# The National Pollutant Discharge Elimination System (NPDES)

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## Table

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The National Pollutant Discharge Elimination System (NPDES) Permit Management System: Pilot System Description

by

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The National Pollutant Discharge Elimination System (NPDES) management system: pilot system description

The Clean Water Act of 1977 and Army Regulation 200-1 require Army installations to control the quality of their point-source wastewater effluents. Point-source discharges are controlled by National Pollutant Discharge Elimination System (NPDES) permits; each wastewater point discharging into a navigable waterway is regulated either by a Federal or State NPDES permit. The Department of the Army has been issued hundreds of NPDES permits.
This report describes a pilot NPDES Permit Management System developed by the U.S. Army Construction Engineering Research Laboratory (CERL). This program allows the Army to retrieve from a central database a permanent, continually updated inventory of the Army's wastewater effluent discharge self-monitoring information and associated NPDES permit data. This system also lets the Army aggregate, manipulate, and analyze the database information. This report gives a brief background of the pilot system's development, suggests how the system can be used to help manage the Army's pollution abatement program, and gives detailed user instructions.
FOREWORD

This study was sponsored by the Directorate of Military Programs, Office of the Chief of Engineers (OCE), under Project 4A762720A896, "Environmental Quality for Construction and Operation of Military Facilities"; Task A; Work Unit 034, "Hazardous/Toxic Materials Management System." LTC D. Gilson was the OCE Technical Monitor. The work was also funded in part by the Army Environmental Hygiene Agency under IAO AEHA 82-60.

The work was performed by the Environmental Division (EN) of the U.S. Army Construction Engineering Research Laboratory (CERL). This research was made possible through the efforts of OCE and Army Environmental Hygiene Agency personnel. Administrative support and counsel were provided by Dr. R. K. Jain, Chief of CERL-EN.

COL Louis J. Circeo is Commander and Director of CERL, and Dr. L. R. Shaffer is Technical Director.
THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT MANAGEMENT SYSTEM: PILOT SYSTEM DESCRIPTION

1 INTRODUCTION

Background

The Clean Water Act of 1977 prohibits the discharge of pollutants from a point source into a receiving stream unless the discharge is authorized by the U.S. Environmental Protection Agency (USEPA) or the State EPA. Army regulation (AR) 200-1, Environmental Protection and Enhancement, requires Army installations to comply with these Federal and State regulations.¹

Point-source wastewater effluents are authorized by a National Pollutant Discharge Elimination System (NPDES) permit. This permit names the type and amount of pollutants that can be released from each point source. The holder of each permit also must submit, at specified intervals, self-monitoring reports which describe the quality of the effluent actually discharged.

A recent General Accounting Office study reported that 87 percent of municipal wastewater treatment plants are in violation of their NPDES permits.² Some 31 percent of those plants show serious, long-term violations which indicate overloaded conditions.

The Army’s NPDES compliance record is much better. The latest year of record for one major command (MACOM) shows only 79 discharges in non-compliance out of 351 point sources regulated by NPDES permit. This represents just 22 percent non-compliance—four times better than the national average.

NPDES compliance is a nationwide problem because new pollution control facilities often are designed poorly, and because old facilities which cannot meet today’s strict NPDES discharge limits are still in use.

Most of the Army’s NPDES compliance problems fall into this latter category. The Army has been issued hundreds of NPDES permits, many of which regulate trickling filter plants designed during World War II. Some of these plants may have to be upgraded to meet future permit requirements, either by retrofit (new construction), or by changing their process control. To insure the Army’s limited construction and research money is spent where it will do the most good, the Army must find:

1. Which of its point-source discharge sites are in the most serious jeopardy of violating current or future NPDES limits.

2. Which sites could be made to comply with NPDES limits with only process control changes, rather than with costly new construction.

To do this, the Army managers who set pollution abatement priorities must have quick, easy access to a complete data base of Army NPDES permits and their associated self-monitoring reports. They also must be able to manipulate and analyze this data base.

An Army-wide NPDES permit data base and data management system could help managers at every level in the Army. At the installation level, the Directorate of Facilities Engineering (DFE) would have an easily accessible, readable operating log of the wastewater treatment processes at their installation. This log could be used to develop and analyze operational data needed to make changes in process control, build a case for requesting an exemption from NPDES discharge limits, or write a proposal for new facility construction. The log’s historical data also could be used to support the Metcalf and Eddy RODA System, now being evaluated for Army use, which helps “fine-tune” a plant so it performs to its maximum capabilities.³

MACOMs could use the system to rank new construction requests related to pollution abatement.

Decision-makers in the Office of the Chief of Engineers (OCE) could use the system to find recurring or widespread problems at Army pollution abatement facilities, thus pinpointing those areas where research into improving pollution abatement facilities should be focused.

¹Environmental Protection and Enhancement, Army Regulation 200-1 (Department of the Army, 1982).
²Costly Wastewater Plants Fail to Perform as Expected, CE 0812-9, Report by the Comptroller General of the United States, CED 81-9 (General Accounting Office, November 14, 1980).
³RODA, Records and Operations Data Analysts (Metcalf and Eddy, Inc., Boston, MA).
Installation, MACOM, OCE, and Department of the Army personnel could use the system to help assess the impact various levels of mobilization would have on pollution abatement facilities in their jurisdiction.

Objective
The objective of this work was to develop (1) a pilot data base of Army NPDES permits and self-monitoring reports, and (2) a computer-aided system to retrieve, aggregate, manipulate, and analyze data base information easily.

Approach
A limited data base containing only U.S Army Training and Doctrine Command (TRADOC) NPDES permits and reports was assembled. System management data and summary requirements were collected from Headquarters TRADOC, Environmental Coordinators at several TRADOC installations, OCE, and the U.S. Army Environmental Hygiene Agency (USAHA). An interactive pilot NPDES Permit Management System was then designed and programmed.

Mode of Technology Transfer
Technology transfer will be in accordance with AR 18-1, Army Automation Management (Department of the Army, 15 August 1980).

2 THE NPDES–OVERVIEW

The NPDES regulations regulate pollutant discharges in two ways:

1. Each discharge must be authorized by a permit. Figure 1 is a topical list of all information contained in an NPDES permit for USEPA Region IV.* All permits list discharge limits and monitoring requirements. That is, all permits control the rate at which various pollutants can be discharged, and set specific requirements for sampling and testing wastewater effluents to determine if discharge limits are being met (Figure 2).

2. Every generator of a permitted discharge must submit periodic, self-monitoring reports giving detailed information about the pollutant levels actually discharged during the time period covered by each report.

A sample Discharge Monitoring Report, EPA Form 3320-1, is shown in Figure 3. A permit's requirements are compared to the data in the self-monitoring report to determine whether a generator is complying with NPDES permit conditions.

3 THE PILOT NPDES PERMIT MANAGEMENT SYSTEM

The Data Base
An NPDES Permit Management System data base was assembled from information extracted from USEPA records of NPDES permits issued to TRADOC installations and associated TRADOC self-monitoring reports. This information fell into five groups:

1. Descriptive information. Each permit gives the name of the installation holding the permit, the NPDES permit number, a description of the type of discharge (e.g., washrack or sewage treatment plant), and the EPA region, watershed, State, county, and city in which the discharge occurs.

2. Event: schedules. Each permit lists events and deadlines that must be met as the discharge is brought into compliance and maintained.

3. Effluent limitations. Each permit lists wastewater constituents (e.g., ammonia or organics) that must be monitored. Also listed are the maximum acceptable level of those constituents in the discharge, and how often and in what ways monitoring samples must be taken.

4. Current reports. These reports give the level of each wastewater constituent actually discharged during each reporting period.

5. Special information. Both permits and reports list notes, memos, special cases, and exceptions pertinent to each discharge.

Retrieving Information From the Data Base
To retrieve information from the pilot system's data base, the user must tell the system exactly what part of the data base he* is interested in reviewing.

*The male pronoun is used throughout this report to refer to both genders.
Part I—Effluent Limitations and Monitoring Requirements
A. Effluent Limitations and Monitoring Requirements
1. Period of Authorization for Discharge
2. Effluent Limitations
3. Sampling Point, Type, and Frequency
4. Effluent-Influent Qualities Relationship To Be Satisfied

B. Schedule of Compliance

C. Monitoring and Reporting
1. Representative Sampling
2. Reporting
3. Test Procedures
4. Reporting Results
5. Additional Monitoring by Permittee
6. Records Retention
7. Location of Sampling Points
8. Flow Determination
9. Substitution for BOD Tests

Part II
A. Management Requirements (when the following occur)
1. Change in Discharge
2. N. i-compliance
3. Facilities Operation
4. Adverse Impact
5. Bypassing
6. Removed Substances
7. Power Failure

B. Responsibilities
1. Right of Entry
2. Transfer of Ownership or Control
3. Availability of Reports
4. Permit Notification
5. Toxic Pollutants
6. Civil and Criminal Liability
7. Oil and Hazardous Substances Liability
8. State Laws
9. Property Rights
10. Seawater

Part III—Other Requirements
A. Definitions
1. Discharge Limitations and Monitoring Requirements
a. Flow
b. Concentration and Any Value Other Than Fecal Coliform Bacteria, Flow, or Loading
c. Fecal Coliform
d. Loading
e. Other Definitions

2. Discharge Sources
a. Potable and Industrial Water Treatment Facilities
b. Cooling Systems
c. Boilers
d. Vehicle and Equipment Cleaning Facilities
e. Painting and Corrosion Control Facilities
f. Petroleum Storage and Handling Areas
g. Vehicle and Equipment Maintenance Facilities
h. Battery Rework Facilities
i. Photographic Laboratories
j. Fire Fighter Training Areas

B. Additional Permitted Discharges
1. Applicability
2. General Conditions
3. Interim Discharge Limitations and Monitoring Requirements
4. Final Discharge Limitations and Monitoring Requirements
a. General Requirements
b. Special Conditions
   (1) Discharge Less Than 2000 gpd
   (2) Discharges to Storm Sewers
c. Discharge Limitations and Monitoring Requirements
   (1) Potable and Industrial Water Treatment Facilities Including Filters, Softeners, and Demineralizers.
   (2) Cooling Water, Cooling Tower Blowdown, and Cleaning Wastes
   (3) Boiler Blowdown
   (4) Vehicle Equipment Cleaning Facilities
   (5) Painting and Corrosion Control Facilities
   (6) Vehicle and Equipment Maintenance and Storage
   (7) Petroleum, Oil, and Lubricant (POL) Storage Handling Areas
   (8) Battery Maintenance
   (9) Photographic Laboratories
   (10) Fire Fighter Training Areas
   (11) Swimming Pools
   (12) Storm Sewers

5. Schedule of Compliance Requirements for Adjudicatory Hearing Request

Figure 1. Topical listing from an NPDES permit for USEPA Region IV.
DISCHARGE LIMITS

<table>
<thead>
<tr>
<th>EFFlUENT CHARACTERISTICS</th>
<th>Concentration in mg/l</th>
<th>kg/day (lb/day)</th>
<th>Minimum Monitoring Requirements</th>
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<td>Monthly Average</td>
<td>Weekly Average</td>
<td>Monthly Average</td>
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<tr>
<td>Biochemical oxygen demand (5-day)</td>
<td>30*</td>
<td>45</td>
<td>70 (150)</td>
</tr>
<tr>
<td>Suspended solids</td>
<td>30*</td>
<td>45</td>
<td>80 (180)</td>
</tr>
<tr>
<td>pH (standard units)</td>
<td>6.0-9.0</td>
<td>(Not to be averaged)</td>
<td>Twice weekly</td>
</tr>
<tr>
<td>Fecal coliform (organisms/100 ml)</td>
<td>200</td>
<td>400</td>
<td>—</td>
</tr>
<tr>
<td>Flow (mgd)</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

*The arithmetic mean of the values for effluent samples measuring biochemical oxygen demand (5-day) and suspended solids collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (minimum: 85 percent removal).

Figure 2. Discharge limits and monitoring requirements.

To do this, the user selects commands that operate on valid keywords. Appendix A lists the pilot system’s valid keywords and keyword categories. The system’s selection commands are:

find (keyword)
and (keyword)
or (keyword)
except (keyword)

The “find” command selects from the total data base only those data records that contain the specified keyword. The “and,” “or,” and “except” commands work according to their logical meaning to enlarge or further limit the size of the data base section focused on by the selection command. This means the user can ask the system to retrieve a specific permit, retrieve and group all permits in a user-specified place, or retrieve and group all permits regulating one or more specified pollutants. For example, the command

find oil and grease

selects those permits that regulate the discharge of oil and grease. If the user then uses the command “and” with the keyword “ammonia-n”

and ammonia-n

the system limits the set of retrieved permits to those that regulate both oil and grease and ammonia-n. The series of commands

find oil and grease
or ammonia
and Region 4

tells the system to retrieve those permits that regulate discharges in USEPA Region IV which limit either oil and grease or ammonia-n. Such a subset of retrieved permits is called a “current list” by the system.

Assigned-Value Keywords

The user can control system retrieval even further by using special keywords called “assigned-value” keywords. These keywords are used to find the compliance status of each permit (based on the most recent self-monitoring report contained in the database). They are called assigned-value keywords because their definition (value) can change every time the database is updated. Appendix A lists the system’s assigned-value keywords and their meanings. Assigned-value keywords let the user focus on only those discharges having some kind of problem meeting their permit requirements.
Effluent and Event Category Keywords

When a selection command having a keyword value from the "effluent" or "event" categories is used, the pilot system will ask the user to give it more information. For example:

1. When given a keyword from the effluent category, the system will ask "noncompliance?" If the user answers "yes," the system will list point sources for which the effluent has exceeded its permit limits. If the user answers "no," the system will list discharges for which the specified effluent constituent is being monitored as a permit requirement, regardless of compliance status.

2. When given a selection command having a keyword from the event category, the system will ask "noncompliance?" If the user answers "yes," the system will list only those events which are in noncompliance. If the user answers "no," the system will list any discharge for which the permit contains the specified event. The user also will be asked to give start and end dates; this allows the system to search for and retrieve an event which occurred within a given time span.

Restore Command

The "restore" command revokes the last selection command given. This command is used to correct input mistakes.

Appendix B is a syntax guide for the pilot system's commands. It also gives detailed descriptions of the selection commands.

Displaying Data

After the selection commands have isolated that part of the data base which the user wants to see, he uses the list and shows commands to print and examine that information. The "list" command is used with a keyword category name or names. It displays the keyword values associated with the permits in the part of the data base chosen by the selection commands (i.e., the current list). The list command cannot be used to display information from the events or assigned-value keyword categories. (Appendix C lists categories that may be displayed.)

For example, if the user inputs

```
find noncompliance
list installation, descriptor, effluent
```

the system would list those installations in noncompliance with their NPDES permit, the type of discharge (e.g., washrack, cooling tower, or sewage lagoon), and the pollutant(s) exceeding the permitted level.

The "show" command, when used alone, displays the record number, permit number, source number, and facility name of each point source on the system's current list. When the show command is used with one or more of the options described below, data associated with that option is printed out. The options are:

1. keys: used to display the keyword values associated with each point source in the current list.

2. events: used to display the event schedules for each point source in the current list.

3. limits: used to display the effluent limits for each point source in the current list.

4. reports: used to display the most current set of monitoring reports submitted for the point sources in the current list.

5. notes: used to display the notes sections for each point source in the current list.

The syntax guide in Appendix B further defines the use of display commands.

Manipulating Data

At present, the pilot system has three commands for extracting and combining data base information.

The "summary" command creates a file of NPDES permit conditions which includes permit number, expiration date, discharge description, effluent limits, and sampling requirements. The summary command can be invoked on the whole data base or on that part of the data base isolated by the selection commands.

The "find report due" command is used to find out when the next self-monitoring reports are due. The system asks the user for the start and end dates of interest, then retrieves those permits that have a report due within that period. The list and show commands then can be used to generate further information.

The "letter" command creates a file of all permit violations for all point sources in the system's current
list. Permit violations include non-compliance with effluent limits, missing or late reports, late events, or missing data.

Appendix D contains samples of the information generated by the summary, find report due, and letter commands.

Other Features
The pilot system has an interactive data input subroutine which lets installations enter self-monitoring report data into the data base. This subroutine can be invoked by narrowing the current list to one point source, and typing the command "reports." The subroutine then will ask the user for all of the information about that point source, and automatically complete the self-monitoring report.

The "save file" and "restore file" commands can be used when the same set of permits has to be retrieved more than once.

4 CONCLUSION

This report has described a pilot data base and a data management system developed for Army NPDES permits and self-monitoring reports. This system allows a user to easily retrieve, aggregate, manipulate, and analyze effluent characteristics and other technical information contained in NPDES records.
APPENDIX A:
KEYWORD VALUES

Part 1:
Category name: region
Keyword values:
  - region 2
  - region 3
  - region 4
  - region 5
  - region 6
  - region 7

Part 2:
Category name: state
Keyword values:
  - alabama
  - arkansas
  - florida
  - georgia
  - indiana
  - kansas
  - kentucky
  - mississippi
  - missouri
  - new jersey
  - ohio
  - oklahoma
  - pennsylvania
  - south carolina
  - texas
  - virginia

Part 3:
Category name: county
Keyword values:
  - adams
  - belmont
  - calhoun
  - calhoun
  - caroline
  - chattachoochee
  - comanche
  - covington
  - dale
  - essex
  - etowah
  - fairfax
  - floyd

forrest
henry
hinds
jefferson
kenton
lauderdale county
lee
leon
lincoln lumpkin
madison
n county
nelson
nottoway
palo pinto
pike
pulaski
richland
richmond
sebastian
tift
waynesboro

Part 4:
Category name: city
Keyword values:
  - abbeyville
  - akron
  - anniston
  - bardstown
  - bellaire
  - blackstone
  - bowling green
  - brookhaven
  - bryan
  - cadiz
  - canton
  - clarksdale
delaware
  - fort thomas
  - freemont
  - gadsden
  - hattiesburg
  - huntsville
  - jackson
  - kenton
  - kings mills
  - louisville
  - mahwah
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**Part 5:**

**Category name:** permit

**Keyword values:**

- a10002178
- a10003808
- a10025336
- a10026751
- a10026760
- a10026778
- a10027073
- a10027111
- a10027120
- ar0034452
- fl0036099
- ga0000973
- ga0006484
- ga0027316
- ga0027383
- ga0027405
- in0033456
- ks0002615
- ky0002917
- ky0042676
- ky0042684
- ky0042692
- ky0042706
- mo0029742
- mo0029751
- mo0029769
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**Part 6:**

**Category name:** source

**Keyword values:**

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Part 7:
Category name: descriptor
Keyword values:
- air conditioning cooling tower blowdown
- boiler blowdown
- cooling tower
- domestic wastewater treatment plants
- firefighter training area
- material storage run-off
- mobile water treatment plant
- n descriptor
- pot storage area
- sewage lagoon
- swimming pool backwash
- washrack
- water treatment plant backwash

Part 8:
Category name: watershed
Keyword values:
- beechfork tributary
- big miami river
- big niney river
- black lake drainage canal
- bogue chitto river
- branch of mill creek
- brick kiln creek
- brooking mill creek
- butler creek
- cache creek
- cane creek
- cane creek tributary
- cave creek
- chattahoochee river
- choctahatchee river
- clay bank creek
- cocoa river tributary
- crosstown creek
- deer creek
- delaware river
- dilly branch
- dothard creek
- dry creek
- east cache creek
- etowah river
- fall creek
- gill creek
- harrand creek
- hipps folly
- horseley creek
- hurricane creek
- indian creek
- james river
- jones branch
- killbuck river
- killbuck river via storm sewer
- king's creek tributary
- lake elmer thomas
- lake of the ozarks
- leaf river
- letort spring
- little miami river
- little vache grasse creek
- maracossic creek
- maumee river via storm drain
- mill creek
- n watershed
- new river
- ohio river
- okabibee creek
- oleatangy river via storm drain
- otter creek
- passaic river
- pearl river tributary
- possum kingdom lake
- potomac river
- quarry creek ramapo river
- rappahannock river
- reo river
- roubidoux creek
- roubidoux creek
- brooking mill creek
- butler creek
- cache creek
- cane creek
- cane creek tributary
- cave creek
- chattahoochee river
- choctahatchee river
- clay bank creek
- cocoa river tributary
- crosstown creek
- deer creek
- delaware river
- dilly branch
- dothard creek
- dry creek
- east cache creek
- etowah river
walnut creek
west branch ware creek
wolf creek tributary

Part 9:
Category name: facility
Keyword values:
abbeville usar center
anniston usar center
belmont county usar memorial center
carlisle barracks
clarksdale usar center
conway usar center
delaware memorial usar centers
fort a.p. hill
fort belvoir
fort benjamin harrison
fort benning
fort chaffee
fort dix
fort eustis
fort gordon
fort jackson
fort knox
fort leavenworth
fort leonard wood
fort mcclellan
fort monroe
fort pickett
fort rucker
fort sill
fort thomas usar center
franklin lakes family housing complex
gadsden usar center
harold b. durham jr. usar center
hastings usar center
hattiesburg usar center
hayes usar center
huisman usar center
huntville usar center
jackson usar center no. 1
jackson usar center no. 2
kings mill training facility (usar)
knight usar center
livingston family housing complex
louisville no. 1 usar center
louisville no. 2 usar center
meridian usar center
natchez usar center
opp usar center
outcalt usar center
parrott usar center
pedricktown support center
pennington usar center
possum lake usar center
rome usar center
scouten usar center
talmadge whedden usar center
troy memorial usable center
troy usable center
tupelo usable center
ward memorial usable center
wayneboro usable center
woodford usable center

Part 10:
Category name: installation
Keyword values:
carlisle barracks
fort a.p. hill
fort belvoir
fort benjamin harrison
fort benning
fort dix
fort eustis
fort gordon
fort jackson
fort knox
fort leavenworth
fort leonard wood
fort mcclellan
fort monroe
fort pickett
fort rucker
fort sill

Part 11:
Category name: command
Keyword values:
tradoc

Part 12:
Category name: class
Keyword values:
major
minor

Part 13:
Category name: instal_type
Keyword values:
active
reserve
Part 14:
Category name: effluent
Keyword values:
- ammonia-n
- bod5-%removal
- bod5
- chromium
- cod
- copper
- dissolved oxygen
- fecal coliform
- flow
- iron
- manganese
- oil and grease
- ph
- phosphorus
- residual chlorine
- settleable solids
- ss
- temperature
- total n
- tss-%removal
- tss
- unoxidized n
- zinc

Part 15:
Category name: event
Keyword values:
- approval of funding
- attain final effluent limitations
- attain operational level
- attainment of final effluent limitations
- attainment of operational level
- award of contract
- begin construction
- commence construction
- commencement of construction for upgrading facilities
- commencement of construction for upgrading facility
- commencement of construction
- complete construction for upgrading facilities
- complete construction of the required facilities to achieve compliance
- complete construction of upgraded facility
- complete final plans and specifications
- complete operation and maintenance program
- completion of construction by completion of final plans for achieving compliance
- completion of plans
- completion of preliminary plans
- construction begins
- construction complete
- effective data
- expiration date for interim limitations
- expiration date
- expiration of interim effluent limitations
- final design
- final funding
- final plans completed
- first discharge monitoring report due
- operational by
- progress report on preliminary plans
- reapply for permit

Meanings:
- all: every record in the database.
- event exceptions: records whose event schedules are modified by further conditions explained in the notes section of the database.
- late events: records whose event schedules contain late events.
- effluent exceptions: records whose effluent limits are modified by conditions explained in the notes sections of the database.
report of construction progress
report of funding progress
report of progress for achieving compliance
report of progress
report on construction progress by
submit a report of progress on construction of
facilities

submit final engineering report
submit listing of existing sources
submit preliminary engineering report
submit progress report to regional administrator
submit schedule of actions to achieve compliance

APPENDIX B:
SYNTAX GUIDE

find <keyword value>
or <keyword value>
and <keyword value>
except <keyword value>
list <category name>
show <option name>
save <filename>
restore <filename>
help <command name>
letter <filename>
summary <filename>
reports
quit

APPENDIX C:
LIST COMMAND CATEGORIES

The list command operates on the following keyword categories:

installation
state
county
city
permit
source
descriptor
watershed
facility
command
effluent
APPENDIX D: SAMPLE OUTPUT

Sample Output: Final report due command

What next?
find report due
enter starting date: 82/01/01
enter ending date: 82/01/31
94 found
What next?
and noncompliance
25 found
22 in current list
What next?
list installation permit
fort a.p. hill (2)
permit: va0031071
fort belvoir (2)
permit: va0025186
fort benjamin harrison (1)
permit: in0033456
fort benning (3)
permit: ga0000973
fort dix (1)
permit: nj0004855
fort knox (1)
permit: ky0002917
fort mcclellan (3)
permit: ms0040576
fort monroe (1)
permit: va0005924
fort pickett (1)
permit: va0245194
fort rucker (5)
permit: al0002178
fort sill (2)
permit: ar0034452

Sample Output: letter command
tupelo usar center (fort mcclellan)
ms04057001
For the report covering 79/04/01 to 79/07/01

oil and grease
reported average concentration 17 mg/L;
requirement is 10
reported maximum concentration 17 mg/L;
requirement is 15
ph:
reported minimum concentration 5.6 stunit;
requirement is 6.0
anniston usar center (fort mcclellan)
a0027120 001
For the report covering 79/04/01 to 79/07/01
tas:
reported average concentration 57 mg/L;
requirement is 25
reported maximum concentration 57 mg/L;
requirement is 40
oil and grease
reported average concentration 105 mg/L;
requirement is 10
reported maximum concentration 105 mg/L;
requirement is 15
fort rucker (fort rucker)
m0040495 001
jackson usar center no. 2 (fort rucker)
m0040461 There are no self-monitoring reports on file.
For the report covering 79/4/1/ to 79/6/30
oil and grease
reported average concentration 85 mg/L;
requirement is 10
reported maximum concentration 85 mg/L;
requirement is 15
tas:
reported average concentration 364 mg/L;
requirement is 25
reported maximum concentration 364 mg/L;
requirement is 40
ph:
reported minimum concentration 5.6 stunit;
requirement is 6.0
EM Team Distribution

Chief of Engineers
ATTN: DAEN-MPO-R
ATTN: DAEN-MPR
ATTN: DAEN-MPF-A

US Army Engineer District
New York 10007
ATTN: Chief, NAME-E
ATTN: Chief, Design Br.
ATTN: Chief, Engr Div

Pittsburgh 15222
ATTN: Chief, NAME-E

Philadelphia 19106
ATTN: Chief, ENPM-E

Baltimore 21203
ATTN: Chief, Engr Div

Norfolk 23510
ATTN: Chief, NAME-E

Huntington 25701
ATTN: Chief, ORNE-D-P

Wilmington 28401
ATTN: Chief, NAME-E

Charleston 29402
ATTN: Chief, NAME-E

Savannah 31402
ATTN: Chief, NAME-E

Jacksonville 32232
ATTN: Engr, Res. Br.

Nashville 37202
ATTN: Chief, ORNE-D-P

Memphis 38103
ATTN: Chief, NAME-E

Vicksburg 39180
ATTN: Chief, NAME-E

Louisville 40201
ATTN: Chief, Engr Div

St. Louis 63101
ATTN: Chief, ED-9

Kansan City 64106
ATTN: Chief, NAME-E

Omaha 68102
ATTN: Chief, Engr Div

Little Rock 72203
ATTN: Chief, Engr Div

Tulsa 74102
ATTN: Chief, Engr Div

Fort Worth 76102
ATTN: Chief, NAME-E

Galveston 77550
ATTN: Chief, NAME-E

Albuquerque 87103
ATTN: Chief, NAME-E

Los Angeles 90053
ATTN: Chief, NAME-E

San Francisco 94105
ATTN: Chief, NAME-E

Sacramento 95814
ATTN: Chief, NAME-E

Far East 96301
ATTN: Chief, Engr Div

Seattle 98124
ATTN: Chief, NAME-E

Hillsdale 92962
ATTN: Chief, Engr Div

Alaska 99901
ATTN: Chief, NAME-E

US Army Engineer Division
New England 02104
ATTN: Laboratory

South Atlantic 30303
ATTN: Chief, NAME-E

US Army Engineer Division
Huntville 35807
ATTN: Chief, NAME-E

Lower Mississippi Valley 39180
ATTN: Chief, NAME-E

Ohio River 45201
ATTN: Chief, NAME-E

North Central 60605
ATTN: Chief, NAME-E

South Pacific 94111
ATTN: Laboratory

Pacific Ocean 96858
ATTN: Chief, NAME-E

North Pacific 97208
ATTN: Chief, NAME-E

5th US Army 78234
ATTN: Chief, NAME-E

6th US Army 94129
ATTN: Chief, NAME-E

7th US Army 09407
ATTN: Chief, NAME-E

USA ARMYCOM
ATTN: ORDIN-LCA-DK

West Point, NY 10996
ATTN: Dept of Mechanics

Library

Fort Belvoir, VA 22060
ATTN: Learning Resources Center

American British Liaison Officer (5)

Library

Ford, Clayton Canal Zone 34004
ATTN: NAME-E

Library

Past, Leavenworth, KS 66027
ATTN: NAME-E

Library

Fort, Lee, VA 23001
ATTN: NAME-E

Library

Fort, McPherson, GA 30330
ATTN: NAME-E

Library

Fort, Monroe, VA 23651
ATTN: NAME-E

Library

Naval Facilities Engr Command 22332
ATTN: NAME-E

Library

US Naval Oceanographic Office 39622
ATTN: NAME-E

Library

Fort Huessen, CA 93043
ATTN: NAME-E

Library

Kirtland AFB, NM 87117
ATTN: NAME-E

Library

Little Rock AFB 72076
ATTN: NAME-E

Library

Patrick AFB, FL 32925
ATTN: NAME-E

Library

AF/HDOT

MASH ODC 20330

AF/HDOT

MASH ODC 20330
Vomalor, Manette

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