region and State should specify the State's intent to use or interface with PCS. The MOA should address the rationale for selecting one of these selected methods of data entry into PCS, an outline of all requirements neces-sary for implementing the selected method, the mechanisms to be used to supply sufficient resources, and a schedule for attainment.

Responsibilities   ~OWEC

Office of Water Enforcement and Permits: It is OWEP's full responsibility to maintain the structure (i.e., the computer software) of PCS and to operate the system. OWEP will continue to support time-sharing funds needs, training, and the necessary resources to continue the operation of PCS. OWEP will work with the EPA Regions and NPDES States to continually evaluate and improve, where feasible, the system's software, time-share funding, operation, and maintenance. OWEP will maintain a Steering Commit-tee and User Group, organize the national meetings, and work closely with the Regional and State representatives on major decisions related to PCS.

OWEP will oversee the Regions' and States' progress in fulfilling this policy statement by assessing the quantity of data entered each quarter.

EPA Regions and NPDES States: It is the EPA Regions' and NPDES States' full responsibility to maintain the infrastructure of PCS by accurately entering data in a timely manner. Also, EPA Regions and NPDES States are responsible for participating in PCS Workgroups and contributing to improvements to PCS.

Three National PCS meetings are held each year, one for the Steering Committee and two for the PCS Users Group. EPA Regions are expected to attend all three meetings. NPDES States directly using PCS are invited to attend the State portions of these meetings. More meetings may be scheduled during the year if necessary.

Since consistent and objective compliance tracking is a central component of an effective and credible enforcement program, NPDES States are strongly urged to use PCS directly. We realize, however, that there may be some cases where NPDES States cannot use PCS directly. In these instances, in accordance with §123.41 of the regulations, EPA requests from the States all required information (as indicated in the attachments) for entry into PCS. This can be achieved one of two ways:

* A State Automated Data Processing (ADP) interface can be developed. It is the EPA Region's responsibility to work with the NPDES State to develop an effective State ADP interface. The State, however, should take the lead in developing the interface and work closely with the Region to ensure the interface is effective. It should be realized that system interfaces are often troublesome and unwieldy; they are often ineffective and limit the States' flexibility to change their systems quickly to meet management needs. In the event a State ADP interface is developed, there must be formal agreement that the State will operate the interface, maintain the interface software, and be fully responsible for making any changes to the interface based on changes made to its automated data base. This will ensure that the NPDES State will be held responsible for system compatibility. If the State does not accept full responsibility with system compatibility, then changes must not be made to the State system without the prior knowledge of EPA. The State is responsible for ensuring that the data are transferred to PCS in a timely manner, accurately, and completely. Interfaces must be developed and maintained so that they operate with maximum efficiency all of the time.

* OWEP recognizes that FY 1986 will be a transition year for PCS. NPDES States will begin using PCS or will develop interfaces. In the event that neither of these alternatives is accomplished by the end of FY 1986, in accordance with the FY 1986 Guidance for the Oversight of NPDES Programs, the State will be responsible for submitting all required information (as indicated in the attachments) in hard copy format. The data must be submitted either already

coded onto PCS coding sheets or in a format that can be readily transferred onto PCS coding sheets. Also, the data must be submitted at regular intervals to ensure timely entry into PCS. Once the data are received by EPA, it is the EPA Region's responsibility to enter the data into PCS in a timely manner.

Funding

- §106 grant funds may be used for interface software development. However, they cannot be used for maintenance of the interface software for State-initiated changes to a State ADP system or for the operation and maintenance of a separate State ADP system.

- §106 grant funds may be used for State data entry if and only if the State uses PCS directly or the State provides data to PCS via an interface that meets the standards of this policy.

- If requested by a State, EPA will agree to pay for its time-sharing costs to implement this policy, within given resources.

- Headquarters will continue to pursue alternative methods of reducing the data entry burden on Regions and States.

10/31/85
Date

Lawrence J. Jensen
Assistant Administrator for Water

APPENDIX B
REVISED 1989
REQUIRED DATA TO BE ENTERED INTO PCS

INFORMATION TYPE[1]	MAJORS	MINOR[5] 95-500'S	OTHER[5] MINOR
Permit Facility Data	X	X	X
Permit Event Data	X	X	X
Inspection Data	X	X	X
Parameter Limits and Pipe Schedule Data	X		
Significant Compliance Data		X	X
Compliance Schedule Data	X	X	
DMR Measurement Data	X		
Enforcement Action (Enforcement Action Data, Compliance Schedule Data, and Interim Limits Data from all active formal enforcement actions and Enforcement Action Data for all active informal enforcement actions)	X		
Enforcement Action Data from all active informal and formal enforcement actions		X	
Enforcement Action/ Administrative Penalty Order[2]	X		
Pretreatment Approval[3]	X	X[5]	X[5]
National Municipal Policy Data[4]	X	X	X
Single Event Violation Data	X	X[5]	X[5]
Pretreatment Compliance Inspection (PCS)/Audit	X	X[5]	X[5]
Pretreatment Performance Summary	X	X[5]	X[5]

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[1] For each of the categories listed in this chart, the Information
    Type is the set of core date elements listed in Appendix C.

[2] These data elements are required specifically for administrative
    penalty orders. Entry of these data elements is only required for
    EPA actions.

[3] Pretreatment Program Required Indicator, PRET; one data element.

[4] All required data as described in May 16, 1985 memorandum on
    National Municipal Policy Tracking in PCS. This includes NPFF,
    NPSC, NPSQ, RDC2, Compliance Schedule, and Enforcement Action
    Information.

[5] The following information types are only for minor POTWs which
    are pretreatment control authorities: pretreatment approval,
    single event violation data, pretreatment compliance inspection
    (PCI)/audit, and pretreatment performance summary.

APPENDIX C
WATER ENFORCEMENT NATIONAL DATA BASE (WENDB) ELEMENTS
REVISED 1989

<u>Data Element Name</u>	<u>Acronym</u>

COMMON KEY

NPDES Number	NPID

COMPLIANCE SCHEDULE RECORD

Compliance Schedule Actual Date	DTAC
Compliance Schedule Date	DTSC
Compliance Schedule Event Code	EVNT
Compliance Schedule File Number	CSFN
Compliance Schedule Number	CSCH
Compliance Schedule Report Received Date	DTRC
Compliance Schedule User Data Element[2]	RDC2
Data Source Code	DSCD

COMPLIANCE VIOLATION RECORD[1]

Compliance Schedule Violation Code	CVIO
Compliance Schedule Violation Date	CVDT
Compliance Schedule Violation Event Code	CVEV
Compliance Violation Compliance Schedule Number	VCSN
Compliance Schedule Violation Data Source Code	VDCD
QNCR Compliance Schedule Violation Detection Code	SNCC
QNCR Compliance Schedule Violation Detection Date	SNDC
QNCR Compliance Schedule Violation Resolution Code	SRCC
QNCR Compliance Schedule Violation Resolution Date	SRDC

ENFORCEMENT ACTION RECORD[2]

Enforcement Action Code	ENAC
Enforcement Action Comment	ECMT
Enforcement Action Compliance Schedule Violation Code	ECVC
Enforcement Action Compliance Schedule Number	EVSN
Enforcement Action Compliance Schedule Violation Date	ECVD
Enforcement Action Data Source Code	EVCD
Enforcement Action Date	ENDT

NOTE: See last page for listing of footnotes

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APPENDIX C

WENDB ELEMENTS

Data Element Name	Acronym
Enforcement Action Discharge Number	EVDS
Enforcement Action Event Code	EVEV
Enforcement Action File Number	ERFN
Enforcement Action Limit Type-Alphabetic	EVLM
Enforcement Action Modification Number	EMOD
Enforcement Action Monitoring Date	EVMD
Enforcement Action Monitoring Location	EVML
Enforcement Action Parameter Code	EVPR
Enforcement Action Report Designator	EVRD
Enforcement Action Response Due Date	EVDT
Enforcement Action Season Number	ESEA
Enforcement Action Status Code	ENST
Enforcement Action Status Date	ESDT
Enforcement Action Violation Type	EVTP
Enforcement Action Code - Violation Key[3]	EKAC
Enforcement Action Date - Violation Key[3]	EKDT
Enforcement Action Type Order Issued EPA/State Violation Key[3]	EKTP
Enforcement Action Single Event Violation Code[3]	ESVC
Enforcement Action Single Event Violation Date[3]	ESVD
Enforcement Action Type Order Issued EPA/State[3]	EATP

ENFORCEMENT ACTION/ADMINISTRATIVE PENALTY ORDER

Date Proposed Order Issued (generated from Enforcement Action Date)	APDT
Class I or II	APCL
Hearing Requested	APHR
Date of Final Order	APFO
Penalty Amount Assessed	APAM
Class II Appeal Filed	APAP
Date Judicial Appeal Filed	APAF
Date Penalty Collected	APPC

EVIDENTIARY HEARING RECORD

Evidentiary Hearing Event Code[4]	EHEV
Evidentiary Hearing Event Date	EHDT

INSPECTION RECORD

Inspection Date	DTIN
Inspector Code	INSP
Inspection Type	TYPI
Inspection Comments (First three characters for Industrial User pretreatment inspections)	ICOM

NOTE: See last page for listing of footnotes

APPENDIX C

WENDB ELEMENTS

Data Element Name	Acronym
MEASUREMENT VIOLATION RECORD	
Measurement/Violation Concentration Average	MCAV
Measurement/Violation Concentration Minimum	MCMN
Measurement/Violation Concentration Maximum	MCMX
Measurement/Violation Quantity Average	MQAV
Measurement/Violation Quantity Maximum	MQMX
Measurement/Violation Discharge Number	VDSC
Measurement/Violation Monitoring Location	VMLO
Measurement/Violation Monitoring Period End Date	MVDT
Measurement/Violation Parameter	VPRM
Measurement/Violation Report Designator	VDRD
No Discharge Indicator	NODI
Measurement Violation Detection Code[1]	SNCE
QNCR Measurement Violation Detection Date[1]	SNDE
QNCR Measurement Violation Resolution Code[1]	SRCE
QNCR Measurement Violation Resolution Date[1]	SRDE
PARAMETER LIMITS RECORD	
Change of Limit Status	COLS
Concentration Average Limit	LCAV
Concentration Maximum Limit	LCMX
Concentration Minimum Limit	LCMN
Concentration Unit Code	LCUC
Contested Parameter Indicator	CONP
Limit Discharge Number	PLDS
Limit File Number	PLFN
Limit Report Designator	PLRD
Limit Type - Alphabetic	LTYP
Modification Number	MODN
Modification Period End Data	ELED
Modification Period Start Date	ELSD
Monitoring Location	MLOC
Parameter Code	PRAM
Quantity Average Limit	LQAV
Quantity Maximum Limit	LQMX
Quantity Unit Code	LQUC
Season Number	SEAN
Statistical Base Code	STAT

NOTE: See last page for listing of footnotes

APPENDIX C

WENDB ELEMENTS

PERMIT EVENT RECORD

Permit Tracking Actual Date	PTAC
Permit Tracking Event Code[6]	PTEV

PERMIT FACILITY RECORD

Average Design Flow	FLOW
City Code	CITY
County Code	CNTY
Facility Inactive Code	IACC
Facility Inactive Date	IADT
Facility Name Long	FNML
Federal Grant Indicator	FDGR
Final Limits Indicator	FLIM
Major Discharge Indicator (Entered by EPA Headquarters)	MADI
NMP Final Schedule[6]	NPSC
NMP Financial Status[6]	NPFF
NMP Schedule Quarter[6]	NPSC
Pretreatment Program Required Indicator	PRET
QNCR Status Code, Current Year (Manual)[7] CYMS	
Reissuance Control Indicator	RCIN
River Basin (first four characters)	BAS6
SIC Code	SIC2
Type of Permit Issued - EPA/State	EPST
Type of Ownership	TYPO

PIPE SCHEDULE RECORD

Discharge Number	DSCH
Final Limits End Date	FLED
Final Limits Start Date	FLSD
Initial Limits End Date	ILED
Initial Limits Start Date	ILSD
Initial Report Date	STRP
Initial Submission Date - EPA	STSU
Initial Submission Date - State	STSS
Interim Limits End Date	MLED
Interim Limits Start Date	MLSD
Number of Units in Reporting Period	NRPU
Number of Units in Submission Period - EPA	NSUN
Number of Units in Submission Period - State	NSUS

NOTE: See last page for listing of footnotes

APPENDIX C

WENDB ELEMENTS

Data Element Name	Acronym

PIPE SCHEDULE RECORD (continued)

Pipe Inactive Code	PIAC
Pipe Inactive Date	PIDT
Pipe Latitude[*]	PLAT
Pipe Longitude[*]	PLON
Report Designator	DRID
Reporting Units	RENU
Submission Unit - EPA	SUUN
Submission Unit - State	SUUS

SINGLE ELEMENT VIOLATIONS DATA ELEMENTS[3]

Single Event Violation Code	SVCD
Single Event Violation Date	SVDT
QNCR Single Event Violation RNC Detection Code	SNCS
QNCR Single Event Violation RNC Detection Date	SNDS
QNCR Single Event Violation RNC Resolution Code	SRCS
QNCR Single Event Violation RNC Resolution Date	SRDS

PRETREATMENT PERMITS AND ENFORCEMENT TRACKING SYSTEM (PPETS)

SOURCE - PRETREATMENT COMPLIANCE INSPECTION (PCI)/AUDIT

Adoption of Technically-based Local Limits	ADLL
Categorical Industrial Users	CIUS
Technical Evaluation for Local Limits	EVLL
SIUS in SNC with Self-Monitoring	MSNC
Significant Industrial Users Without Control Mechanisms	NOCM
SIUS Not Inspected or Sampled	NOIN
SIUS in SNC with Pretreatment Standards or Reporting	PSNC
Date Permit Was Modified to Require Pretreatment Implementation	PTIM
Significant Industrial Users	SIUS
SIUS in SNC with Self-Monitoring and Not Inspected or Sampled	SNIN
PCI/Audit Date	DTIA

NOTE: See last page for listing of footnotes

WENDB ELEMENTS

Data Element Name

<div align="right">

Acronym
</div>

SOURCE - PRETREATMENT PERFORMANCE SUMMARY

Data Element Name	Acronym
Formal Enforcement Actions Excluding Civil and Criminal Judicial Suits	FENF
Industrial Users From Which Penalties Have Been Collected	IUPN
Civil or Criminal Suits Filed Against SIUS	JUDI
SIUS in SNC with Pretreatment Compliance Scheduled	SSNC
SIUS with Significant Violations Published in Newspaper	SVPU
Pretreatment Performance Summary Start Date	PSSD
Pretreatment Performance Summary End Date	PSED

NOTE: See last page for listing of footnotes

Listing of Footnotes

1. These data elements are automatically generated by PCS unless the user wishes to enter them manually.

2. The data element are required for both informal and formal enforcement actions (when applicable). This includes administrative penalty order both EPA and State issued.

3. These data elements were added at the request of the PCS Steering Committee at the 1986 meeting.

4. There are seven (7) required evidentiary hearing event codes (when applicable). They are as follows:

   01099 Date Granted   10099 Date ALJ Decision Rendered
   06099 Date Hearing Scheduled 11099 Date Appealed to Administrator
   07099 Date Requested   (EPA issued permits only)
   08099 Date Settled
   09099 Denied

5. There are thirteen (13) required permit event codes (when applicable.) They are as follows:

   P1099 Application Received   P7299 301 (g) Variance
   P3099 Draft Permit/Public Notice   P7599 316 (b) Variance
   P4099 Permit Issued   P7699 316 (b) Variance
   P5099 Permit Expired   P7799 Fundamental Difference
   P6599 Reopener   Factors Variance
   P7199 301 (c) Variance
   P7499 301 (k) Variance

6. These data elements are previously approved National Municipal Policy (NMP) data elements.

7. Required for P.L. 92-500 minors.

8. These data elements were added at the request of the PCS Steering Committee at the February 1989 meeting.

APPENDIX B

PCS QA PROGRAM SELF-ASSESSMENT

APPENDIX B.

PCS QA PROGRAM SELF-ASSESSMENT

B.0 Overview

This appendix discusses the evaluation of a quality assurance program as a whole. This evaluation should be conducted at regular intervals (e.g. yearly) to make sure that all of the necessary components of the program are in place and are functioning together efficiently. Every QA program requires periodic evaluation and modification to perform up to its full potential. To accomplish this, OWEC suggests a systematic approach using the following steps:

- Evaluate your current QA program
- Identify QA problems with your program
- Isolate the source or cause of the problems
- Identify potential solutions
- Select and implement solutions
- Regularly re-evaluate your QA program

B.1 Evaluate Your Current QA Program

Starting with your current QA program consider how input documents are received, screened, and transferred into PCS. A set of questions, relating to the suggestions made in Sections 1--4, are presented below. Go through these questions and use them to help verify that your program contains all the components needed for a successful QA program.

B.2 Identify QA Problems With Your Program

As you read through the list of questions you are likely to identify two types of problems. First, a suggested quality assurance component may be absent from your program. For example, responsibility for quality assurance may have never been formally assigned to your

staff. Alternatively, you may identify problems with a component that is already in place, but is not functioning efficiently. For example, you may have kept a list of phone numbers of problem facilities in the past, but it is now outdated. Any of the questions on the list that you answered with a "No" or "< 50" may identify a potential problem with your QA program. As you work through this list of questions, you may identify other problems with your PCS QA program. Make a list of all problems as they occur to you.

The next step is to determine whether these problems are, or could potentially, affect your PCS data quality. Make sure to consider all four of the PCS Data Quality targets (timeliness, accuracy, completeness, and consistency).

B.3 Isolate the Source of Current QA Problems

It is important to realize that some problems may be caused by factors that are not at first apparent. For example, your staff may be failing to log-in DMRs correctly when they arrive. The cause of this problem may not lie in the design of the form but may simply be that they did not attend a training course on the log-in procedures used in your office. Review your list of problems and try to identify the ultimate cause of the problem.

It is also important to realize that you cannot solve every problem. Some errors occur by random chance and cannot be corrected (e.g. lost mail). Other problems may be corrected only at a different administrative level (e.g. PCS computer system enhancements). Focus your actions on the problems that you can correct through local action.

B.4 Identify Potential Solutions

Once you have identified the problems affecting the quality of your PCS data, isolated their ultimate causes, and determined that they can indeed be solved at your local level, then list all of the potential solutions for each problem.

When identifying potential solutions you should also consider whether changes in staff management could be applied effectively. Some management topics to consider include how QA responsibilities are assigned and evaluated, if PCS training has been adequate, and if documented procedures are available to all staff who may need them. A more complete discussion of management factors worth considering is presented in Section 4.

B.5 Select and Implement Improvements

For each problem select the one solution from your list of potential solutions that best suits your particular set of circumstances. Some questions to consider when making this decision include:

- How costly is each solution in terms of staff time and money?
- Is a particular solution likely to create a different problem?
- How quickly will the benefits be seen in terms of PCS data quality?
- Can more than one problem be solved with the same solution?
- Is there applicable solution to the problem in the *Sample PCS QA Manual?*

After you identify the solution with the highest return to your program, obtain any needed resources, and implement the solution. The final, and very important, step is to completely document the actions that you have taken. By recording your actions, you provide a reference for future evaluations and create additional documentation for your QA program.

B.6 Regularly Re-evaluate Your QA Program

Plan to evaluate your program at regular intervals. Conditions, personnel, budgets, and regulations continue to change and unless your QA program is fine-tuned periodically, it will soon become inefficient and outmoded. OWEC suggests that every program be evaluated on a yearly schedule.

QUESTIONS TO EVALUATE YOUR PCS QUALITY ASSURANCE PROGRAM

PCS DATA QUALITY OBJECTIVES

What percentage of your staff knows your data quality target for:

		< 50		51-75		> 75
timeliness?	☐	< 50	☐	51-75	☐	> 75
accuracy?	☐	< 50	☐	51-75	☐	> 75
completeness?	☐	< 50	☐	51-75	☐	> 75
consistency?	☐	< 50	☐	51-75	☐	> 75

QUALITY ASSURANCE PROCEDURES

Data Capture

Do you keep a list of input due dates?	☐ No	☐ Yes		
Do you keep a list of phone numbers of problem facilities?	☐ No	☐ Yes		

What percentage of PCS input documents
are logged in when they are received?   ☐ < 50   ☐ 51-75   ☐ > 75

What percentage of the time do you
follow up on non-receipt or missing data?   ☐ < 50   ☐ 51-75   ☐ > 75

Data Transfer

Do you keep a problem / solution log?   ☐ No   ☐ Yes

What percentage of your input documents
are reviewed using checklists?   ☐ < 50   ☐ 51-75   ☐ > 75

What percentage of your Sample DMRs
are written and coded using checklists?   ☐ < 50   ☐ 51-75   ☐ > 75

Edit and Update Error Correction

Do you have established procedures to review
Edit and Update Audit reports?   ☐ No   ☐ Yes

What percentage of the time do you use standard procedures
to correct identified errors?   ☐ < 50   ☐ 51-75   ☐ > 75

What percentage of the time do you use the PCS Edit (Dummy)?   ☐ < 50   ☐ 51-75   ☐ > 75

PCS Data Base Quality Control

What percentage of the time do you use:

the Quality Assurance Report?	☐ < 50	☐ 51-75	☐ > 75
customized Data Quality Audits?	☐ < 50	☐ 51-75	☐ > 75
special techniques to examine the PCS data base?	☐ < 50	☐ 51-75	☐ > 75

STAFF MANAGEMENT

Assignment of Staff Responsibilities

Have you designated a PCS quality assurance overseer?   ☐ No   ☐ Yes

What percentage of relevant PCS job descriptions
    include assignment of QA responsibility?   ☐ < 50   ☐ 51-75   ☐ > 75

What percentage of the staff member's QA accomplishments
    are evaluated during their performance evaluations?   ☐ < 50   ☐ 51-75   ☐ > 75

Establishment of Attainable Goals and Targets

Are your timeliness goals as stringent as the national targets?	☐ No	☐ Yes
Are your accuracy goals as stringent as national targets?	☐ No	☐ Yes
Are your consistency goals as stringent as national targets?	☐ No	☐ Yes
Are your completeness goals as stringent as national targets?	☐ No	☐ Yes

Tracking Performance Against Goals

Do you measure your DMR data quality monthly?	☐ No	☐ Yes
Do you measure your non-DMR PCS data quality quarterly?	☐ No	☐ Yes

Self-Assessment of Your Quality Assurance Program

Do you review and evaluate your PCS QA program at least yearly?   ☐ No   ☐ Yes

Management of Data Input Personnel

Does your staff have enough available time to do a good job?	☐ No	☐ Yes
Are non-performing staff reassigned or reprimanded?	☐ No	☐ Yes
Are hiring procedures completed quickly for new staff?	☐ No	☐ Yes

Management Commitment to Quality

Have you issued an office statement emphasizing PCS data quality?   ☐ No   ☐ Yes

Communication between PCS Users

Do you have a phone list to call for help with PCS problems? ☐ No ☐ Yes
Is your office represented at the yearly national PCS meetings? ☐ No ☐ Yes
What percentage of your staff have written
    PCS QA procedures readily available to them? ☐ < 50 ☐ 51-75 ☐ > 75
What percentage of your staff have attended PCS training classes? ☐ < 50 ☐ 51-75 ☐ > 75

APPENDIX C

SAMPLE
PERMIT COMPLIANCE SYSTEM (PCS)
QUALITY ASSURANCE MANUAL

This appendix provides a sample manual for Environmental Protection Agency (EPA) Regional offices and states to use in developing and documenting their own quality assurance procedures for the Permit Compliance System (PCS). It is based on guidelines presented in the main body of this manual and draws information from documented QA procedures provided to EPA Headquarters by the Regional offices.

The sample manual is written as if it were the PCS QA Manual for EPA Region 11. This approach allows the presentation of concrete, usable examples of methods that are particularly effective in increasing the quality of PCS data. Users of this sample manual should be aware that for many procedures there may be other equally effective methods. The methods and procedures presented here have been selected because they are simple to use and will produce the desired result of improving PCS data quality.

Sample
Permit Compliance System (PCS)
Quality Assurance Manual

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List of Figures

Region 11
Permit Compliance System (PCS)
Quality Assurance Manual

SECTION 1

INTRODUCTION

1.0 Overview

This manual is designed to provide you with quality assurance (QA) procedures for entering and maintaining reliable and consistent data in the Permit Compliance System (PCS) which may be used with confidence in environmental decision making. The manual contains three sections. This first section serves as an introduction and presents background information on PCS and Region 11's PCS QA program. Topics include PCS data quality standards, key ingredients of the QA program, and the QA goals for PCS. The second section of this manual focuses on QA in Region 11's **PCS Operations**. Four areas in the PCS data handling process where QA procedures should be implemented are discussed -- data capture, data transfer, data edit and update error correction, and data base quality control. To assist in the development and evaluation of QA procedures in each of these areas, several forms have been included for the staff's use. The final section of this manual focuses on **PCS Management**. Topics briefly discussed include assigning staff responsibility, establishing attainable goals, tracking performance, and managing data input personnel, among others. Several forms are also presented here to help you carry out these management functions.

1.1 PCS Quality Assurance Program

Region 11 is committed to cleaning and protecting our Nations surface waters by carrying out the goals of the Clean Water Act. Under Section 402 of the Act, all facilities that discharge wastewater into waters of the United States must obtain a National Pollutant Discharge Elimination System (NPDES) permit. As a condition of these permits, facilities must periodically report their compliance information to EPA or to a NPDES delegated State. This

C-1

data is entered into PCS. The Region uses information retrieved from PCS to assess performance in achieving the NPDES program objectives.

To meet the information needs of the NPDES program under the Clean Water Act, EPA's Office of Wastewater Enforcement and Compliance developed PCS for tracking compliance and enforcement status. It is a computerized information system for the automated entry, updating, and retrieval of information on NPDES permitted facilities. PCS is designed using a data base management system called ADABAS. It resides on the EPA IBM mainframe computer located in Research Triangle Park, North Carolina.

The PCS Policy Statement, issued in 1985, designated PCS as the national data base for the NPDES program and established the minimum required standard for data entry -- the Water Enforcement National Data Base (WENDB). Moreover, the PCS Policy Statement requires all direct users of PCS to develop a QA program that includes monthly tracking of the level of data entered, appropriate time frames for data entry, and nationally consistent standards for PCS data completeness and accuracy.

1.2 PCS Data Quality Standards

How well Region 11's PCS data meets the definition of quality is evaluated based on an objective assessment of four measures -- timeliness, accuracy, completeness, and consistency. Headquarters has proposed national standards for each of these measures which are based on input from the Regions and States. The recommended standards are presented in Figure 1.1. Region 11 has adopted these national standards in their entirety for its own PCS QA program.

Timeliness refers to the "punctuality" of information in the data base -- as measured by the length of time between the actual event (or receipt of information about the event) and its appearance in the data base. The PCS targets for timeliness vary by the type of data being entered into the system.

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Summary of Recommended PCS Data Quality Targets			
Timeliness	Accuracy	Completeness	Consistency
Entered within 5 Working Days of Receipt of Report, Application, or Action ■ Permit Facility Data ■ Compliance Schedule Data ■ Enforcement Action Data / Enforcement Action Key Data ■ Single Event Violation Data ■ Permit Events Data ■ Evidentiary Hearing Data Entered within 10 Working Days of Receipt of Report, Application, or Action ■ Pipe-Schedule Data ■ Parameter-Limits Data ■ Inspection Data ■ Pretreatment PCI Audit Data ■ Measurement/Violation Data Entered within 30 Working Days of Receipt of Report ■ Pretreatment Performance Summary Data	95% of the WENDB elements entered into PCS should be identical with those reported on the DMR, permit or other input document.	95% of the WENDB elements entered for each facility.	100% of the WENDB elements use appropriate value defined nationally.

Figure 1.1

Accuracy refers to the absence of erroneous data resulting from mistakes during any point in the data preparation, entry, or transmission process. Errors sometimes result from mistakes by key-entry personnel, but they can also be introduced by program or facility personnel who prepare the source documents used for data entry.

Completeness refers to the amount of required data present in the data base at a specific point in time. Completeness is important to assure that all pertinent information is available for use when it is needed. The PCS Policy Statement has designated the WENDB elements as the minimum set of data elements required for PCS.

Consistency refers to the extent to which appropriate values are used for a data element as defined nationally (in the case of WENDB data elements). For management reports to be the most effective, data must be comparable over time within the area of interest. If valid comparisons are to be made then comparable codes or values must be used for the same data elements over time and in different geographical area (state or Region).

1.3 Key Ingredients for a QA Program

Region 11's QA program is based on a thorough understanding of the recommended national PCS data quality standards for timeliness, accuracy, completeness, and consistency. Combining this knowledge with well-documented procedures and effective management commitment has produced a successful QA program resulting in better PCS data, smoother PCS operations, and improved operation and management of the NPDES program in Region 11. The success of the Region 11's PCS QA program is due to the adoption and customizing of eight ingredients to meet current program needs. These ingredients are:

- Measurable, well-defined data quality objectives
- Well-documented data collection and handling procedures
- Procedures for detecting and correcting errors
- Procedures to measure and track performance against goals

- Clearly assigned staff responsibilities and oversight
- Adequate documentation, training, and communication
- Consistent management commitment to data quality
- Periodic review and evaluation of the QA program.

1.4 QA Goals for PCS

Every QA Program should set overall goals and establish data quality procedures to achieve these goals. Among Region 11's QA goals for PCS are:

- Ensure consistency of data
- Ensure data is reliable for use in environmental decision making
- Identify areas where PCS software problems or enhancement recommendations should be forwarded to Headquarters
- Ensure valid compliance/noncompliance statistics are reported to Headquarters, Congress, and the general public
- Pinpoint areas where re-training efforts are necessary
- Ensure data is reliable for data integration efforts (e.g., multi-media studies)
- Provide effective oversight of delegated programs.

This manual has considered each of the key ingredients for a QA program and incorporates them into its procedures in order to meet our QA goals for PCS and the NPDES program.
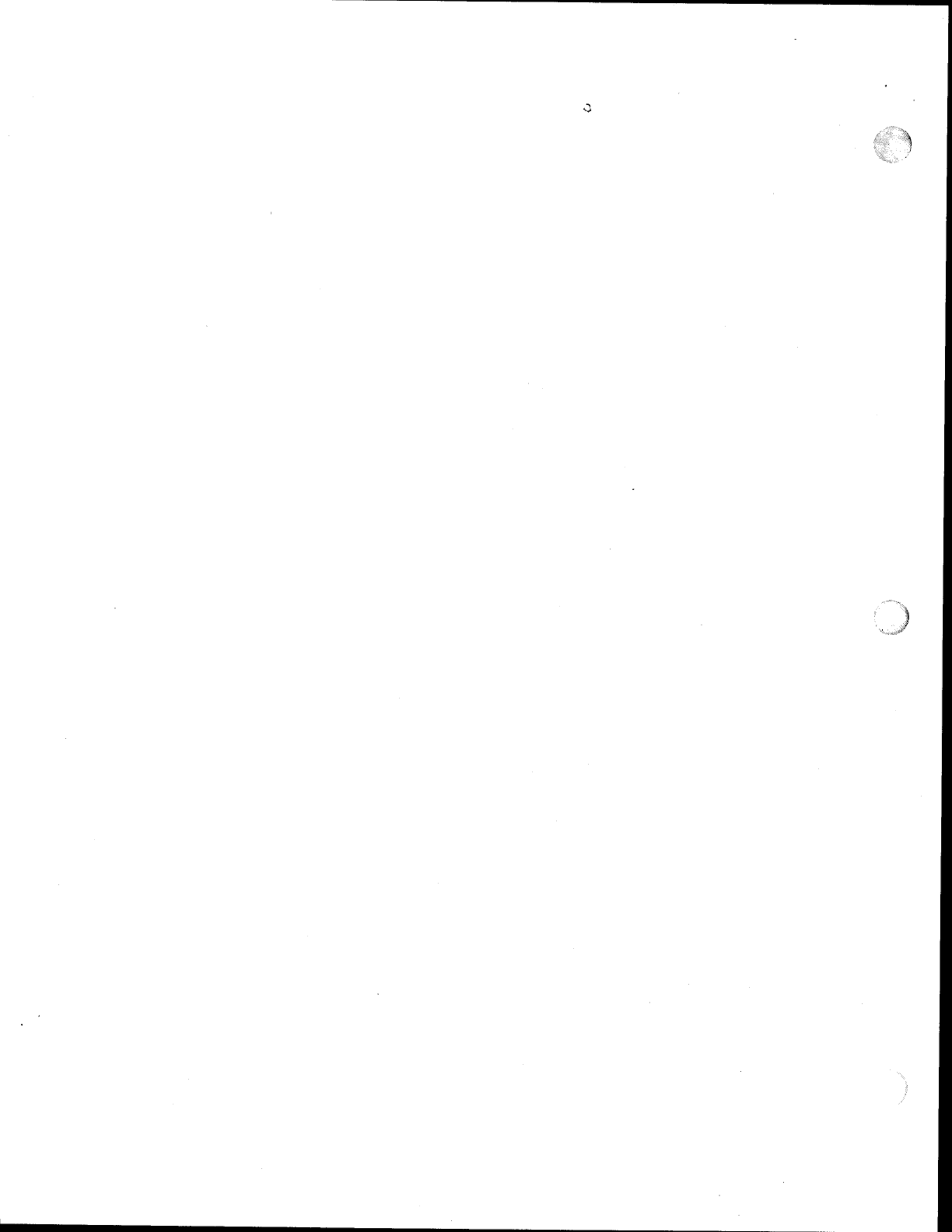
SECTION 2

PCS OPERATIONS

2.0 Overview

There are four major areas in Region 11's NPDES data handling process where QA procedures have been established to ensure that high quality data are entered and maintained in the system -- data capture, data transfer, edit and update error correction, and data base quality control.

- *Data capture* -- procedures relating to document handling prior to its entry into PCS, such as logging in Discharge Monitoring Reports (DMR) from NPDES facilities.

- *Data transfer* -- procedures relating to the entry of information from the input documents into PCS, such as screening and entering the data from a DMR into PCS using PCS-ADE.

- *Edit & update error correction* -- procedures to correct data errors resulting from the PCS Edit or Update process, such as identifying and correcting errors from a PCS Edit Audit report.

- *Data base quality control* -- procedures to identify and correct data errors in the PCS data base, such as running the PCS QA Retrieval to identify missing or invalid data elements.

The remaining portion of this section considers each of these four areas in turn. By paying proper attention to data integrity in these areas, you can help maintain Region 11's PCS data quality at its high level.

2.1 Data Capture

Data Capture	Data Transfer	Edit & Update Error Correction	Data Base Quality Control

This section of the manual documents data capture procedures for the NPDES program documents processed by the Region. Data capture includes the receipt and sorting of input documents, their preliminary review for missing or inaccurate data, and their submission for data entry. In Region 11 data for entry into PCS is reported on various source documents such as the permit, the DMR, enforcement actions, and inspection reports. These procedures include identifying due dates for reports where possible, logging and performing initial screening on input documents, and verifying that input documents are properly routed for data entry.

The Region has designed two log-in forms to help you manually track source documents received and when they are routed to the appropriate personnel for data entry. They are:

- *PCS Transmittal and Processing Form*
- *Discharge Monitoring Report (DMR) Log-in.*

2.1.1 General Document Processing

As NPDES documents are received by the EPA Unit Supervisor, they should be date stamped. The "PCS Data Transmittal and Processing Form" used for forwarding work to the PCS contractor (shown in Figure 2.1.1 on page C-8) should then be completed specifying the type of work to be performed and an EPA Log number assigned to the request. (DMRs are generally handled in batches and recorded on a separate DMR Log Form. Procedures for logging and transmitting DMRs are discussed in Section 2.1.2) The EPA requestor should also indicate the date the documents are sent to the PCS contractor, verify that all accompanying documents are included, and note any special requirements in the "Special" or "Comments" areas of the form.

PCS Data Transmittal and Processing Form

Requestor	Mail Code	Special	EPA Date of Receipt

Type of Request	PCS Initials

☐ Reissue New Permit Correction _____ Revision _____	Log No._____
☐ Administrative Order Correction _____ Revision _____	
☐ DMR Data Original _____ Correction _____ Revision _____ _____ Date Range	Received
☐ Inspection Data Original _____ Correction _____ Revision _____	Received Contractor
☐ Facility Report Original _____ Correction _____ Revision _____	Completed Contractor
☐ Limitation Summary Original _____ Correction _____ Revision _____	
☐ OTHER _____ Original _____ Correction _____ Revision _____	Received Contractor

COMMENTS:	Distributed to Requestor

Figure 2.1.1

Instructions to Complete
PCS Data Transmittal and Processing Form

☐ 1.   Record the Requestor, Mail Code, if Special Processing is required, and Date of Receipt in the boxes across the top of the form.

☐ 2.   Check the type of request. Add appropriate remarks to "Comments" section at bottom of form.

☐ 3.   Initial the form, assign a log number, and record the date received and transmitted to PCS Contractor.

Upon receipt of the "PCS Data Transmittal and Processing Form," the PCS contractor should enter the date received and verify that all accompanying documents have been included to process the work. For example, reissued permit revisions and corrections, permit modifications, administrative orders, and consent decrees should be accompanied by a current Limitation Summary report. Any request for special or priority work should be given the highest priority and processed within two updates if possible. Upon completion of the work, the contractor should enter the "Completed Contractor" date in the form and the "Distributed to Requestor" date and return it to the EPA requestor.

2.1.2 DMR Logging and Transmittal

All NPDES permits require the submission of DMRs to the Region or state. The DMRs represent a summary of the results of monitoring tests taken by the permittee over a monitoring period in accordance with the limits established in the permit. The states for which Region 11 enters data record their DMR information on preprinted DMRs.

You may use the manual form in Figure 2.1.2 to track when DMRs are due or you may run a DMR Administrative Report at the Parameter Level. This report will automatically identify those facilities which are due within a specified time frame. Once the submission dates are established, reports which have not been received should be flagged and follow-up steps should be taken to determine why the DMR is late. When the DMRs are received at the Regional office the following steps should be taken by the EPA Unit Supervisor:

☐ Date stamp and copy.

☐ Order by state and NPDES number.

☐ Perform initial screening for obvious errors such as incorrect NPDES numbers, missing data, and changes to any of the preprinted fields on the preprinted DMRs.

☐ Record information on Log-in Forms.

☐ Submit copies of the DMRs, accompanied by a log sheet, to PCS contractor personnel for further review and data entry.

☐ The PCS contractor removes the log sheet, compares against the batch of DMRs to ensure that all forms were actually sent for the facility, and verifies that all the facilities are listed.

☐ The PCS contractor notes any discrepancies and returns the batch to the PCS Unit Supervisor for corrections.

☐ The DMR Log-In Form is filed in the Contractor Log book for DMRs.

If the number of DMRs exceeds that which can be easily tracked manually, use the Generalized Retrieval to generate the due dates for the DMRs from PCS. The retrieval logic to produce the report is shown on page C-14 and a sample report are illustrated in Figure 2.1.3. The DMR Log-in Form would then be used only to transmit the DMRs in batches.

DMR Log-in Form

NPDES Number	Pipe Number	Facility Name	Date Due	Date Received	Date Transferred to Data Entry

Figure 2.1.2

Instructions to Complete DMR Log-in Form

☐ 1. Record the NPDES Number in first column, the pipe number in the second column, the name of the facility in the third column, and the DMR due date in fourth column.

☐ 2. When the DMR is obtained from the facility, record the date received in the fifth column. As appropriate, contact facilities to check on DMR status. Record any relevant notes from your conversation.

☐ 3. Review the DMR Log-in form periodically to identify any overdue reports.

☐ 4. As the DMRs are transferred to Data Entry, record the transfer date on form.

Example PCS Generalized Retrieval. Retrieval statements produce a report similar to the example on the following page.

```
00 SYNTAX=NO RMT=255 PRTY=2 JOBID=DMRDP TIME=2M BIN=D005
01 HQ DP FOR REGION XI
10 REGN EQ 11
20 DP
20 WITH SUDB GE 010192
20 WITH SUDB LE 033192

   ** DEFAULTS IN EFFECT **
10 IACC EQ A
10 PTYP AB
```

Output produced from the above retrieval statements which can be used as a DMR Log-in form.

```
                        PCS DMR ADMINISTRATIVE REPORT
                              BY PARAMETER
                             DP FOR REGION X
                      REPORT PERIOD: 01/01/90 - 03/31/90

FACILITY        OUT- LIMIT  MONITORING  MONITORING  DATE DUE  DATE DUE  VIOLATION
IDENTIFICATION  FALL TYPE   END DATE    LOCATION    AT EPA    AT STATE  EVENT
                                                                        PARAMETERS
-------------------------------------------------------------------------------------

PERMIT-NO:      001A  FINAL 02/28/92  EFFLUENT    03/31/92   DMR OVERDUE
XX0000058 MAJOR                       GROSS VALUE
INTERNATIONAL CO                      BOD, 5-DAY
P.O. BOX 72                           (20 DEG. C)
CHARLESTON
XX 32467        002A  FINAL 02/28/92  EFFLUENT    03/31/92   DMR OVERDUE
                                      GROSS VALUE
                                       PH

PERMIT-NO:      001A  FINAL 02/28/92  EFFLUENT    03/31/92   DMR OVERDUE
XX0000122 PRINCE                      GROSS VALUE
CHEMICAL CO                           BOD, 5-DAY
P.O. 422                              (20 DEG. C)
PORT
XX 32468                              EFFLUENT    03/31/92   DMR OVERDUE
                                      GROSS VALUE
                                      FLOW, IN CONDUIT OR THRU TREATMENT PLANT
```

Figure 2.1.3

2.1.3 Problem Facility Phone List

The Problem Facility Phone List (illustrated in Figure 2.1.4 on page C-16) is to aid you in contacting the facilities in Region 11 that are habitually late in sending in their reports. Instructions for completing the form are on the back. There are several other methods of maintaining a phone list, such as using a personal computer software package to maintain a word processing document or a dBase file. Such an approach is an efficient method if a personal computer is available for use.

2.2 Data Transfer

Data Capture	Data Transfer	Edit & Update Error Correction	Data Base Quality Control

Data transfer includes events taking place after the input document has been received and logged-in and transmitted to the PCS Contractor until the data has been keyed into the system. Examples include the detailed screening of the input documents, coding the input, resolution of any obvious problems (for example, missing data), and entering the data into PCS using PCS-ADE, PC-Entry, or batch entry. When pursued carefully and diligently, the screening of PCS data and the timely resolution of the identified problems before data entry will have a significant effect on PCS data quality. Region 11's QA program focuses on establishing and documenting standard procedures for each major PCS data information type or NPDES source document (i.e., Facility Information, DMRs, Permits, Inspections, and Enforcement Actions) so that data are correctly entered into PCS.

There are two techniques used in Region 11 for entering data into PCS -- a batch method and an interactive method using PCS-ADE. The batch method involves using the PCS Data Entry software package on a personal computer. It takes the data and converts it to a card format to be uploaded to the mainframe. The interactive method involves logging into CICS and using PCS-ADE to send the data directly to the mainframe. The majority of the data entry in Region 11 is done using PCS-ADE with the exception of DMR data which is frequently entered using PC-Entry.

This section is organized to present QA procedures for data transfer by the type of NPDES document received for processing in the Region, for example, the Permit, the DMR or an Inspection Report. Instructions for preparing, screening, and entering the document information and follow-up steps are presented for each of the documents in a checklist format. The checklist approach provides for an orderly review method of the most critical data elements and ensures each step in the process is followed.

In addition, procedures for using the Range checking option to check measurement data for validity are discussed in Section 2.2.4 after the DMR data entry procedures.

Problem Facility Phone List				
NPDES Number	Facility Name	Contact	Phone	Problem / Comments / Action

Figure 2.1.4

Instructions to Complete
Problem Facility Phone List

☐   1.   Record the NPDES Number in first column and the name of the facility in the
second column.

☐   2.   Record the contact person received in the third column and their phone number
in the forth column.

☐   3.   Briefly note the problem and action taken in the last column. Record any relevant
notes from your conversation.

2.2.1 Permit Facility Level Data Entry

Facility Level data includes general information from the NPDES permit describing each permitted facility. For example, the facility's name, address, classification, and design flow rate are included in this data type.

Permit Facility Level Data Entry Checklist

Preparation

- ☐ 1. PCS Assistant / Specialist ensures that all of the following input documents are available:
  - ☐ Application
  - ☐ Public Notice
  - ☐ Permit.

Screening

- ☐ 2. PCS Assistant / Specialist reviews documents to check for:
  - ☐ Blank permit event dates
  - ☐ Original issue date is not greater than current issue date
  - ☐ Current issue date greater than reissue, modification, effective, or expiration date
  - ☐ Effective date greater than expiration date
  - ☐ Reissue date greater than effective and expiration date
  - ☐ Permit modification date greater than effective and expiration date.

Data Entry

- ☐ 3. PCS Contractor enters data using PCS-ADE.

- ☐ 4. PCS-ADE automatically checks for the following:
  - ☐ Valid NPDES number
  - ☐ Valid PCS codes (SIC, City, County, etc.)
  - ☐ Valid Alpha / numeric entry.

Follow-Up

- ☐ 7. PCS Contractor reviews the Edit Audit and Update Audit reports using the checklists in Sections 2.3.1 and 2.3.2, verifies accepted transactions, and resolves and corrects errors.

- ☐ 8. PCS Contractor ensures all input documents are initialed, are marked completed with the completion date, and are stored in the permanent files.

2.2.2 Permit Pipe Schedule / Limits Data

This data type contains information relating directly to permitted effluent limits and parametric requirements, in addition to information relating to DMR submission and reporting requirements for specific permitted outfalls.

Permit Pipe Schedule / Limits Data Entry Checklist

Preparation

☐ 1. PCS Assistant / Specialist ensures that one of the following input documents is available:
   ☐ Permit (includes general permit)
   ☐ Administrative Order
   ☐ Modified Permit
   ☐ Consent Decree.

☐ 2. PCS Assistant / Specialist retrieves PCS data using Limits Summary Report or DMR Printed Report and Quick Look for Reviewing Permits to compare to new permit requirements. Examples of these reports are illustrated in Section 2.4.

Screening

☐ 3. PCS Assistant / PCS Contractor compares reissued or modified permits to the information in the Limits Summary to determine what changes are required. Particular attention should be given when making comparisons to ensure that the PCS Assistant / PCS Contractor:

   ☐ Verifies and notes PCS issue and expiration date.

   ☐ Notes seasonal, quarterly, annual pipes, parameters.

   ☐ Verifies and notes interim/final limits and associated start/end dates.

   ☐ Notes any additional monitoring requirements added from Part III of Permit.

   ☐ Explains any unique permit requirements.

   ☐ Checks for any DMR date greater than effective date of permit.

   ☐ Determines appropriate modification number and COLS if limits are from Consent Decree or Administrative Order.

Permit Pipe Schedule / Limits Data Entry Checklist (continued)

☐ Examines Monitoring Locations (MLOC) to ensure that they are coded correctly, that the code used accurately reflects monitoring location requirements stated in the permit.

☐ Examines Unit Codes to ensure that they accurately reflect the units stated in the permit. Especially check that milligrams per liter (mg/l) and micrograms per liter (ug/l) are used as stated in the permit.

☐ Examines Statistical Base Codes to ensure they are correct.

☐ Examines Limit Data to ensure that data in PCS under the headings LQAV (Limit Quantity Average), LQMX (Limit Quantity Maximum), LCMN (Limit Quantity Minimum), LCAV (Limit Concentration Average), AND LCMX (Limit Concentration Maximum) are exactly the same as is written in the permit.

☐ Examines any Special Conditions on the Permit to ensure they are correctly coded in PCS.

☐ Examines start and end dates to ensure that these is no overlap with the reissued permit start and end dates.

☐ 4. PCS Assistant / PCS Contractor marks any changes on current Limits Summary Report.

Data Entry

☐ 5. PCS Assistant routes material to appropriate personnel for data entry.

☐ 6. PCS data entry personnel enters outfalls and limits into PCS using PCS-ADE. PCS-ADE will verify:
   ☐ Alpha/numeric values
   ☐ Overlapping dates
   ☐ Valid PCS codes (unit codes, etc.)
   ☐ Valid transaction code
   ☐ Presence of COLS

Follow-Up

☐ 7. PCS Contractor reviews the Edit Audit and Update Audit reports using the checklists in Sections 2.3.1 and 2.3.2. Verifies accepted transactions and resolves and corrects errors.

☐ 8. PCS Specialist / PCS Contractor runs new limits summary after updates and compares to source documents for 100 % accuracy. Any errors are returned to PCS Contractor for data entry.

☐ 9. PCS Contractor ensures all input documents are stored in the permanent files.

2.2.3 DMR Data

The DMR form is used to record the results of monitoring required by the NPDES permit. These forms are preprinted with the effluent limits contained in the permit and mailed to the permittee for reporting. In Region 11 the primary method of coding and entering DMR data is the DMR Data Entry Checklist approach. The Region also supports the Sample DMR approach.

2.2.3.1 Sample Discharge Monitoring Report (DMR)

The Sample Discharge Monitoring Report is one method for ensuring that NPDES permits are written in a form that can be accurately coded and entered into PCS. To use this method successfully, it is vital that the Permit Writer and the PCS Coder communicate effectively.

The Permit Writer initiates the process by completing the Sample DMR forms with the required information from the draft permit concerning the facility, contact person, parameters and numeric limits, sample type, and frequency of analysis. Any special conditions concerning the permit are noted on the form. It is often helpful to the Permit Writer to communicate with the PCS Coder concerning coding limits that may apply in Region 11. Once the Sample DMR is completed, it is sent to the PCS Coder.

The PCS Coder then inserts the proper PCS code for all information on the same form. Special permit conditions are also coded directly on the Sample DMR forms. The PCS Coder clarifies any questions with the Permit Writer and informs the Permit Writer of any specific procedures concerning Region 11's coding limits. This back and forth communication between the Permit Writer and the PCS coder ensures that the finalized permit can be accurately recorded and coded in PCS.

As the Permit Writer and the PCS Coder become more familiar with the Sample DMR process, they can work together to help each other become more efficient. For example, the Permit Writer can indicate appropriate codes for parameters and unique monitoring conditions. The PCS Coder can help the Permit Writer understand the standard procedures for coding information for PCS. The Permit Writer and the PCS Coder may use the checklist on the following page as a guide to complete the Sample Discharge Monitoring Report.

Sample Discharge Monitoring Report (DMR) Procedures

FOR THE PERMIT WRITER: *(See Form A for a Sample DMR completed by the Permit Writer.)*

Using a copy of the permit, complete the Sample DMR by including, at a minimum, the following items:

- ☐ 1. Facility name and address
- ☐ 2. Name of person to whom form should be sent
- ☐ 3. Facility permit number
- ☐ 4. Discharge number (e.g. 001, 002)
- ☐ 5. Any notes to appear in upper right corner, at your discretion
- ☐ 6. Parameters (e.g. flow, BOD-5)
- ☐ 7. Numeric limits
- ☐ 8. Statistical base codes (e.g. monthly average)
- ☐ 9. Units (e.g. lbs/day, mg/l)
- ☐ 10. Frequency of analysis (e.g. continuous, 2/week)
- ☐ 11. Sample type (e.g. recorded, 24-hr. composite)
- ☐ 12. Note any special monitoring conditions that apply to specific parameters (such as monitoring location) on "Comments and Explanation" section at bottom of DMR.
- ☐ 13. If a parameter has seasonal limits, enter the different limits in two rows and specify the dates that they apply.
- ☐ 14. Place an "X" in the boxes that do not have limits
- ☐ 15. Add any additional explanations as necessary for the PCS Coder

FOR THE PCS CODER: *(See Form B for a Sample DMR completed by the PCS Coder).*

Insert the following codes on the Sample DMR:

- ☐ 1. Parameter codes (e.g. 50050, 00310)
- ☐ 2. Monitoring locations (e.g. P, Q)
- ☐ 3. Season Codes (e.g. season 1 and 2 for BOD and Ammonia)
- ☐ 4. Statistical base codes (e.g. 01, 13)
- ☐ 5. Unit codes (e.g. 03, 26, 19)
- ☐ 6. Frequency of Analysis codes (e.g. 99/99, 02/07)
- ☐ 7. Sample type codes (e.g. RC, 24, GR)
- ☐ 8. Add any permit conditions as specified by permit writer
- ☐ 9. Clarify any questions with permit writer

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) Ⓐ

PERMITTEE NAME/ADDRESS: WEST GOSHEN SEWER AUTHORITY
SOUTH CONCORD ROAD
WEST GOSHEN, XX 12345

FACILITY: ATTN: MR. GLENN SMITH, MANAGER

PERMIT NUMBER: XX 0020734
DISCHARGE NUMBER: FAC A

EFFECTIVE DATES: 1/23/85 to 1/23/90

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	4.5 mo. avg.	XXX	MGD	XXX	XXX	XXX	X		CONT.	RECORD
BOD-5 (5/1-10/31)	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	751 mo. avg	1126 wk. avg	lbs/day	XXX	20 mo. avg	30 wk. avg.	mg/l		2/wk	24-hr comp
BOD-5 (11/1-4/30)	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	1126 mo. avg	1689 wk. avg	lbs/day	XXX	30 mo. avg.	45 wk. avg	mg/l		2/wk	24-hr comp
TSS	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	1126 mo. avg	1689 wk. avg	lbs/day	XXX	30 mo. avg	45 wk. avg	mg/l		2/wk	24-hr comp
Ammonia as N (5/1-10/31)	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	94 mo. avg	141 wk. avg	lbs/day	XXX	2.5 mo. avg	3.75 wk. avg	mg/l		2/wk	24-hr comp
Ammonia as N (11/1-4/30)	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	281 mo. avg	422 wk. avg	lbs/day	XXX	7.5 mo. avg	11.25 wk. avg	mg/l		2/wk	24-hr comp
Fecal Coliform	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	X	XXX	200 geo avg	XXX	#/100ml		2/wk	grab

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

TYPED OR PRINTED

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

NOTES: Flow - from o-gull- 001 & 002 combined.
BOD-5, TSS, Ammonia, DO, pH sampled at either 001 or 002.
Fecal coliform must be sampled at both 001 and 002 and reported separately.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE   AREA CODE   NUMBER

DATE: YEAR MO DAY

PAGE ___ OF ___

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 1 year.)

EPA Form 3320-1 (Rev. 10-79) PREVIOUS EDITION TO BE USED UNTIL SUPPLY IS EXHAUSTED (REPLACES EPA FORM T-40 WHICH MAY NOT BE USED.)

Figure 2.2.1

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NOTE: Read instructions before completing this form.

PERMIT NUMBER: XX0028784
DISCHARGE NUMBER: FCA

MONITORING PERIOD
FROM: YEAR MO DAY — TO: YEAR MO DAY

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Dissolved Oxygen	SAMPLE MEASUREMENT	XXX	XXX	X	5.0 minimum	XXX	XXX	mg/l		daily	grab
	PERMIT REQUIREMENT	XXX	XXX			XXX	XXX				
pH	SAMPLE MEASUREMENT	XXX	XXX	X	6.0	XXX	9.0	s.u.		daily	grab
	PERMIT REQUIREMENT	XXX	XXX			XXX	XXX				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE
AREA CODE / NUMBER

DATE: YEAR MO DAY

TYPED OR PRINTED

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Form 3320.1 (Rev. 10-79) PREVIOUS EDITION TO BE USED UNTIL SUPPLY IS EXHAUSTED   (REPLACES EPA FORM T-40 WHICH MAY NOT BE USED.)

PAGE   OF

Figure 2.2.1 (Continued)

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Figure 2.2.2

Figure 2.2.2 (Continued)

NOTE: Read instructions before completing this form.

PERMIT NUMBER: XX0028789

DISCHARGE NUMBER: FACA

MONITORING PERIOD: FROM YEAR MO DAY TO YEAR MO DAY

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX ANALYSIS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
---	---	AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS		
Dissolved Oxygen C0300	SAMPLE MEASUREMENT	XXX	XXX	X	5.0 minimum	XX mn	XXX	(19) mg/l	01/01 daily	GR grab
	PERMIT REQUIREMENT	XXX (11)	XXX							test
pH C0400	SAMPLE MEASUREMENT	XXX	XXX	X	6.0	XXX	9.0	(12) S.U.	01/01 daily	GR grab
	PERMIT REQUIREMENT	XXX (15)	XXX							test
Fecal Coliform F4055	SAMPLE MEASUREMENT	XX	XX	X	XX	200 geom	X	(13) #/100ml	01/01 2/week	GR qual
	PERMIT REQUIREMENT	XX (01)	XX							

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN...

TYPED OR PRINTED

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE / NUMBER

DATE: YEAR MO DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

EPA Form 3320-1 (Rev. 10-79) PREVIOUS EDITION TO BE USED UNTIL SUPPLY IS EXHAUSTED (REPLACES EPA FORM T-40 WHICH MAY NOT BE USED.)

PAGE OF

2.2.3.2 DMR Data Entry Checklist

Preparation

☐ 1. PCS Assistant / Specialist ensures that the following input documents are available:

- ☐ Preprinted Discharge Monitoring Reports (DMRs)
- ☐ Limits Summary.

Screening

☐ 2. PCS Assistant / Specialist screens all preprinted DMRs as follows:

- ☐ A. Orders DMRs by NPDES number within a state.

- ☐ B. Checks the following fields for legibility and for alteration by permittee: NPDES number, Limit type, Discharge/Designator number, and Monitoring Period.

- ☐ C. Checks remainder of DMR to ensure permittee has not altered any preprinted field (especially parameter and monitoring location codes).

- ☐ D. Checks Units field for each parameter to insure that permittee has not altered pre-printed units and that units match Limitations Summary. If needed, converts to correct units.

- ☐ E. Checks each parameter for real numerical values or acceptable PCS codes. If fields are left completely blank, or if "N/A" or "Not applicable" is entered, checks to see if the following pertains to the parameter:

  - ☐ a) the comments field at the bottom of the DMR
  - ☐ b) the "Frequency of Analysis" field (if < monitoring period)
  - ☐ c) if the parameter is "paired" (i.e. winter/summer temperature).

- ☐ F. If parameters have been added to preprinted DMR, checks Limitations Summary.

- ☐ G. Checks "Frequency of Analysis" field for valid codes.

DMR Data Entry Checklist (continued)

- ☐ H. Checks bottom and rear of form and attachments for Notice of Non-Compliance.

- ☐ I. When screening and coding process is complete, initials and dates DMR in red pencil DMR and initiates Data Entry process.

☐ 3. PCS Assistant / Specialist completes code-sheet for data entry.

☐ 4. PCS Supervisor reviews code-sheets to:
   - ☐ Check for blanks
   - ☐ Verify all MGD flow values greater than 100
   - ☐ Check for reported maximum values greater than reported average values
   - ☐ Verify pH values less than 4.0 or greater than 11.0
   - ☐ Check for coding consistency
   - ☐ Check key data elements.

☐ 5. PCS Supervisor marks questionable items and discusses them with staff.

Data Entry (for corrections and late submissions)

☐ 6. PCS Assistant / Supervisor enters data using PCS-ADE or PC-Entry.

☐ 7. PCS-ADE automatically checks for the following:
   - ☐ Valid alpha/numeric entry
   - ☐ Valid date ranges
   - ☐ Valid key values
   - ☐ Valid PCS codes.

☐ 8. PCS Assistant / Supervisor notes warning messages and discusses them with appropriate person.

☐ 9. PCS Assistant / Supervisor enters corrections.

Data Entry (for Majority of DMRs)

☐ 6. PCS Assistant / Supervisor routes code-sheets to data entry personnel.

☐ 7. PCS data entry personnel keys preprinted DMRs:
   - ☐ Reviews current limits summary
   - ☐ Notes any changes to limits on DMR

☐ Batches, logs and enters data.

☐ 8. PCS data entry personnel enters data using PC-ENTRY (Batch).

☐ 9. PCS data entry personnel conducts dummy edit.

☐ 10. Data entry personnel reviews rejected transactions from dummy Edit Audit report.

☐ 11. Data entry personnel researches and edits data set prior to live edit submittal.

☐ 12. PCS data entry personnel discusses problems with PCS Supervisor.

☐ 13. PCS data entry personnel corrects rejected transactions and submits live edit.

Follow-Up

☐ 14. PCS Assistant / Specialist reviews the Edit Audit and Update Audit reports using the checklists in Sections 2.3.1 and 2.3.2. Verifies accepted transactions and resolves and corrects errors. Verifies non-reporting violations in PCS.

☐ 15. PCS Assistant / Specialist ensures all input documents are stored in the permanent files.

2.2.4 PCS Range Checking

Range Checking is one PCS optional feature that may be used to improve the accuracy of your measurement data. It identifies measurements with values lying outside a range considered to be valid and highlights extremely high or low values which warrant further investigation. Several different sets of valid ranges can be specified allowing you to tailor your range-checking to specific requirements. The PCS Range Checking capability is available for both Batch Edits and PCS-ADE.

Checklist to Use PCS Range Checking

Using the PCS Range Checking Capabilities with **Batch Edits:**

☐ 1. Enable Range Checking option by using the appropriate JCL statements.

☐ 2. Select National Default Table or Region or State-specific table by using the appropriate JCL statements.

☐ 3. Examine all identified values on the report that fall outside of the normal range and determine their validity.

Using the PCS Range Checking Capabilities with **PCS-ADE:** Range checking may be enabled in PCS-ADE on both the EVIO and the EDMR screens. This example will employ the EDMR screen.

```
<time>                         PCS-ADE                        PCDEKEYD
<date>                    EFFLUENT DMR DATA              SCREEN ID: EDMR
                            KEY SCREEN


        PERMIT # _____

        TRANS CODE __

        DISCHARGE NUMBER ___

        REPORT DESIGNATOR ____

        RANGE CHECKING? Y/N _

        TABLE ID: _____

  ACCEPT? Y/N/M: _                                 VERSION n.n  <date>
```

Figure 2.2.3

Checklist to Use PCS Range Checking (continued)

☐ 1. Enable option through the Effluent DMR Data Key Screen. (Enter Y at Range Checking? Y/N_)

☐ 2. Select National Default Table or Region or State-specific table through the Effluent DMR Data Key Screen. If no table is specified, the National Default Table will be used.

When range checking is enabled, the Effluent DMR Data Screen will display the message that Range Checking is turned on in the upper right hand corner (See Figure 2.2.4).

```
<time>                      EFFLUENT DMR DATA                    PCDEEDMR
<date>                                                     SCREEN ID: EDMR
PERMIT # _____      TRANS CODE __             RANGE CHECKING IS ON
DISCHARGE NUMBER ____   REPORT DESIGNATOR __            TABLE ID: XXXXX
MONITORING PERIOD END DATE _____           ·   USE PF2 TO OVERRIDE
--------------------------------------------------------------------------
                          DMR RECEIVED DATE _____
                   PIPE NO DISCHARGE REASON CODE __
S                          ====
T
A        V  |                                        R      R   R   R   N
T        M  |                                        E  FREQ. S  U   C   O
U  VPRM  L  | ---QUANTITY--------CONCENTRATION----   X  OF  A  N   U   D
S        O  | AVG   MAX    MIN   AVG    MAX          C  ANAL. M T   N   I
-  -------   | ----  -----  ----  ----   ------      -  ---  -  --  --  --
  1:___  _  | ____  _____  ____  ____   _____      _  ___  _  __  __  __
  2:___  _  | ____  _____  ____  ____   _____      _  ___  _  __  __  __
  3:___  _  | ____  _____  ____  ____   _____      _  ___  _  __  __  __
  4:___  _  | ____  _____  ____  ____   _____      _  ___  _  __  __  __
  5:___  _  | ____  _____  ____  ____   _____      _  ___  _  __  __  __
  6:___  _  | ____  _____  ____  ____   _____      _  ___  _  __  __  __
  7:___  _  | ____  _____  ____  ____   _____      _  ___  _  __  __  __

  ACCEPT: Y/K/P/N/M: __                          VERSION N.N <date>
```

Figure 2.2.4

☐ 3. Examine any value identified as falling outside of the normal range. If the value is valid press PF2 to override.

At any time during the PCS-ADE session, the range-checking environment can be changed: range-checking can be turned on or off, and the Table ID can be changed. This is accomplished by returning to the EDMR Key Screen and changing these two values.

When range-checking is enabled, each measurement entry is compared against the corresponding ranges in the selected Table (if an entry exists for that parameter). If the measurement falls outside the range allowed, a Fatal error will occur. In order to allow PCS-ADE to accept that measurement entry (assuming it has been correctly entered), the user will have to press the override function key displayed in the range-checking notice on the data entry screen. This will force PCS-ADE to accept the data. The override function will only apply to the currently displayed range-checking error. If multiple range-checking errors are found on a measurement or group of measurements and the override function is necessary, it will have to be invoked for each error to be overridden. The override function will have no effect on any other edit errors.

2.2.5 Compliance Schedule Data

The Compliance Schedule contains information to track the scheduled versus achieved dates of specific milestone events which are conditions of the facility's permit. The Compliance Schedule violations, such as failure to achieve a milestone or failure to submit a required report, are automatically determined from this information.

Compliance Schedule Data Entry Checklist

Preparation

☐ 1. PCS Assistant / Specialist ensures availability of one of the following input documents:
  ☐ Permit and Modified Permit
  ☐ Administrative Order
  ☐ Consent Decree.

Screening

☐ 2. PCS Assistant / Specialist prepares code-sheets for data entry.

☐ 3. PCS Supervisor reviews code-sheets to:
  ☐ Check for blanks
  ☐ Check for coding consistency
  ☐ Check key data elements.

☐ 4. PCS Supervisor marks questionable items and discusses them with staff.

Data Entry

☐ 5. PCS Supervisor routes PCS-ADE code-sheets to data entry personnel for entry to PCS-ADE.

☐ 6. PCS-ADE automatically checks for the following:
  ☐ Valid alpha/numeric entry
  ☐ Valid date ranges
  ☐ Valid PCS codes
  ☐ Record on file (new transactions)
  ☐ Record exists in data base for transactions being changed, deleted or mass deleted.
  ☐ Associated violation does not exist for delete transactions.

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Compliance Schedule Data Entry Checklist (continued)

☐ 7. Data entry personnel notes warning messages and discusses with appropriate person.

☐ 8. Data entry personnel reenters corrections.

Follow-Up

☐ 9. PCS Assistant / PCS Contractor reviews the Edit Audit and Update Audit reports using the checklists in Sections 2.3.1 and 2.3.2, verifies accepted transactions and resolves and corrects errors.

☐ 10. PCS Assistant / PCS Contractor verifies compliance schedule number against events to ensure correct number is used on Pretreatment, Municipal Water Pollution Prevention, and Orders for Information.

☐ 11. PCS Assistant / PCS Contractor verifies that all schedule numbers related to formal enforcement activities have a docket number present.

☐ 12. PCS Assistant / PCS Contractor runs a printout of schedule violations with associated enforcement actions to ensure action is taken on all violations.

☐ 13. PCS Assistant / PCS Contractor ensures all input documents are stored in the permanent files.

2.2.6 Enforcement Actions Data

This data type includes information related to enforcement actions taken by the authorized agency against the facility as a result of effluent limits violations, non-receipt of DMR's or compliance schedule citations.

Enforcement Actions Data Entry Checklist

Preparation

☐ 1. PCS Assistant / Specialist ensures that all of the following input documents are available:
   ☐ Administrative Order
   ☐ Consent Decree
   ☐ Warning Letter
   ☐ Record of communication
   ☐ Compliance Review Action Sheet (CRAS)
   ☐ Meeting.

Screening

☐ 2. PCS Assistant / Specialist prepares code-sheets for data entry.

☐ 3. PCS Supervisor reviews code-sheets to:
   ☐ Check for blanks
   ☐ Check for correct compliance schedule number
   ☐ Check for coding consistency
   ☐ Check key data elements.

☐ 4. PCS Supervisor marks questionable items and discusses them with staff.

Data Entry

☐ 5. PCS Supervisor routes code-sheets to appropriate personnel for data entry using PCS-ADE.

☐ 6. PCS-ADE automatically checks for the following:
   ☐ Valid alpha/numeric entry
   ☐ Valid date ranges
   ☐ Valid PCS codes
   ☐ Enforcement action key data elements do not exist in data base for new transactions

Enforcement Actions Data Entry Checklist (continued)

☐   Enforcement action key data elements do exist in data base for transactions being changed, deleted or mass deleted.

☐ 7.   Data entry personnel notes warning messages and discusses with appropriate person.

☐ 8.   Data entry personnel reenters corrections.

Follow-Up

☐ 9.   PCS Assistant / Specialist reviews the Edit Audit and Update Audit reports using the checklists in Sections 2.3.1 and 2.3.2. Verifies accepted transactions and resolves and corrects errors.

☐ 10.   PCS Assistant / Specialist verifies that every enforcement action has an associated violation and a docket number in PCS.

☐ 11.   PCS Assistant / Specialist verifies Payment and Consent Agreement is entered on Administrative Penalty Orders.

☐ 12.   PCS Assistant / Specialist ensures all input documents are stored in the permanent files.

2.2.7 Inspections Data

This data type contains information relating to the inspections of facilities, such as the performing inspector, inspection scheduling information, and inspector comments.

Inspections Data Entry Checklist

Preparation

☐ 1. PCS Assistant / Specialist ensures that Inspection Report is available.

Data Entry

☐ 2. PCS Assistant / Specialist enters data using PCS-ADE.

☐ 3. PCS-ADE automatically checks for the following:
Inspections Data Entry Checklist (continued)

☐ Valid alpha/numeric entry
☐ Valid date ranges
☐ Valid PCS codes.

☐ 4. PCS Assistant / Specialist proofs all transactions (both accepted and rejected).

☐ 5. PCS Assistant / Specialist discusses problems with inspector or engineer/scientist performing inspection or audit.

☐ 6. PCS Assistant / Specialist re-keys rejected transactions.

Follow-Up

☐ 7. PCS Assistant / Specialist reviews the Edit Audit and Update Audit reports using the checklists in Sections 2.3.1 and 2.3.2, verifies accepted transactions and resolves and corrects errors.

☐ 8. PCS Assistant / Specialist ensures all input documents are stored in the permanent files.

2.2.8 Pretreatment Compliance Inspection Data

This data type includes information from either a Pretreatment Audit or a Pretreatment Compliance Inspection.

Pretreatment Compliance Inspection Data Entry Checklist

Preparation

☐ 1. PCS Assistant / Specialist ensures that the PCI - Inspection Report is available.

Screening

☐ 2. Inspector prepares code-sheet for data entry and forwards it to appropriate personnel for data entry using PCS-ADE.

Data Entry

☐ 3. PCS-ADE automatically checks for the following:
   ☐ Valid alpha/numeric entry
   ☐ Valid date ranges
   ☐ Parent inspection on file
   ☐ Valid PCS codes
   ☐ Type of inspection = P
   ☐ Totals are compared for SIUS, CIUS, NOIN, and NOCM.

☐ 4. Data entry personnel notes warning messages and discusses them with appropriate person.

☐ 5. Data entry personnel reenters corrections.

Follow-Up

☐ 6. PCS Assistant / Specialist reviews the Edit Audit and Update Audit reports using the checklists in Sections 2.3.1 and 2.3.2. Verifies accepted transactions and resolves and corrects errors.

☐ 7. PCS Assistant / Specialist verifies Pretreatment Compliance Inspection dates in inspection family against PPETS.

☐ 8. PCS Assistant / Specialist ensures all input documents are stored in the permanent files.

2.2.9 Pretreatment Audit Data

This data type includes information from the Annual Report or Pretreatment Performance Summary (PPS) submitted by a pretreatment facility.

Pretreatment Audit Data Entry Checklist

Preparation

- ☐ 1. PCS Assistant / Specialist ensures that Pretreatment Audit - Inspection report is available.

Screening

- ☐ 2. Compliance Engineer/Scientist prepares code-sheet for data entry.

Data Entry

- ☐ 3. Compliance Engineer/Scientist routes code-sheet to appropriate personnel for entry using PCS-ADE.

- ☐ 4. PCS-ADE automatically checks for the following:
  - ☐ Valid alpha/numeric entry
  - ☐ Valid date ranges
  - ☐ Parent inspection on file
  - ☐ Valid PCS codes
  - ☐ PSSD must be entered for new, change, and replace transactions.

- ☐ 5. Data entry personnel notes warning messages and discusses them with appropriate person.

- ☐ 6. Data entry personnel reenter corrections.

Follow-Up

- ☐ 7. PCS Assistant / Specialist reviews the Edit Audit and Update Audit reports using the checklists in Sections 2.3.1 and 2.3.2. Verifies accepted transactions and resolves and corrects errors.

- ☐ 8. PCS Assistant / Specialist verifies Pretreatment Audit dates in inspection family against PPETS.

- ☐ 9. PCS Assistant / Specialist ensures all input documents are stored in the permanent files.

2.2.10 Permit Event Data

The Permits Event data type contains information to tracks the events related to permit issuance.

Permit Event Data Entry Checklist

Preparation

- ☐ 1. PCS Assistant / Specialist ensures that the Permit and Modified Permit are available.

Screening

- ☐ 2. PCS Assistant / Specialist prepares code-sheet using the Permit and Modified Permit.

Data Entry

- ☐ 3. PCS Assistant / Specialist enters data using PCS-ADE.

- ☐ 4. PCS-ADE automatically checks for the following:
  - ☐ Valid alpha/numeric entry
  - ☐ Valid date ranges
  - ☐ Valid PCS codes
  - ☐ Key data elements do not exist in data base for new transactions
  - ☐ Key data elements do exist in data base for transactions being changed or deleted.

- ☐ 5. PCS Assistant / Specialist notes warning messages and discusses with appropriate person.

- ☐ 6. PCS Assistant / Specialist reenters corrections.

Follow-Up

- ☐ 7. PCS Assistant / Specialist reviews the Edit Audit and Update Audit reports using the checklists in Sections 2.3.1 and 2.3.2. Verifies accepted transactions and resolves and corrects errors.

- ☐ 8. PCS Assistant / Specialist ensures all input documents are stored in the permanent files.

2.2.11 Evidentiary Hearing Data

The Evidentiary Hearing data type contains information related to a facility's appeal or negotiation of limits or compliance schedules at evidentiary hearings.

Evidentiary Hearing Data Entry Checklist

Preparation

- ☐ 1. PCS Assistant / Specialist ensures that all evidentiary hearing documents are available.

Data Entry

- ☐ 2. Data entered by Regional Counsel using PCS-ADE.

- ☐ 3. PCS-ADE automatically checks for the following:
  - ☐ Valid alpha/numeric entry
  - ☐ Valid date ranges
  - ☐ Valid PCS codes.

Follow-Up

- ☐ 4. PCS Assistant / Specialist reviews the Edit Audit and Update Audit reports using the checklists in Sections 2.3.1 and 2.3.2. Verifies accepted transactions and resolves and corrects errors.

- ☐ 5. PCS Assistant / Specialist ensures all input documents are stored in the permanent files.

2.2.12 Single Event Data

This data type contains information describing violations not related to effluent limits or compliance schedules.

Single Event Data Entry Checklist

Preparation

☐ 1. PCS Assistant / Specialist ensures that all of the following input documents are available:
  ☐ Non-compliance report
  ☐ Inspection Report
  ☐ Record of communication
  ☐ Administrative Order
  ☐ Consent Decree.

Screening

☐ 2. PCS Assistant / Specialist prepares code-sheet.

☐ 3. PCS Supervisor reviews code-sheets to:
  ☐ Check for blanks
  ☐ Check for correct compliance schedule number
  ☐ Review coding for consistency
  ☐ Check key data elements.

☐ 4. PCS Supervisor returns questionable items to staff for resolution.

Data Entry

☐ 5. PCS Assistant / Specialist enters data using PCS-ADE.

☐ 6. PCS-ADE automatically checks for the following:
  ☐ Valid alpha/numeric entry
  ☐ Valid date ranges
  ☐ Valid PCS codes
  ☐ Enforcement action key data elements do not exist in data base for new transactions
  ☐ Enforcement action key data elements do exist in data base for transactions being deleted (change transactions not allowed).

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☐ 7.   PCS Assistant / Specialist notes warning messages on code-sheet and discusses them with PCS Supervisor.

Follow-Up

☐ 8.   PCS Assistant / Specialist reviews the Edit Audit and Update Audit reports using the checklists in Sections 2.3.1 and 2.3.2. Verifies accepted transactions and resolves and corrects errors. Also verifies that related enforcement action/SNC is entered into PCS.

☐ 9.   PCS Assistant / Specialist ensures all input documents are stored in the permanent files.

2.3 Edit and Update Error Correction

Data Capture	Data Transfer	Edit & Update Error Correction	Data Base Quality Control

This section of Region 11's QA manual focuses on procedures to correct data errors identified as a result of the Edit/Update process in PCS. In Region 11, PCS users enter data into the system via two methods -- PCS-ADE or batch mode. PCS-ADE is an on-line, interactive method that allows users to input data directly into the IBM mainframe. On-line edit processing allows for the immediate correction of unacceptable data entries. Batch data entry involves the entry of transactions into the system without interactive edit and correction through the use of PC-Entry. An Edit Audit report is generated from batch process submittal. A Dummy Edit may be run first to verify the data. The Update Audit report is generated from both batch and on-line data entry. The procedures outlined below were developed to identify and correct rejected transactions on the Edit and Update Audits. If the error rate on the Edit or Update Audits exceeds ten percent, immediately notify the PCS Supervisor so that the PCS data capture and entry process can be evaluated and corrected.

2.3.1 PCS Edit Audit Reports

The Edit process evaluates each transaction in the batch submittal. Those transactions with fatal syntactical errors are rejected while those with correct syntax are output to a transaction file. A Dummy Edit may be run prior to the line edit to avoid entering inaccurate data into the update. An Edit Audit Report containing three sections is generated. One section lists transactions rejected by the Edit processor, one section lists transactions accepted by the Edit processor, and a third section lists a breakdown of the transactions submitted by data type and transaction type with the number of transactions accepted or rejected. Examples of the three report sections are shown on the following page with instructions for reviewing the Rejected and Accepted sections.

Checklist to Review PCS Edit Audit Reports

Example Output from Edit Audit Report (Rejected Transactions)

RUN DATE: 05/19/92	PERMIT COMPLIANCE SYSTEM EDIT AUDIT REPORT		AUDITRPT
	REGION: 11 USER-ID: JXL BATCHID: UPDATE		PAGE: 1
			REGION: 11

REJECTED TRANSACTIONS

TRANSACTION	NPDES			DATA			WARNING (W) OR
ID TYPE	NUMBER	KEY VALUE		ELEMENT	GEN	VALUE	ERR MSG.	INFORMATION(I)

MV CHG	XX0024635	BETA 9 5 00310 1 0 0 931130						
				MVIO	G	E90	RECORD NOT ON FILE	(W)
				VIND	G	Y		
				MCAV		37		
				MCMX		49		
				VQAV	G	000000		
				VQMX	G	000000		
				VCMN	G	000000		
				VCAV	G	000023		
				VCMX	G	000009		
				VWCS		000023		
MV CHG	XX0024635	BETA 9 5 00530 1 0 0 931130						
				MVIO	G	E90	RECORD NOT ON FILE	(W)
				VIND	G	Y		
				MCAV		35		
				MCMX		50		
				VQAV	G	000000		
				VQMX	G	000000		
				VCMN	G	000000		
				VCAV	G	000017		
				VCMX	G	000011		
				VWCS		000017		

Figure 2.3.1

For the **rejected** transactions on the Edit Audit Report

☐ 1. Check "ERR MSG, WARNING(W), OR INFORMATION(I)" column for reason
that transaction was rejected.

☐ 2. Research and resolve error message.

☐ 3. Route corrections to appropriate person for entry into PCS data base.

Checklist to Review PCS Edit Audit Reports (continued)

Example Output from Edit Audit Report (Accepted Transactions)

```
RUN DATE: 05/19/92              PERMIT COMPLIANCE SYSTEM EDIT AUDIT REPORT              AUDITRPT
                                                                                       PAGE:    1
                          REGION: 04   USER-ID: JXL   BATCH-ID: EDIT RPT              REGION: 04

                                        ACCEPTED TRANSACTIONS


TRANSACTION  NPDES                            DATA
ID    TYPE   NUMBER        KEY VALUE          ELEMENT GEN          VALUE          ERR MSG, WARNING(W) OR INFORMATION(I)
----------- -------- ------------------------ ------- --- -------------------- --------------------------------------


PS    MDL   XXF0000019 0011 9

MV    ADD   XXF0003778 BETA 9 5 00310 1 0 0 920531  MVIO    G  E90
                                                    VIND    G  Y
                                                    MCAV              32
                                                    MCMX              44
                                                    VQAV    G  00000
                                                    VQMX    G  00000
                                                    VCMN    G  00000
                                                    VCAV    G  00007
                                                    VCMX    G  00002
                                                    VMCS       00007


MV    ADD   XXF0003778 BETA 9 5 00530 1 0 0 920531  MVIO    G  E90
                                                    VIND    G  Y
                                                    MCAV              48
                                                    MCMX              67
                                                    VQAV    G  00000
                                                    VQMX    G  00000
                                                    VCMN    G  00000
                                                    VCAV    G  00060
                                                    VCMX    G  00049
                                                    VMCS       00060


MV    ADD   XXR0024635 BETA 1 5 00310 1 0 0 920531  MVIO    G  E90
                                                    VIND    G  Y
                                                    MCAV              38
                                                    MCMX              44
                                                    VQAV    G  00000
                                                    VQMX    G  00000
                                                    VCMN    G  00000
                                                    VCAV    G  00027
                                                    VCMX    G  00002
                                                    VMCS       00027
```

Figure 2.3.2

For the **accepted** transactions on the Edit Audit Report

☐ 4. Check "ERR MSG, WARNING(W), OR INFORMATION(I)" column. Review information (I) messages to identify those that may affect data quality.

☐ 5. Resolve if necessary.

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Example Output from Edit Audit Report (Summary)

```
RUN DATE: 05/19/92                    EDIT AUDIT SUMMARY                           AUDITRPT
                                                                                   PAGE:   4
                                   PERMIT COMPLIANCE SYSTEM                        REGION: 04

                                          REGION: 04
```

TRANSACTION TYPE	TOTAL INPUT	ADD ACCEPTED	REJECTED	CHANGE ACCEPTED	REJECTED	REPLACE ACCEPTED	REJECTED	DELETE ACCEPTED	REJECTED	PERCENT ACCEPTED
PERMIT FACILITY	•	•	•	•	•	•	•	•	•	0.0
PERMIT ADDRESS	•	•	•	•	•	•	•	•	•	0.0
PIPE SCHEDULE	1	•	•	•	•	•	•	1	•	100.0
PARAMETER LIMITS	8	•	•	•	•	•	•	8	•	100.0
MEASUREMENT VIOLATION	8	2	•	•	2	2	•	2	•	75.0
COMPLIANCE SCHEDULE	•	•	•	•	•	•	•	•	•	0.0
COMPLIANCE VIOLATION	•	•	•	•	•	•	•	•	•	0.0
ENFORCEMENT ACTION	•	•	•	•	•	•	•	•	•	0.0
ENFORCEMENT KEYS	•	•	•	•	•	•	•	•	•	0.0
INSPECTION SCHEDULES	•	•	•	•	•	•	•	•	•	0.0
INSPECTIONS	•	•	•	•	•	•	•	•	•	0.0
PCI/AUDIT INSPECTIONS	•	•	•	•	•	•	•	•	•	0.0
PERMIT EVENTS	•	•	•	•	•	•	•	•	•	0.0
EVIDENTIARY HEARINGS	•	•	•	•	•	•	•	•	•	0.0
GRANTS	•	•	•	•	•	•	•	•	•	0.0
SINGLE EVENTS VIOS	•	•	•	•	•	•	•	•	•	0.0
PRETREATMENT SUMMARY	•	•	•	•	•	•	•	•	•	0.0
PCS TABLE UPDATE	•	•	•	•	•	•	•	•	•	0.0
INVALID TRANSACTIONS	•	•	•	•	•	•	•	•	•	0.0
TOTALS:	17	2	•	•	2	2	•	11	•	88.2

Figure 2.3.3

For the Edit Audit **Summary** Report

☐ 6. Verify totals as a check that you have examined all transactions.

2.3.2 PCS Update Audit Reports

Data base update transactions accepted by the Edit processor "batch mode" and PCS-ADE are initially stored for input to the PCS Update processor. When the Update is executed (usually on Mondays and Thursdays) by EPA Headquarter's staff, the data are actually incorporated into the PCS data base. The Update process generates an Update Audit report of rejected and accepted transactions and an Update Audit Summary report identical in format to the Edit Audit Report generated for batch transactions.

Checklist to Review PCS Update Audit Reports

Example Output from Update Audit Report (Rejected Transactions)

```
RUN DATE: 05/19/92        PERMIT COMPLIANCE SYSTEM REGULAR UPDATE AUDIT REPORT         AUDITRPT
                              REGION: 11 USER-ID: JXL BATCHID: BROWN                    PAGE: 1
                                                                                       REGION: 11
                                      REJECTED TRANSACTIONS

TRANSACTION NPDES                      DATA                                  WARNING (W) OR
ID   TYPE   NUMBER    KEY VALUE        ELEMENT    GEN    VALUE    ERR MSG.    INFORMATION(I)
─────────────────────────────────────────────────────────────────────────────────────────

PL   CHG    XX0025755 001A 9 5 01094 1 0 1
                                       LTYP       F               SEASONAL LIMIT CHG LEAVES MV W/O LIM
                                       ELSD       910201          ELSD CHANGE MAY REEVALUATE MEAS (I)
                                       ELED       940131
```

Figure 2.3.4

For the **rejected** transactions on the Update Audit Report

☐ 1. Check "ERR MSG, WARNING(W), OR INFORMATION(I)" column for reason that transaction was rejected.

☐ 2. Research and resolve error message.

☐ 3. Route corrections to appropriate person for entry into PCS data base.

Example Output from Update Audit Report (Accepted Transactions)

```
RUN DATE: 05/19/92          PERMIT COMPLIANCE SYSTEM REGULAR UPDATE AUDIT REPORT           AUDITRPT
                             STATEN: XX USER-ID: JXL BATCHID: BROWN                        PAGE: 2
                                                                                           REGION: 11
                                      ACCEPTED TRANSACTIONS

TRANSACTION  NPDES                     DATA                              WARNING (W) OR
ID  TYPE   NUMBER   KEY VALUE          ELEMENT   GEN   VALUE  ERR MSG.   INFORMATION(I)
----------------------------------------------------------------------------------------------
IS  CHG    XX0001929 000000 S S 920331  SDTI      G     920402
IS  CHG    XX0002259 000000 C S 920331  SDTI      G     920330
IS  CHG    XX0020508 000000 S S 920331  SDTI      G     920312
IS  CHG    XX0023060 000000 C R 920930  SDTI      G     920211
```

Figure 2.3.5

For the **accepted** transactions on the Update Audit Report.

☐ 4. Check "ERR MSG, WARNING(W), OR INFORMATION(I)" column. Review information (I) messages to identify any affecting PCS data quality. Resolve, if necessary.

Example Output from Update Audit Report (Summary)

TRANSACTION TYPE	TOTAL INPUT	ADD ACCEPTED	ADD REJECTED	CHANGE ACCEPTED	CHANGE REJECTED	REPLACE ACCEPTED	REPLACE REJECTED	DELETE ACCEPTED	DELETE REJECTED	PERCENT ACCEPTED
PERMIT FACILITY	0	0	0	0	0	0	0	0	0	0.0
PIPE SCHEDULE	3	0	0	3	0	0	0	0	0	100.0
PARAMETER LIMITS	1	0	0	0	1	0	0	0	0	0.0
MEASUREMENT VIOLATION	42	0	0	17	0	25	0	0	0	100.0
COMPLIANCE SCHEDULE	2	0	0	2	0	0	0	0	0	100.0
COMPLIANCE VIOLATION	0	0	0	0	0	0	0	0	0	0.0
ENFORCEMENT ACTION	0	0	0	0	0	0	0	0	0	0.0
ENFORCEMENT KEYS	0	0	0	0	0	0	0	0	0	0.0
INSPECTION SCHEDULES	0	0	0	0	0	0	0	0	0	0.0
INSPECTIONS	0	0	0	0	0	0	0	0	0	0.0
PCI/AUDIT INSPECTIONS	0	0	0	0	0	0	0	0	0	0.0
PERMIT EVENTS	0	0	0	0	0	0	0	0	0	0.0
EVIDENTIARY HEARINGS	0	0	0	0	0	0	0	0	0	0.0
GRANTS	0	0	0	0	0	0	0	0	0	0.0
SINGLE EVENTS VIOS	0	0	0	0	0	0	0	0	0	0.0
PRETREATMENT SUMMARY	0	0	0	0	0	0	0	0	0	0.0
PCS TABLE UPDATE	0	0	0	0	0	0	0	0	0	0.0
INVALID TRANSACTIONS	0	0	0	0	0	0	0	0	0	0.0
TOTALS:	48	0	0	22	1	25	0	0	0	97.9

Report header: RUN DATE: 05/22/92 — REGULAR UPDATE AUDIT SUMMARY — PERMIT COMPLIANCE SYSTEM — BATCH-ID: BROWN — STATE: XX — AUDITRPT — PAGE: 76 — REGION: 05

Figure 2.3.6

For the Update Audit **Summary** Report

☐ 5. Verify totals as a check that you have examined all transactions.

2.4 PCS Data Base Quality Control

Data Capture	Data Transfer	Edit & Update Error Correction	Data Base Quality Control

Once the data has been entered and uploaded into the PCS data base, the focus of Region 11's quality assurance program shifts from preventing new errors to identifying and correcting existing errors in the data base. Various PCS Generalized Retrievals are used to determine the quality and quantity of Region 11's data in PCS and to highlight existing errors in the data base which require correction. Three types of PCS Reports are available:

□ **Pre-formatted Reports** -- System generated reports with standardized formats. They provide comprehensive information on all of the data found in PCS and are particularity useful in verifying the accuracy of data in PCS and identifying when information is due to EPA for entry into PCS.

□ **User Designed Reports** -- The user generates the types and details of information to be displayed and the format of the resulting report. These "Quick Look" Reports allow data to be reported on from any of the data types in PCS and are useful for users in tailoring the amount and types of information required to QA their data.

□ **Special Processing Reports** -- These reports are a subset of the predefined reports which are run to track compliance information or produce data which can be statistically analyzed. In addition to providing information on the program, they serve as excellent QA reports because the data in the system must be accurate and comprehensive to produce reliable reports. A thorough review of these reports frequently spotlights areas requiring QA. Examples of these reports are the QNCR and the EDS report.

This remainder of this section presents examples of each of these retrievals for use in quality assuring the data already contained in PCS. Card images are given for each retrieval. A short checklist which identifies the major items to examine in each of the printed reports follows as necessary.

2.4.1 Pre-formatted & Quick Look QA Retrievals

Pre-formatted standardized Generalized Retrievals and Quick Look Retrievals are most useful for QA. Often, several of these retrievals are used together to examine data at a particular level (data type). The examples below present a variety of retrievals to QA the different types of data found in PCS. They provide the retrieval logic necessary to produce the report, the general format of the report, and the steps necessary to review the output. The retrievals are grouped according to the type of data being QA'd. Below is a summary of the retrievals which will be discussed in this section.

All Data Types

- Quality Assurance Retrieval

Facility Level data

- Facility Report (FA)

Permit Limits data

- Limits Summary
- Abbreviated Limits Summary
- DMRs Printed Report
- Quick Look Report for Reviewing Permits

DMR Data

- DMR Administrative Report (DA)
- DMR Administrative Report by Parameter (DP)
- DMR Forecast Report
- DMR Summary Report
- Violations Log Report

Inspections Data

- Inspection Scheduling Report

Compliance Schedule

- Compliance Schedule Forecast Report

Enforcement Actions

- Enforcement Action Quick Look Retrieval

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2.4.1.1 PCS Quality Assurance Retrieval

The PCS QA Retrieval produces a pre-formatted report that displays all the WENDB elements for all data types in PCS and their associated error messages on a permit by permit basis. This retrieval examines each WENDB element and determines whether it, or a related element, has a missing or invalid value. The following statements apply to this retrieval:

☐ Any 10 card selection statements can be used including 11 OR cards.

☐ The 20 card QA is used for the report type. This will only display Facility data. To display more than Facility data use one of the three following options:

    ☐ SECTIONS -- Lists all data elements for the data types specified, whether there are errors or not. Four 20 WITH cards can be used with this selection:

        ☐ SECTIONS=M
          20 WITH MVDT GE MMDDYY
          20 WITH MVDT GE MMDDYY

        ☐ SECTIONS=I
          20 WITH DTIN GE MMDDYY
          20 WITH DTIN LE MMDDYY

    ☐ MISSING -- Lists only data elements that are missing from the data types specified.

    ☐ ERRORS -- Lists only the data elements that have error messages from the data types specified.

☐ The data types that can be selected for the three options are:

        F   -- Permit Facility and Permit Tracking Events
        I   -- Inspections
        C -- Compliance Schedules
        O -- Outfalls
        L   -- Parameter Limits
        M -- Measurements
        E   -- Enforcement Actions
        P   -- Administrative Penalty Orders
        H -- Evidentiary Hearings
        S   -- Single Events

N -- Pretreatment Inspections / Audits
X -- Pretreatment Performance Summary
A -- Selects All Data Types

Example of PCS QA retrieval statements:

```
00  SYNTAX=NO JOBID=QA RMT=225 PRTY=4 TIME=5M BIN=D005 COPIES=1
01  HQ QUALITY ASSURANCE RETRIEVAL
02     FOR REGION 11
10  NPID AL XX0001650
10  NPID AL AR0000663
20  QA SECTIONS=FOL

 ** DEFAULTS IN EFFECT **

10  IACC EQ A
10  PTYP AB
```

Output from QA retrieval statements:

Figure 2.4.1

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PCS Quality Assurance Retrievals (continued)

Once the report is generated, follow the checklist below.

☐ 1. Examine the output for each data type requested and check each error message.

☐ 2. Identify the invalid or missing WENDB data elements. *A single missing WENDB element may result in many error messages in related data elements*.

☐ 3. Research error message by examining original input documents and resolve.

☐ 4. Route corrections to appropriate person for entry into PCS data base.

Summary Section from Output of QA Retrieval:

```
DATE: 05/22/92                    QUALITY ASSURANCE RETRIEVAL                           PAGE: 4

                         SUMMARY SECTION
                         ---------------

DATA TYPE                  MISSING RECORDS             INVALID VALUES
-----------------------------------------------------------------------
PERMIT FACILITY                 0                           1
INSPECTIONS                     0                           0
COMPLIANCE SCHEDULE             0                           0
OUTFALL DATA                    0                           0
PARAMETER LIMITS                0                           4
MEASUREMENTS                    0                           0
ENFORCEMENT ACTIONS             0                           0
ADMINISTRATIVE PENALTIES        0                           0
EVIDENTIARY HEARINGS            0                           0
SINGLE EVENTS                   0                           0
PRETREATMENT INSPECTIONS        0                           0
PRETREATMENT SUMMARY            0                           0
-----------------------------------------------------------------------
TOTALS                          0                           5
```

Figure 2.4.1 (continued)

☐ 5. Review Update Audit report to verify correction has been made, as described in Section 2.3.2.

☐ 6. Repeat the retrieval to verify that no more errors exist (especially in complex cases or when many corrections were made).

2.4.1.2 Facility Report (FA)

Facility reports can be useful in QA by tracking the entry of data into PCS, especially for permit modifications or re-issues. The Facility Report is a pre-formatted report which lists all permit facility level information for a given NPDES facility along with any requested information. In this example, Permit Events data are requested.

Example of Facility Report retrieval statements.

```
00  SYNTAX=NO JOBID=GGFA TIME=05M PRTY=2
00  BIN=D005 RMT=255
01  XI FACILITY REPORT
10  NPID EQ XX0000229
20  FA SECTIONS=P

        ** DEFAULTS IN EFFECT **

10  IACC EQ A
10  PTYB AB
```

Output from Facility Report retrieval statements

```
DATE: 07/30/92                          PCS FACILITY REPORT                          PAGE:    1


*******************************************************************************************************
                                * GENERAL FACILITY INFORMATION *              PERMIT NUMBER: XX0000229
                                *******************************                             PAGE:  1
PERMIT NUMBER: XX0000229
FACILITY NAME: LEEDY WTP                MAJOR/MINOR   : MAJOR     TYPE OF OWNERSHIP: PUB  PUBLIC
   (SEGMENT 2):                         MAJORS RATING :           SIC CODE/DESCRIP : 4952 SEWERAGE SYSTEMS
   (SEGMENT 3): LEEDY CR                PREVIOUS RATING: NO CHG   INDUSTRIAL CLASS : M    MUNICIPAL
   (SEGMENT 4):                         ACTIVITY STATUS: ACTIVE   CODE OF FED. REG.:
                                        ACTIVITY DATE  :          FED FACILITY ID  :
CITY  : 66420 ORANGE COUNTY             EPA HQ PRIORITY: 3        CONSOLIDATED ID  :
COUNTY: 095   ORANGE                    REGION PRIORITY:          STATE PERMIT NO  :
STATE : FL  REGION: 04  SUB-REGION: OR
                                        AVERAGE DESIGN FLOW  : 3.300    CONTROL AUTHORITY ID :
RIVER BASIN    : 032000 SE/ST. JOHNS R. FEDERAL GRANT INDICATOR :        RECEIVING POTW ID :
RIVER REACH    :                        FINAL LIMIT INDICATOR   :        RDF1:     RDF4: TRK   RDF7:
RECEIVING WATERS: LEEDY CR              WATER QUALITY LIMIT IND  :        RDF2:     RDF5:       RDF8: SLUDGE
LATITUDE      : 2822350N LONGITUDE: 08135100W  PRETREAT PGM REQUIRED :   RDF3: E   RDF6:       RDF9: DAG
LON/LAT CODE OF ACCURACY: 2             ATTORNEY:       ENGINEER : MLM    RDF0 :X00

SLUDGE INDICATOR:
SLUDGE CLASS FAC IND:                   SLUDGE RELATED PERMIT # :         ANNUAL DRY SLUDGE PROD: 0       DMT/YR
SLUDGE USER DEFINED ELEMENT 1:     SLUDGE USER DEFINED ELEMENT 2:

ARCHIVAL DESCRIPTOR:      LAST ARCHIVAL DATE: 12/31/91  PERMIT DATE ISSUED: 06/13/91  PERMIT DATE EXPIRED: 06/30/96
NEW SOURCE CODE:                        ORIGINAL PERMIT ISSUE DATE: 12/30/74  REISSUED NUMBER:

                                ***********************
                                * MAILING INFORMATION *
                                ***********************

FACILITY LOCATION:                 PRIMARY DMR MAILING ADDRESS:         ALTERNATE DMR MAILING ADDRESS:
                                   LEEDY CREEK IMPROVEMENT DIST
                                   2001 DEER ISLAND ROAD       \D

                                   LAKE BUENA VISTA
                                   FLORIDA           32830


OWNER'S ADDRESS:                   OPERATOR'S ADDRESS:                  SLUDGE COMMERCIAL HANDLER ADDRESS:




OWNER'S PHONE:                     OPERATORS'S PHONE:                   COGNIZANT OFFICIAL: ED KRATZ, MANAGE R
                                                                        OFFICIAL'S PHONE:   (123) 124-0915
```

Figure 2.4.2

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Facility Report (FA) (continued)

Output from Facility Report retrieval statements

```
DATE: 07/30/92                    PCS FACILITY REPORT                          PAGE: 2
•••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
FACILITY: LEEDY CR               * PERMIT TRACKING DATA*        PERMIT NUMBER: XX0000229
PERMIT TYPE: STANDARD                                                         PAGE: 2

TYPE OF APPLICATION: LA STANDARD A    ORIGINAL ISSUE DATE: 12/30/74    NEW SOURCE CODE:
PERMIT ISSUED BY: EPA                 NUMBER OF REISSUES:               NEW SOURCE DATE:

        PERMIT TRACKING EVENT      ACTUAL    SCHEDULED  PERMIT TRACKING EVENT   RDE1    RDE2
        CODE/DESCRIPTION           DATE      DATE       COMMENTS
        ----------------------------------------------------------------------

        P10-99 APPLICATION RECEIVED        06/27/90   02/20/79   CONVERSION
        P20-99 APPLICATION COMPLETE        06/25/85
        P30-99 DRAFT PERMIT/PUBLIC NOTICE  04/16/92
        P40-99 PERMIT ISSUED               06/13/91   11/01/85
        P50-99 PERMIT EXPIRED              06/30/96   10/31/90
        P60-99 PERMIT EFFECTIVE            07/01/91
```

Figure 2.4.2 (continued)

☐ 1. For re-issue or modified permits, run a Facility report for existing permit.

☐ 2. Enter new data into PCS as per established procedure.

☐ 3. Once data has been entered into PCS, generate a Facility report for the new permit.

☐ 4. Compare new facility report against the old Facility report or against code sheet to verify the accuracy of coding and data entry.

☐ 5. When errors are identified, inform the appropriate person. Follow up to ensure their correction in the PCS data base.

2.4.1.3 Limits Summary (LS)

The Limits Summary (LS) is a pre-formatted report which provides all the information available in PCS on pipe schedules and their related parameter limits associated with a specific facility. In addition to providing the information on permit limits, it can be useful as a QA tool. Among its uses are identifying changes to permit limits and verifying new data has been accurately entered. It is also useful in verifying the accuracy of DMR data entered into PCS (See Section 2.2.3.2).

Example of Limits Summary retrieval statements.

```
00  SYNTAX=NO JOBID=LIMS RMT=255 PRTY=4
00  TIME=2M BIN=D005 COPIES=1
01  HQ LIMITS SUMMARY FOR REGION XI
10  NPID EQ XX0034565
20  LS

        ** DEFAULTS IN EFFECT **

10  IACC EQ A
10  PTYB AB
```

Output from Limits Summary Report retrieval statements

Figure 2.4.3

2.4.1.4 Abbreviated Limits Summary

This Quick Look report displays information similar to the Limits Summary Report but in a more user-friendly format.

Example of Abbreviated Limits Summary retrieval statements.

```
10  STTE EQ XX
10  NPID EQ XXNNNNNNN
20  TOP=YES BREAK=1
30  NPID
40  NPID FNMS MADID FLIM CNTN SUBR TAB18 PERD PERE TAB5 SIC2 ////
40  / TAB2 DSDG PIPE PIAC PIDT FLSD FLED TAB3 ELSD ELED STAT LQUC
    LAQAV LQMX LCUC
40  //LCMN LCAV LCMX
40  / TAB46 COLS TAB19 CONP PLFN SEAN ALLS TAB2 FRAN SAMP //
```

Output from Abbreviated Limits Summary Report retrieval statements.

Figure 2.4.4

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2.4.1.5 DMRs Printed Report

This pre-formatted report is created when DMRs are pre-printed and is used in conjunction with the Quick Look Report for Reviewing Permits (Section 2.4.1.6) in order to manually check against the permit to ensure that data has been correctly entered into PCS. The DMRs Printed Report provides an easy format to determine whether limits have been correctly coded.

Example of DMRs Printed retrieval statements.

```
00  SYNTAX=NO JOBID=DMRPP TIME=2M BIN=D005 RMT=255
01  HQ DMR RETRIEVAL
10  NPID EQ XX0034565
20  DM DSN=DMRPPRNT DISP=MOD SIZE=5 DMRPRT=FN FRMT=R255
20  WITH EDDT GE 010191
20  WITH EDDT LE 052792

** DEFAULTS IN EFFECT **
10  IACC EQ A
10  PTYP AB
```

Output from DMRs Printed retrieval statements

Figure 2.4.5

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☐ 1. Generate DMRs Printed retrieval.

☐ 2. Compare limits report output to limits in permit.

☐ 3. When errors are identified, inform the appropriate person. Follow up to ensure their correction in the PCS data base.

2.4.1.6 Quick Look Report for Reviewing Permits

The Quick Look Report for Reviewing Permits is used in conjunction with the DMRs Printed Report to manually check against the permit that the data has been correctly entered into PCS. It can verify that limits in PCS are accurate and have the correct statistical base codes and unit codes.

Example of Permit Limits/ Measurement Violations Quick Look retrieval statements.

```
00  SYNTAX=NO JOBID=EFFLUENT TIME=5M PRTY=2 BIN=D005 RMT=255
01  HQ QL REPORT FOR RETRIEVING PERMITS
10  NPID EQ XX0034565
20  QL TOP=YES
40  / NPID FNMS FLIM RWAT MADI PTEV PTAC /
40  / PDSG LTYP PRAM PRAMD STAT FRAN SAMP /
40  / ELED ELSD LQUC LQAV LQMX LCUC LCMN LCAV LCMX ALLS MLOC SEAN MODN

    ** DEFAULTS IN EFFECT **

10  IACC EQ A
10  PTYP AB
```

Output from Permit Limits / Measurement Violations QL retrieval statements

Figure 2.4.6

Quick Look Report for Reviewing Permits (continued)

☐   1.   Generate the Quick Look Report for Reviewing Permits.

☐   2.   Compare the information on limits in the report output to the permit.

☐   3.   When errors are identified, inform the appropriate person. Follow up to ensure their correction in the PCS data base.

2.4.1.7 DMR Administrative Report (DA)

The DMR Administrative Report is a pre-formatted report which provides summary information on measurement violations tallied by pipe and date. The report lists the number of nonreporting violations, late violations, effluent violations, and administrative deficient violations. The report includes an ERRORS=YES option which you may use to request a DMR Error Report which gives information on why a DMR will not be produced.

Example of DMR Administrative Report retrieval statements.

```
00  SYNTAX=NO RMT=255 PRTY=2 JOBID=DMRDA
00  TIME=2M BIN=D005
01  HQ DMR ADMINISTRATIVE REPORT PIPE LEVEL
02     FOR REGION XI MINORS
10  REGN EQ 11
10  MADI EQ M
20  DA
20  WITH SUDB GE 060192
20  WITH SUDB LE 063092


    ** DEFAULTS IN EFFECT **


10  IACC EQ A
10  PTYP AB
```

Output from DMR Administrative Report

FACILITY IDENTIFICATION	OUT-FALL	LIMIT TYPE	MONITORING END DATE	NUMBER OF PARAMETERS	DATE DUE AT EPA	DATE DUE AT STATE	NON-RPT	RPT LATE	EFF VIO	ADM DEF
PERMIT-NO: XX0000001 MAJOR SMITH ELECTRIC PO BOX 777 GOULDPALD XX 12345	002Q	FINAL	05/31/92	7	00/00/00	06/25/92	7	0	0	0
PERMIT-NO: XX0000015 MAJOR MAYNELL CO	005C	FINAL	05/31/92	9	06/25/92	06/25/92	9	0	0	0
123 JOHN HANSON SMITHEVILLE	011A	FINAL	05/31/92	2	06/25/92	06/25/92	2	0	0	0
XX 12345	004B	FINAL	05/31/92	8	06/25/92	06/25/92	8	0	0	0
PERMIT-NO: XX0000175 MAJOR GEN ELECTRIC-CRAIGHEAD	005B	FINAL	05/31/92	6	06/25/92	06/25/92	6	0	0	0
333 H STREET LONGSBORO	006B	FINAL	05/31/92	6	06/25/92	06/25/92	6	0	0	0
XX 12345	007B	FINAL	05/31/92	6	06/25/92	06/25/92	6	0	0	0
	008B	FINAL	05/31/92	5	06/25/92	06/25/92	5	0	0	0

DATE: 05/19/92   PCS DMR ADMINISTRATIVE REPORT   PAGE   1
FOR REGION XI MINORS
REPORT PERIOD: 06/01/92 - 06/30/92
** TOTAL VIOS **

Figure 2.4.7

DMR Administrative Report (DA) (continued)

☐   1.   Generate DA report for a specified timeframe.

☐   2.   Review the report to identify those facilities with violations.

☐   3.   Run additional retrievals to review facilities with violations and make corrections if possible. If further investigation is required to resolve, discuss with appropriate PCS contact.

2.4.1.8 DMR Administrative Report by Parameter (DP)

The DMR Administrative Report By Parameter (DP) is a pre-formatted report similar to the DA Report. It provides summary information on measurement violations and is especially useful in verifying old DMR data. This report lists violations by pipe, but unlike the DA it lists information by parameter within each pipe. Care should be taken not to rely on this report entirely as some data may be incomplete and still not be flagged as missing (such as parameters lacking concentrations).

Example of DMR Administrative Report by Parameter retrieval statements.

```
00  SYNTAX=NO RMT=255 PRTY=2 JOBID=DMRDP
00  TIME=2M BIN=D005
01  HQ DP FOR REGION XI
10  REGN EQ XI
20  DP
20  WITH SUDB GE 010192
20  WITH SUDB LE 033192

    ** DEFAULTS IN EFFECT **

10  IACC EQ A
10  PTYP AB
```

Output from DMR Administrative Report by Parameter

DATE : 08/04/92			PCS DMR ADMINISTRATIVE REPORT BY PARAMETER DP FOR REGION XI REPORT PERIOD: 01/01/90 - 03/31/90				PAGE: 1
FACILITY IDENTIFICATION	OUT-FALL	LIMIT TYPE	MONITORING END DATE	MONITORING LOC/PARAMETERS	DATE DUE AT EPA	DATE DUE AT STATE	VIOLATION EVENT
PERMIT-NO: XX00000058 MAJOR INTERNATION CO P.O. BOX 72 CHARLESTON	001A	FINAL	02/28/92	EFFLUENT GROSS BOD,5-DAY (20 DEG. C)	03/31/92		DMR OVERDUE
XX 32467	002A	FINAL	02/28/92	EFFLUENT GROSS VALUE PH	03/31/92		DMR OVERDUE

Figure 2.4.8

DMR Administrative Report by Parameter (DP) (continued)

☐ 1. Generate DP report for specified timeframe.

☐ 2. Review report for missing pipes and parameters.

☐ 3. Contact facility to determine why DMR data has not been received.

2.4.1.9 DMR Non-Receipt Report

The DMR Non-Receipt Report is a pre-formatted report which lists the instance of non-reporting, monitoring period end date, outfall, and limit type for each facility selected for a specified time period. This report is useful in identifying facilities that have not reported DMR data as required or to identify facilities which are required to report for a selected timeframe (i.e., FY1992). You may select three levels of information:

- **LEVEL=FACI** -- will display information where the entire DMR is missing

- **LEVEL=PIPE** -- will display the same information as LEVEL=FACI where all pipes are missing, and, in addition, partial DMRs where entire pipes are missing

- **LEVEL=PRAM** -- will display the same information as LEVEL=PIPE where entire pipes are missing and, in addition, parameters that are missing from other pipes on the DMR.

The DETAIL=PIPE option can be used with all LEVEL options to display the pipes where the entire DMR is missing. The example below illustrates the format for the report using the LEVEL=PRAM option.

Example of DMR Non-Receipt Report retrieval statements.

```
00  SYNTAX=NO RMT=255 PRTY=2 JOBID=DMRDF
00  TIME=2M BIN=D005
01  HQ DMR NON-RECEIPT REPORT
10  STTE EQ XX
20  DF LEVEL=PRAM
20  WITH SUDB GE 060192
20  WITH SUDB LE 063092

        ** DEFAULTS IN EFFECT **

10  IACC EQ A
10  PTYP AB
```

Output from DMR Non-Receipt Report

```
DATE: 06/30/92                              PCS DMR NON-RECEIPT REPORT                              PAGE    1
                                                 PARAMETER LEVEL
                                      DMR ADMINISTRATIVE REPORT BY PARAMETER
                                      SUBMISSION PERIOD: 06/01/92 - 06/30/92

                             MONITORING                                    LIMIT              MON   SEASON   MOD
       FACILITY IDENTIFICATION   END DATE   INSTANCE OF NONCOMPLIANCE  OUTFALL   TYPE   PARAMETER  LOC   NUM     NUM
     --------------------------  ----------  --------------------------  -------  -------  ---------  ---  ------  ---
     PERMIT NO: XX0000019 MINOR   05/31/92   DMR OVERDUE - STATE
     QUINCY ORCHARD
     HWY 15 SOUTH
     LINCOLN
     XX 64442


     PERMIT NO: XX0000033 MINOR   05/31/92   DMR OVERDUE - STATE
     LEWIS PRODUCTS, INC.
     P.O. BOX 115
     PORTSMORTH
     XX 64442


     PERMIT NO: XX0000143 MAJOR   05/31/92   DMR OVERDUE - STATE
     JARLING STORE FIXTURES
     PO BOX 170
     SARAGOULD
     XX 64450


     PERMIT NO: XX0000160 MINOR   05/31/92   DMR OVERDUE - EPA/STATE
     GENERAL ELECT
     PO BOX 220
     SCOTT & PEKIN STREETS
     SARAGOULD
     XX 64450


     PERMIT NO: XX0000086 MAJOR   05/31/92   DMR OVERDUE - EPA/STATE
     GLENDALE COMPANY
     515 EADST WEST HIGHWAY
     SLYTHEVILLE
     XX 66315
```

Figure 2.4.9

☐ 1. Generate DMR Non-Receipt Report (DF) for the specified timeframe.

☐ 2. Review the report to identify those facilities with missing DMR data.

☐ 3. Run additional retrievals to verify the information in the DF report. Resolve problems if possible. Contact the facility to determine why DMR data has not been reported.

2.4.1.10 DMR Summary Report (DS)

The DMR Summary Report (DS) is a pre-formatted report which displays totalling information on reported measurements tallied by municipals and non-municipals within each State and/or Region for a specified timeframe. You may use this report to determine the percentage of DMR data the Region is entering into PCS.

Example of DMR Summary Report retrieval statements.

```
00  SYNTAX=NO RMT=255 PRTY=2 JOBID=DMRDS
00  TIME=2M BIN=D005
01  HQ DSP FOR REGION XI
10  STTE EQ XX
10  MADI EQ M
10  INCL EQ M
20  DS
20  WITH SUDB GE 010192
20  WITH SUDB LE 033192

    ** DEFAULTS IN EFFECT **

10  IACC EQ A
10  PTYP AB
```

Output from DMR Summary

DATE: 07/30/92			PCS DMR SUMMARY REPORT DS FOR REGION XI REPORT PERIOD: 01/01/92 - 03/31/92			PAGE 1
REGION XI	PARAMETERS RECEIVED	PARAMETERS EXPECTED	PERCENT OF PARAMETERS RECEIVED	DMR FORMS RECEIVED	DMR FORMS EXPECTED	PERCENT OF DMR FORMS RECEIVED
XX						
MUNICIPAL	73	382	19.10	12	41	29.20
NONMUNICIPAL	218	440	49.50	41	82	50.00
TOTAL						
MUNICIPAL	73	382	19.10	12	41	29.20
NONMUNICIPAL	218	440	49.50	41	82	50.00

Figure 2.4.10

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DMR Summary Report (continued)

☐ 1. Generate DS report for specified timeframe.

☐ 2. Review report to determine reporting percentages.

☐ 3. Run DF or DP report to identify facilities not reporting DMR data as required. Bring information to attention of PCS coordinators to determine appropriate follow-up procedures.

2.4.1.11 Violation Log Report

The Violation Log Report identifies violations of effluent measurement data and nonreceipt of DMR data. In addition, it shows compliance schedule events which have been scheduled but not achieved.

Example of Violation
Log Report retrieval
statements.

```
10  STTE EQ XX
10  MADI EQ M
10  MVDT GE 090191
10  MVDT LE 022992
10  MVIO NE E00
11  OR
10  STTE EQ XX
10  MADI EQ M
10  DTSC GT 010170
10  DTSC LE 051592
10  DTAC EQ 000000
20  QL TOP=YES BREAK=3 GHOST=YES
30  RDF5 FNMS NPID
40  FNMS TAB5 NPID TAB5 MADID TAB5 FLIM FDGR SUBR RDF6 TAB4 NPSC
    NPFF NPSQ TAB10 CYQS CYMS TAB5 RDF5
40  //// TAB1 VDSG VPRM VPRMD VMLO VMOD MVDT MQAV MQMX MCMN
    MCAV MCMX MVIO SNCE SRCE
40  WITH MVIO NE E00
40  WITH MVDT GE 090191
40  WITH MVDT LE 022992
40  //// CSCH DSCD EVNT EVNTD DTSC DTAC DTRC CSFN COMM TAB5 SNCC
    SRCC
40  WITH DTSC GT 010170
40  WITH DTSC LE 051592
40  WITH DTAC EQ 000000
40  //// ENAC ENACD EATP EVTP ERFN ENDT ECM1 ECM2
```

Output from Violation Log Report retrieval statements

Figure 2.4.11

Violation Log Report (continued)

☐   1.   Generate the Violation Log Report specifying the appropriate dates.

☐   2.   Review output for violations.

☐   3.   When errors are identified, inform the appropriate person. Follow up to ensure their correction in the PCS data base.

2.4.1.12 Inspection Scheduling Report

The Inspection Scheduling Report is an option associated with the Facility Report. It lists projected dates for NPDES inspections to be conducted at permitted facilities by date and quarter. It can be compared to the Inspections Report to determine how well projected goals are being met.

Example of Inspection Scheduling Report retrieval statements.

```
00 SYNTAX=NO JOBID=QAIS RMT=255 PRTY=4 TIME=3M BIN=D005 COPIES=1
01 HQ INSPECTION SCHEDULING REPORT
02   FOR REGION XI MINORS
10 STTE EQ
10 MADI EQ M
20 FA SECTIONS=R

    ** DEFAULTS IN EFFECT **

10 IACC EQ A
10 PTYP AB
```

Output from Inspection Scheduling Report retrieval statements

```
DATE: 05/21/92                          PCS FACILITY REPORT                        PAGE:    2

                                  INSPECTION SCHEDULING REPORT
                                      FOR REGION XI MINORS

*************************************************************************************************
FACILITY: JONES METALS COMPANY       *  INSPECTION SCHEDULE DATA  *       PERMIT NUMBER:  00000
                                     ********************************                     PAGE:  2

PERFORMED    SCHEDULED INSPECTION TYPE     SCHEDULED INSPECTOR    SCHEDULED    SCHEDULED INSPECTION
  DATE          CODE / DESCRIPTION          CODE / DESCRIPTION      DATE         QUARTER / YEAR
----------   ----------------------------  ---------------------  ----------   --------------------------

             C COMPLIANCE EVAL (NON-SAMPLING)  S STATE             09/30/92           4/92
                                            SCHEDULED INSPECTION COMMENTS:
09/06/90     C COMPLIANCE EVAL (NON-SAMPLING)  S STATE             09/30/90           4/90
                                            SCHEDULED INSPECTION COMMENTS:
06/13/91     A PERFORMANCE AUDIT               S STATE             06/30/91           3/91
                                            SCHEDULED INSPECTION COMMENTS:
06/24/91     S COMPLIANCE SAMPLING             S STATE             06/30/91           3/91
                                            SCHEDULED INSPECTION COMMENTS:
```

Figure 2.4.12

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Inspection Scheduling Report (continued)

☐ 1. Generate a Facility Report selecting the Inspection Scheduling option for the specified timeframe.

☐ 2. Compare the Inspection Scheduling report to the Inspections report to determine actual inspections conducted as compared to scheduled inspections.

☐ 3. Route report to Inspections section for their review.

2.4.1.13 Compliance Schedule Forecast Report

The Compliance Schedule Forecast Report is a pre-formatted report which may be used to make sure that all milestone events and reports scheduled in a compliance schedule have been achieved.

Example of
Compliance   Schedule
Forecast Report
retrieval statements.

```
00 SYNTAX=NO JOBID=QACP RMT=255 PRTY=4 TIME=3M BIN=D005 COPIES=1
01 HQ COMPLIANCE SCHEDULE FORECAST REPORT
02    FOR REGION XI MINORS
10 REGION EQ 11
10 MADI EQ M
20 CP
20 WITH DTSC GE 060192
20 WITH DTSC LE 063092
```

Output from Compliance Schedule Forecast Report retrieval

Figure 2.4.13

☐ 1.   Generate a Compliance Schedule Forecast Report for the specified timeframe.

☐ 2.   Compare Compliance Schedule Date to the Compliance Schedule Achieved Date.

☐ 3.   Bring any facilities where the scheduled date has not been achieved to attention of the supervisor.

2.4.1.14 Enforcement Action QL Retrieval

The Enforcement Action Quick Look Retrieval is used to ensure that the complete enforcement actions are entered, closed, superseded, and linked to the correct violations.

Example of Enforcement Action Quick Look retrieval statements.

```
00 SYNTAX=NO BIN=D005 PRTY=2 RMT=255 JOBID=CKEA1 TIME=2M
01 HQ CHECK ON ENFORCEMENT ACTION DATA
10 NPID EQ XX0000789
20 QL TOP=YES HEADERS=LONG
40 NPID FNMS MADI CYQS CYMS
40 / TAB10 ENAC EATP ENDT ERFN ENST ESDT ENAC
40 / TAB15 EVTP EVDS EIPQ EVRD EVLM EVPR EVML ESEA EMOD EVMD
40 / TAB15 EVTP EVSN EVCD EVEV ECVC ECVD
40 / TAB15 EVTP ESVC ESVD

** DEFAULTS IN EFFECT **

10 IACC EQ A
10 PTYP AB
```

Output from Enforcement Action QL retrieval statements

Figure 2.4.14

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Enforcement Action QL Retrieval (continued)

☐ 1. Generate an Enforcement Action Quick Look report for the entered data.

☐ 2. Compare the Enforcement Action Quick Look report against code sheet to verify the accuracy of coding and data entry.

☐ 3. When errors are identified, inform the appropriate person. Follow up to ensure their correction in the PCS data base.

2.4.2 Special Processing

PCS can perform several special processing retrievals as a function of the Generalized Retrieval Subsystem. Two of the special processing retrievals are the generation of the Quarterly Non-Compliance Report (QNCR) which lists all active major facilities for which instances of Reportable Non-Compliance have been recorded within the current reporting period and the Effluent Data Statistics (EDS) which allow DMR data to be statistically analyzed or graphed over time. Both of these reports also serve as useful QA tools as discussed below.

2.4.2.1 Effluent Data Statistics (EDS)

The EDS software is used to analyze DMR effluent data. In addition to statistical reports, this software produces mass loading reports and several types of graphs. Since DMR data can be stored in different unit formats, EDS converts data values to PCS standard units before conducting an analysis. EDS is especially useful in identifying facilities with DMR data quality problems, improper unit conversions, and improper use of monitoring location codes.

Example of retrieval statements to produce EDS reports.

```
20  AN OPTION=xx DSN=xxxxxxx DISP=xxx COMP=xxxx EST=xxx
20  AN OPTION=xx FIELD=xx RANGE=xx STAT=xxxxxx GROUP=PAGE
20  AN OPTION=xx BOUND=x STBC=xxx WCNT=xxx CONC=xxxxx
20  WITH MVDT GT MMDDYY
20  WITH MVDT LE MMDDYY
20  WITH VPRM EQ 00310
```

Example of a Loading Report Generated from EDS.

```
                     PERMIT COMPLIANCE SYSTEM
                EFFLUENT DISCHARGE MASS LOADING REPORT
                   GEOGRAPHICAL LISTING BY FACILITY

BEG DATE FACILITY NAME      NPDES ID  MAJ IND SIC2 SIC2 DESC
END DATE BASIN   BASIN DESC                      RECEIVING
================================================================
01/31/88 ACME FOUNDRY CO    XX0050600 MINOR 3679 SPECIAL INDUST
12/31/91 0504000 L. ERIE/SMALL R         EAST BR WHITE RIVER

         00310
         BOD, 5-DAY
         KILOGRAMS
         1988       303.41
         1989        96.97
         1990        23.22
         1991  20,722,822.00
================================================================
```

Example of a Statistical Loading Report Generated from EDS.

```
                           STATISTICAL LOADING REPORT
                             REGION 11 LOAD TOTALS
         --- PARAMETER CODE 0310 PARAMETER DESC. = BOD, 5-DAY STATE = XX ---
                      AVE     AVE     AVE     EXCESS  FLOW WT
                      CONC    FLOW    LOAD    LOAD    CONC
  FACILITY NAME PERMIT# YEAR (MG/L) (MGD)  (KG/DAY) (KG/DAY) (MG/L)  MTHS  STD ERR
  ACME FOUNDRY  XX005000 1989 71.166 0.0010  0.2694   0.2656  71.166  12   0.1407
                         1990  5.833 0.0010  0.0645   0.0607  17.0417 12   0.0167
                         1991 22.812 1000.00 76751.42 72966.42 20.277  9   24753.8
```

Figure 2.4.15

After a load and statistical report for a particular geographic area has been generated examine the Load Reports for:

☐ 1. Inconsistent load for year to year periods. Outliers may be due to:

   ☐ inconsistent unit codes

   ☐ a change in the permit that is not reflected in the way the data is being entered

   ☐ a change in the way the facility is monitoring the data (such as halting the monitoring of data in mid-year.

☐ 2. Examine the Basic Statistics Reports for:

   ☐ Large standard errors. A standard error greater than five is questionable. The greater the standard error, the greater the likelihood of an error.

   ☐ Monitoring for less than twelve months. A given facility may not be required to monitor for 12 months. Check the permit to verify the number of months that the facility is required to monitor.

   ☐ High flow averages. High flow is typical of only a very few facilities (such as power plants). Verify other occurrences.

   ☐ High concentrations. High concentrations may be due to:

      ☐ data entered with incorrect unit codes.

☐   data entered incorrectly (missing or misplaced decimal point)

☐   permit has changed unit codes and this change is not reflected in data being entered.

Example of Check Retrieval

```
                                        ACME FOUNDRY
━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━
NPID   FNMAS       PIPE            MADI
────   ─────       ────            ────
PDSG ELSD    ELED   PRAM  MLOC LQUC LQAV  LQMX  LCUC LCAV LCMX ALLS
──── ────    ────   ────  ──── ──── ────  ────  ──── ──── ──── ────
MLOC MLOC            STAT STAT        NRPU
──── ────            ──── ────        ────
     VDSG VPRM        VMLO MQAV   MQMX    RUNT MCAV MCMX RCUN MVDT  NODI
     ──── ────        ──── ────   ────    ──── ──── ──── ──── ────  ────
XX0050000 ACME FOUNDRY            001 POINT REPRESENTATIVE OF DI
001A 07/01/90 06/25/95 00310 1   01 .264 .397  19 15 10 YYYYYYYY
1  EFFLUENT GROSS VALUE 10  30DA AVGDAILY MX    30DA AVGDAILY MX 1
   001A BOD, 5-DAY         1  .1192275 .140045  31.5   37.0  10/31/90
   001A BOD, 5-DAY         1  .1154425 .215745  30.5   57.0  11/30/90
   001A BOD, 5-DAY         1  .102195  .15897   27.0   42.0  12/31/90
   001A BOD, 5-DAY         1  .2365625 .268735  62.5   71.0  01/31/91
   001A BOD, 5-DAY         1  189250.0 253595.0 50.0   67.0  02/28/91
   001A BOD, 5-DAY         1  45420.0  52990.0  12.0   14.0  03/31/91
001A 07/01/90 06/25/95 50050 1   07 ADDMON  ADDMON  DEL  DEL  YYYYYYYYYYYY
1  EFFLUENT GROSS VALUE 10  30DA AVGDAILY MX
   001A FLOW, IN CONDUIT   1  1000.0  1000.0           10/31/90
   001A FLOW, IN CONDUIT   1  1000.0  1000.0           11/31/90
   001A FLOW, IN CONDUIT   1  1000.0  1000.0           12/31/90
001A 07/01/90 06/25/95 50050 1   07 ADDMON  ADDMON  DEL  DEL  YYYYYYYYYYYY
1  EFFLUENT GROSS VALUE 10  30DA AVGDAILY MX
   001A FLOW, IN CONDUIT   1  1000.0  1000.0           01/31/91
   001A FLOW, IN CONDUIT   1  1000.0  1000.0           02/28/91
   001A FLOW, IN CONDUIT   1  1000.0  1000.0           03/31/91
```

Figure 2.4.15 (continued)

☐ 3.   Generate check retrievals in order to follow up on problems found on the Load and Basic Statistics reports. Especially check for:

☐   Incorrect or missing quantity or concentration data. There is usually one value for each of the 12 months of the year unless a parameter is monitored seasonally.

☐   Compare non-detection or below detection values to the limits in order to check for consistent values.

☐   Flow data for the corresponding parameter.

☐ Incorrect monitoring end dates. Each monitoring end date must be the last day of the month. Only one measurement per month.

☐ Incorrectly coded monitoring locations.

☐ Load double counting due to internal pipes.

☐ Correct NRPU (number of reported units for each value). Usually this code is 1, meaning that each value accounts for one unit. For example, if NRPU is 6 there would be just two values for the year.

☐ 4. Check permit to verify data found in the check retrieval.

☐ 5. Resolve problems as usual in office. Methods which may be prove useful include:

☐ Report problems to state and ask for their cooperation in the correction of these problems.

☐ Call permittees and request copies of DMRs (mail, FAX, or over phone)

2.4.2.2 PCS Quarterly Noncompliance Report (Selective QNCR)

The PCS Quarterly Noncompliance report (QNCR) is used as a QA tool for indicating whether formal enforcement actions are coded in PCS and specific violations are addressed properly. Numeric violations are also flagged. This report lists facility name, location, NPDES number, the instances of reportable non-compliance (RNC), and enforcement actions taken as a response.

Format for Quarterly Noncompliance report.

```
00  SYNTAX=NO JOBID=QRTX RMT=255 PRTY=2 TIME=3M BIN=D005
01  HQ QNCR FOR REGION 11
10  NPID EQ XX0000432
20  QR VTYP=ESC

    ** DEFAULTS IN EFFECT **
10  IACC EQ A
10  PTYP AB
```

Output produced from Quarterly Noncompliance retrieval statements

Figure 2.4.16

☐ 1. For invalid facility status codes, check the status of each individual violation:

   ☐ If the status should be RP, check for missing enforcement action, incorrect or missing docket number.
   ☐ If the status should be RE, check to ensure formal enforcement actions are closed. Additionally, check to make sure you do not need to manually resolve the violation, as in the case of a single event violation.
   ☐ If the facility should be NC, ensure that:
      ☐ the correct limits and DMR data are in PCS.
      ☐ the schedule is correctly entered into PCS.
      ☐ the flag on a single event violation has been raised.

☐ 2. For invalid non-reporting violations of DMR data:

   ☐ Ensure DMR data is actually in PCS.
   ☐ Ensure DMR data and limits are accurate.
   ☐ Check for missing "No Discharge" codes.
   ☐ Check that the pipe is supposed to be active.

☐ 3. For invalid non-reporting violations of Compliance Schedule data:

   ☐ Ensure that the Compliance Schedule data is in PCS.
   ☐ Ensure actual and received dates are accurate.

☐ 4. For erroneous effluent violations:

   ☐ Check numeric limits and statistical base codes for accuracy.
   ☐ Check DMR data in PCS for accuracy.
   ☐ Check SNC flags to ensure data was evaluated by PCS.
   ☐ If missing violation relates to an AO or Consent Decree, ensure correct COLS was entered on the limit record. Also examine PLFN on the limit record, ERFN on the Enforcement Action record, and CSFN if there was a schedule.

☐ 5. If old violations suddenly appear on QNCR, check if the facility was recently upgraded to a major and had old data in the system. This usually occurs on the QNCR for the quarter ending December 31.

☐ 6. For missing enforcement action data:

   ☐ Ensure action was correctly keyed into PCS.
   ☐ If using E3, ensure action was linked to correct violation.

2.4.2.3 PCS Quarterly Noncompliance Report (Coordinator's QNCR)

The PCS Coordinator's Quarterly Noncompliance report (QNCR) is used as a QA tool in the same way as the Selective QNCR for indicating whether formal enforcement actions are coded in PCS and specific violations are addressed properly. Numeric violations are also flagged. This report lists facility name, location, NPDES number, the instances of reportable non-compliance (RNC), and enforcement actions taken as a response. It should be reviewed for the same information as the selective QNCR.

Format for Quarterly Noncompliance report.

```
00  SYNTAX=NO JOBID=QRTX RMT=255 PRTY=2 TIME=3M BIN=D005
01  HQ QNCR FOR REGION 11
10  NPID EQ XX0000432
20  QR VTYP=ESC

    ** DEFAULTS IN EFFECT **
10  IACC EQ A
10  PTYP AB
```

Output produced from Quarterly Noncompliance retrieval statements

Figure 2.4.17

SECTION 3

PCS MANAGEMENT

3.0 Overview

Region 11's QA program encompasses more than a set of well-documented procedures for avoiding and correcting errors. The PCS managers also administer their programs in such a way as to emphasize the importance of quality assurance and stress the need for continual improvement of PCS data quality. Region 11's QA program includes the following management activities:

- **Assigned Staff Responsibilities.** Region 11 has formally established the duties of its staff to demonstrate the importance of PCS data quality. The staff know their expected QA duties and have adjusted their performance accordingly. Region 11 has included responsibility for PCS quality assurance in relevant job descriptions, established performance objectives for quality assurance, evaluates quality assurance accomplishments during performance evaluations, and has designated a PCS quality assurance overseer.

- **Established, Attainable Goals and Targets.** Region 11 has set its PCS data quality targets for timeliness, accuracy, completeness, and consistency by adopting the recommended national standards. Region 11 concentrates its efforts on improving its performance in the areas where its QA program is the weakest. The data quality targets and Region 11's performance is publicized throughout the PCS office.

- **Performance Tracked Against Goals.** The quality of Region 11's PCS data is measured at regular intervals and compared to the data quality targets and goals. This evaluation demonstrates how well Region 11 is doing in terms of its data quality. This evaluation uses the same, routine method (presented in Appendix B) of gauging data quality performance at regular intervals (each month, quarter, and year). This routine measurement of achievements against the quality targets allows Region 11 to track its data quality status

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over time, identify trends for appropriate managerial oversight, and provides information to use in fine-tuning the PCS QA program.

■ **Quality Assurance Program Assessed Regularly.** Periodically Region 11 evaluates how well its Quality Assurance program functions and determines how to improve it. First, the current status of the QA program is determined and then measured relative to the OWEC national standards. Region 11 focuses primarily on problems that affect PCS data quality and on identifying their causes. Once the cause of a problem is identified, possible solutions are evaluated and the most appropriate solution implemented.

■ **Management of Data Input Personnel.** Region 11 manages its staff to support and enhance PCS data quality. The PCS staff is allowed to devote the time necessary to complete their data quality work and to follow up on problems promptly when they occur. Good staff performance is rewarded. Staff who do not demonstrate a willingness or the ability to perform quality assurance functions adequately are reprimanded or reassigned. Region 11 prepares for staff turnover by cross training the existing PCS staff in the job duties of the other positions and by moving quickly to replace PCS staff who are leaving, usually while the experienced staff member is still on the job to orient the replacement.

■ **Consistent Commitment to Data Quality.** Region 11 provides full management commitment to PCS data quality. Region 11 has found that unflagging management support is crucial for the success of its quality assurance programs. While the QA program has experienced problems and setbacks, through the perseverance of the PCS managers and the dedication of the PCS staff most, if not all, of these problems have been overcome. Consistency, and following the established policy even when difficulties arise, has proven successful.

- **Communication.** Communication, including system documentation and staff training, is a vital part of Region 11's quality assurance program. All PCS documentation is easily available to all staff. PCS QA training is conducted as frequently as necessary and is targeted to the staff who can benefit most from it.

3.1 Staff Training

Region 11 uses the form presented in Figure 3.1 to help track the PCS training that the staff has received. The local PCS training courses are added to this form, along with the PCS staff's names. As staff complete the classes that they need, the form is completed.

3.2 PCS Phone Contacts

The two lists of phone numbers presented in Figure 3.2 are intended to provide a ready reference for contacts who can help you with PCS problems. Add the phone numbers to reflect your local, state, or regional contacts and distribute the completed lists to all appropriate personnel.

3.3 PCS Documentation List

The following list presents documents and references used in Region 11's PCS QA program. All references are easily available to the PCS staff.

PCS Quality Assurance Reference Manuals

The following references are readily available to all PCS staff:

- ☐ 1. PCS QA Manual.
- ☐ 2. PCS Data Element Dictionary.
- ☐ 3. PCS Generalized Retrieval Manual.
- ☐ 4. PCS INQUIRY Manual.
- ☐ 5. PCS Data Entry, Edit, and Update Manual.
- ☐ 6. PCS Codes and Descriptions Manual.
- ☐ 7. PCS PC Personal Assistance Link (PAL) User's Guide.

PCS Staff Training

Name Position	Course Name	Need? (Y/N)	Date Taken Month/Year
1. _____ _____	Basic PCS Training Advanced PCS Training (QNCR) Generalized Retrieval Training Manager's Inquiry (On-line Tutorial) PCS PAL (On-line Tutorial) _____	___ ___ ___ ___ ___ ___	__/__ __/__ __/__ __/__ __/__ __/__
2. _____ _____	Basic PCS Training Advanced PCS Training (QNCR) Generalized Retrieval Training Manager's Inquiry (On-line Tutorial) PCS PAL (On-line Tutorial) _____	___ ___ ___ ___ ___ ___	__/__ __/__ __/__ __/__ __/__ __/__
3. _____ _____	Basic PCS Training Advanced PCS Training (QNCR) Generalized Retrieval Training Manager's Inquiry (On-line Tutorial) PCS PAL (On-line Tutorial) _____	___ ___ ___ ___ ___ ___	__/__ __/__ __/__ __/__ __/__ __/__
4. _____ _____	Basic PCS Training Advanced PCS Training (QNCR) Generalized Retrieval Training Manager's Inquiry (On-line Tutorial) PCS PAL (On-line Tutorial) _____	___ ___ ___ ___ ___ ___	__/__ __/__ __/__ __/__ __/__ __/__
5. _____ _____	Basic PCS Training Advanced PCS Training (QNCR) Generalized Retrieval Training Manager's Inquiry (On-line Tutorial) PCS PAL (On-line Tutorial) _____	___ ___ ___ ___ ___ ___	__/__ __/__ __/__ __/__ __/__ __/__

Figure 3.1

Phone Numbers for User Support

PCS USER SUPPORT   (FTS/202) 260-8529
U.S. Environmental Protection Agency
401 M Street, S.W. (EN-338)
Washington, D.C. 20460

NCC-IBM User Support   (FTS) 629-7862
                                        (919) 541-7862
                                        (800) 334-2405

NCC Network Control Facility   (FTS) 629-4506
                                        (919) 541-4506

NCC Tape Librarian   (FTS) 629-2385
                                        (919) 541-2385
                                        (800) 334-9700

NCC Training Office   (FTS) 629-3648
                                        (919) 541-3648

Regional Contacts

_____   _____

_____   _____

_____   _____

_____   _____

State Contacts

_____   _____

_____   _____

_____   _____

_____   _____

Figure 3.2

Local Phone Contacts for PCS Problems

Name	Expertise	Phone Number
1. _____	_____ _____ _____	_____
2. _____	_____ _____ _____	_____
3. _____	_____ _____ _____	_____
4. _____	_____ _____ _____	_____
5. _____	_____ _____ _____	_____
6. _____	_____ _____ _____	_____
7. _____	_____ _____ _____	_____
8. _____	_____ _____ _____	_____

Figure 3.2 (continued)

3.4 PCS Staff Responsibilities

The final management chart (see Figure 3.3) lists the QA responsibilities of Region 11's PCS staff. This chart reflects the office organization and the assigned duties of the staff. This list is also used when writing job descriptions and performance objectives for the staff.

QA Responsibility for PCS Positions

PCS POSITION	QUALITY ASSURANCE RESPONSIBILITIES
■ PCS Supervisor / PCS Coordinator	■ Overall supervision of PCS QA Program. ■ Review and evaluate of staff's QA performance. ■ Review of prepared code-sheets. ■ Resolution of QA problems
■ PCS Assistant / PCS Specialist	■ Complete and consistent preparation of Sample DMRs (permit writer/coder). ■ Preparation of code-sheets for data entry. ■ Timely, Accurate, Complete, and Consistent entry of assigned input documents using PCS-ADE. ■ Review of Update Audit reports and resolution of errors. ■ Research and resolution of assigned QA problems.
■ PCS Data Entry Personnel	■ Timely, Accurate, Complete, and Consistent entry of DMR data (primarily using batch mode). ■ Review of Edit Audit (Dummy) report. Research and resolution of QA problems. ■ Review of Update Audit report. Research and resolution of QA problems.

Figure 3.3