

VERSION DESCRIPTION DOCUMENT FOR THE NASA EQUIPMENT MANAGEMENT SYSTEM (NEMS)

Release 4.8.2

NASA-NEMS-VDD-13

PrISMS Contract

June 30, 2001



National Aeronautics and
Space Administration

George C. Marshall Space Flight Center
Huntsville, AL 35812

**VERSION DESCRIPTION DOCUMENT FOR THE
NASA EQUIPMENT MANAGEMENT SYSTEM (NEMS)
RELEASE 4.8.2**

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GEORGE C. MARSHALL SPACE FLIGHT CENTER
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1. INTRODUCTION

This Version Description Document (VDD) describes the changes and installation procedures for this release of the NASA Equipment Management System (NEMS). This section identifies the release, describes its purpose, defines its scope, and identifies its contact points.

1.1 IDENTIFICATION OF THE RELEASE

This software release is identified as NEMS, Release 4.8.2 and has an effective release date of June 30, 2001.

1.2 PURPOSE OF THE RELEASE

This release implements modifications for the following Change Control Requests (CCRs):

<u>CCR</u>	<u>Title</u>
276	Web front end for user information

This release implements modifications necessitated by the following Discrepancy Reports (DRs):

<u>CCR</u>	<u>Title</u>
none	none

1.3 SCOPE

This VDD provides the functional and technical user of NEMS with information regarding the content, status, and structure of Release 4.8.2, including the following:

- Changes implemented since Release 4.8.1;
- Validation procedures to ensure the reliability of release changes;
- References to other documentation affected by this release;
- Detailed software installation instructions.

No waivers are associated with this release.

1.4 CONTACT POINTS

Sustaining Engineering for NEMS is provided through the Consolidation Center (CC) located at Marshall Space Flight Center (MSFC). Questions regarding the functional and/or the technical aspects as well as the installation of this release should be directed to:

The NACC Technical Services Center (Use following Key Words: SESAAS & NEMS)

Telephone: (256) 544-6673

Email: neal.cantrell@msfc.nasa.gov

FAX: (256) 544-1836

2. FUNCTIONAL INFORMATION

This section includes details regarding functional changes, functional interfaces, critical issues, affected documents, and application system administration.

2.1 FUNCTIONAL CHANGES

Please refer to Appendix C, Functional Change Validation Procedures, for a description of all functional changes related to this release. Appendix D, Installation Instructions, describes all Software PREDICT changes related to this release.

2.2 FUNCTIONAL INTERFACES

This section is not applicable for this release.

2.3 CRITICAL ISSUES

This section is not applicable for this release.

2.4 AFFECTED DOCUMENTS

Operations Guide for the NASA Equipment Management System (NEMS).

User's Guide for the NASA Equipment Management System (NEMS) Web Front End.

2.5 APPLICATION SYSTEM ADMINISTRATION

There are no application system administration changes associated with this release.

3. TECHNICAL INFORMATION

This section includes details regarding technical system interfaces, data dictionary changes, software object changes, and database administration activities.

3.1 TECHNICAL SYSTEM INTERFACES

This section is not applicable with this release.

3.2 DATA DICTIONARY CHANGES

Refer to Appendix D, Section 4.0, for the data dictionary changes in this release.

3.3 SOFTWARE OBJECT CHANGES

Modules affected by this release are included in Appendix D, Section 2.2.

3.4 DATABASE ADMINISTRATION

This section describes the database administration activities for installation of this release.

3.4.1 Release Dataset Names

Refer to Appendix D, Introduction section, for the release dataset names.

3.4.2 Inventory of Objects

Refer to Appendix D, Section 2.1, for an inventory of Natural object types.

3.4.3 Storage Considerations

The changes represented by this release should not affect storage requirements.

3.4.4 Installation Procedures

Refer to Appendix D, Installation Instructions for NEMS Software Release 4.8.1 for detailed software installation procedures.

3.5 OPERATIONAL PREPARATION

Refer to the procedure described in Appendix D for assistance in preparing for proper installation and operational use of this release.

4. KNOWN AND OPEN PROBLEMS

There are no known or open problems related to this release.

APPENDIX A - ABBREVIATIONS AND ACRONYMS

CC	Consolidation Center
CCR	Change Control Request
CSC	Computer Sciences Corporation
DBA	Database Administrator
DR	Discrepancy Report
FAX	Electronic Facsimile Transmission
IRM	Information Resources Management
JCL	Job Control Language
MSFC	Marshall Space Flight Center
NACC	NASA Automated Data Processing (ADP) Consolidation Center
NASA	National Aeronautics and Space Administration
NEMS	NASA Equipment Management System
NPDMS	NASA Property Disposal Management System
SESAAS	Sustaining Engineering Support for Agencywide Administrative Systems
VDD	Version Description Document

APPENDIX B - GLOSSARY

Database Administration

Responsibility for maintaining the physical database environment.

Implementation

The process by which a NASA site installs a NASA software release and places it into operational use.

Operational Preparation

Preparation by a NASA site for installation and use of a NASA application release.

System Administration

Responsibility for administrative functions such as application security and table data maintenance associated with a NASA application.

APPENDIX C - FUNCTIONAL CHANGE VALIDATION PROCEDURES

Index of validation procedures for changes in this release:

Section	CCR	Title
----------------	------------	--------------

1.0	276	Web front end for user information
-----	-----	------------------------------------

Details for the validation procedures follow:

1.0 CCR 276 – Web front end for user information.

Currently there is not a way for users of NEMS equipment to make location changes or transfer their equipment to another user without having a property custodian make the changes. It would be easier if the user could access a Web front page to make these changes.

Description of Change

Code was changed to allow a user to make changes from a Web page.

Functional Impact

There is no functional impact as a result of this CCR.

Validation Procedures

Mainframe

- Add a NEMS Web User ID (Table S14) (Option 13 on the Maintenance Selection Menu).
Expected Results: A new Web User ID will be added successfully.
- Change an existing NEMS Web User ID (Table S14) (Option 13 on the Maintenance Selection Menu).
Expected Results: A Web User ID will be changed successfully.
- Delete a NEMS Web User ID (Table S14) (Option 13 on the Maintenance Selection Menu).
Expected Results: The Web User ID will be deleted successfully.
- Display the S14 – Web User ID table from the Adhoc Inquiries Menu.
Expected Results: The Web User ID table will be displayed.

Web

NOTE 1 – This section cannot currently be tested. You will be able to test this section when the server has been set up.

NOTE 2 – You must have a valid Web User ID to perform this validation.

- Access the NEMS Web Front End URL for your center.
Expected Results: You should see a warning screen followed by a screen to enter your Web User ID and Password.
- Enter your Web User ID and Password on the Logon Screen.
Expected Results: A screen will be displayed with 4 options for the user to choose from.
- Select the **View List of Equipment Assigned to You** Option
Expected Results: A list of equipment that is assigned to you is displayed.
 - Select the **List Buildings** button
Expected Results: A List of the Buildings from NEMS table 102 will be displayed.
 - Select a Building from the list.
Expected Results: The Building will be passed back the List of equipment assigned to you screen.

- Select the **Update This Item** button.
Expected Results: The menu screen is displayed with a message informing you that the ECN was changed.
- Select the **View List of Equipment Assigned to You** Option.
Expected Results: A list of equipment that is assigned to you is displayed.
 - Select the **List Users** Button
Expected Results: A List of the Web UserIDs will be displayed.
 - Select a User from the list.
Expected Results: The UserID will be passed back the List of equipment assigned to you screen.
 - Select the **Update This Item** button.
Expected Results: The menu screen is displayed with a message informing you that the transaction was successfully completed and that an email message has been sent to the user the equipment is being transferred to.
- Select the **Download List of Equipment Assigned to You** Option
Expected Results: Equipment will be placed into a spreadsheet.
- Select the **View Incoming Transfer(s) Awaiting Approval** Option
Expected Results: A list of equipment that is awaiting your approval for transfer is displayed.
 - Select the **Approve** button.
Expected Results: The menu screen is displayed with a message informing you that the ECN was changed.
- Select the **View Incoming Transfer(s) Awaiting Approval** Option
Expected Results: A list of equipment that is awaiting your approval for transfer is displayed.
 - Select the **Disapprove** button.
Expected Results: A window is displayed requesting a reason for disapproval of the transfer.
 - Enter the reason for disapproval.
Expected Results: The menu screen is displayed with a message informing you that an email message has been sent to the user that was requesting the transfer of the equipment.
- Select the **View Outgoing Transfer(s) Awaiting Approval** Option
Expected Results: A list of equipment that you have transferred to another user is displayed.

<u>MODULE ID</u>	<u>MODULE NAME</u>	<u>TYPE</u>
ADHS14P1	Web UserID Table Adhoc List	Program
ETB100L0		LDA
ETB100L1		LDA
ETB100N1	Natural Buffer Pool Flusher	Subpgm
ETB100P1	EntireX Broker Application Server	Program
ETB100P2	Control Utility (EntireX Broker)	Program

MNTWIDP1	Web UserID Table Update	Program
MNT000P1	Maintenance Scheduling Menu	Program
NELOGON1	Check Logon UserID and Password for Web input	Subpgm
NEWDISN1	Disapproval Assignment to Your UserID	Subpgm
NEWLBUN1	List all Buildings	Subpgm
NEWLEAN1	List Equipment Awaiting Approval	Subpgm
NEWLEUN1	List Equipment Assigned to a User No	Subpgm
NEWLOAN1	List Equipment Awaiting Approval by Others	Subpgm
NEWLUSN1	List all UserIDs	Subpgm
NEWXFRN1	Change to a new User (Web User Number Change)	Subpgm
TBL000P1	Table File Update Menu	Program
TRNW29N1	Change Transaction 29 (Web Equipment Location Change)	Subpgm
TRNW31N1	Change Transaction 31 (Web User Number Change)	Subpgm
UPTBLS14	Update Table – S14	Program
UPTBS02W	Update Table – S02	Program

**APPENDIX D - INSTALLATION INSTRUCTIONS AND CHECKLIST FOR NEMS
SOFTWARE RELEASE 4.8.2**

Introduction

Release information:

System Name: NEMS
Release Number: 4.8.2
Release Date: June 30, 2001
Effective Date: Immediately

In case of installation problems, contact the NASA Automated Data Processing (ADP) Consolidation Center (NACC) Technical Services Center (Use following Key Words: SESAAS & NEMS)

Telephone: (256) 544-6673
Email: neal.cantrell@msfc.nasa.gov
FAX: (256) 544-1836

The following datasets are located on the transient storage DASD volumes under the following data sets names:

xxMOV.NEMS.PROD.R482.R0601.DOC
xxMOV.NEMS.PROD.R482.R0601.PRD
xxMOV.NEMS.PROD.R482.R0601.SRC

Where "xx" is replaced by the appropriate NASA Center designation.

DF - DFRC
GS - GSFC
HQ - HQ
J5 - JSC
KS - KSC
LA - LaRC
LE - GRC (Glenn)
MS - MSFC
SS - SSC

Installation Sequence

The sequence in which the installation of this release should occur is provided in the following list. A checklist is provided in section 9.0 to assist in tracking the installation of this release.

- 1.0 Back Up Existing Data
- 2.0 Copy Source
- 3.0 Pre-Predict Data Conversion
- 4.0 Install Predict
- 5.0 Catalog Source Code
- 6.0 Post-Predict Data Conversion
- 7.0 Perform Release-Specific Procedures
- 8.0 Local JCL Mods
- 9.0 Installation Checklist

1.0 Back Up Existing Data

It is advisable to back up all NEMS files as a precautionary measure prior to installation.

2.0 Copy Source

2.1 Copy Source Code

- A. Source code is installed in three separate libraries. Source code for programs modified in this release version were unloaded in the NATUNLD format, these programs all have specific destination libraries as shown below. All the NEMS programs have a destination of NEMS; NEMSINV programs have a destination of NEMSINV and NEMSPCM programs have a destination of NEMSPCM.

1. Load the NEMS source library from the dataset
xxMOV.NEMS.PROD.R482.R0601.SRC.

The source programs were unloaded using the Natural utility NATUNLD. The NEMS programs:

- | | |
|--------------|---|
| 1. ADHS14P1 | Web UserID Table Adhoc List |
| 2. ETB100L0 | |
| 3. ETB100L1 | |
| 4. ETB100N1 | Natural Buffer Pool Flusher |
| 5. ETB100P1 | EntireX Broker Application Server |
| 6. ETB100P2 | Control Utility (EntireX Broker) |
| 7. MNTWIDP1 | Web UserID Table Update |
| 8. MNT000P1 | Maintenance Scheduling Menu |
| 9. NELOGON1 | Check Logon UserID and Password for Web input |
| 10. NEMS | NEMS Start Program |
| 11. NEWDISN1 | Disapproval Assignment to Your UserID |

12. NEWLBUN1	List all Buildings
13. NEWLEAN1	List Equipment Awaiting Approval
14. NEWLEUN1	List Equipment Assigned to a User No
15. NEWLOAN1	List Equipment Awaiting Approval by Others
16. NEWLUSN1	List all UserIDs
17. NEWXFRN1	Change to a new User (Web User Number Change)
18. TBL000P1	Table File Update Menu
19. TRNW29N1	Change Transaction 29 (Web Equipment Location Change)
20. TRNW31N1	Change Transaction 31 (Web User Number Change)
21. UPTBLS14	Update Table – S14
22. UPTBS02W	Update Table – S02

will be loaded to the application library NEMS, replacing any existing programs of the same name.

2. Load the NEMSINV source library from the dataset:
xxMOV.NEMS.PROD.R482.R0601.SRC.

The source programs were unloaded using the Natural utility NATUNLD. The NEMSINV programs:

1. None

will be loaded to the application library NEMSINV, replacing any existing programs of the same name.

3. Load NEMSPCM source library from the dataset:
xxMOV.NEMS.PROD.R482.R0601.SRC.

The source programs were unloaded using the Natural utility NATUNLD. The NEMSPCM Programs:

1. None

will be loaded to the application library NEMSPCM, replacing any existing programs of the same name.

The source module counts included in this release are listed below:

Natural Source Modules by Type	Count
GLOBAL DATA AREA	0
LOCAL/PARAM DATA AREA	2
MAPS	0
HELP ROUTINES	0
SUBROUTINES	0
SUBPROGRAMS	11
PROGRAMS	9
COPYCODE	0
TEXT	0
PROCESS	0
MISCELLANEOUS OBJECTS	0
Total:	22

2.2 List of Source Code Modifications

The following are the modules added, modified, and deleted.

Added Modules:

1. ADHS14P1 Program
2. ETB100L0 LDA
3. ETB100L1 LDA
4. ETB100N1 Subprogram
5. ETB100P1 Program
6. ETB100P2 Program
7. MNTWIDP1 Program
8. NELOGON1 Subprogram
9. NEWDISN1 Subprogram
10. NEWLBUN1 Subprogram
11. NEWLEAN1 Subprogram
12. NEWLEUN1 Subprogram
13. NEWLOAN1 Subprogram
14. NEWLUSN1 Subprogram
15. NEWXFRN1 Subprogram
16. TRNW29N1 Subprogram
17. TRNW31N1 Subprogram
18. UPTBLS14 Program
19. UPTBS02W Program

Modified Modules:

1. MNT000P1 Program
2. NEMS Program
3. TBL000P1 Program

Deleted Modules:

None

3.0 Pre-Predict Data Conversion

Not applicable with this release.

4.0 Install Predict

4.1 Data Dictionary Changes

This release will include the new enhancements for Version 4.8.2. Details for changes in this release can be found under Section 4.1.3 Physical File Changes or by performing Predict reporting on the keyword NEMS-4.8.2.

Use SYSDICBE to load the PREDICT modifications from the dataset:
xxMOV.NEMS.PROD.R482.R0601.PRD.

The following NEMS DDMs should be generated after the PREDICT load is completed.

NEMS-EQUIPMENT
NEMS-TABLE
NEMS-WEB-PENDING

*** IMPORTANT ***

NEMS-WEB-PENDING must be added to NATURAL Security and UPDATE linked to the NEMS named library.

4.1.1 Inventory of Objects

The object types and inventory listed below represent a comprehensive count of the Predict object modules for this release.

PREDICT Objects by Type:

Keyword	-	1
ADABAS Files and Views	-	3

4.1.2 Storage Considerations

The NEMS-WEB-PENDING file will begin empty and records will be added in conjunction with daily business. While center business will determine it's ultimate size, the estimated number of records is less than 1000. The overall space allocation should be less that 1 cylinder each for associator and data storage.

4.1.3 Physical File Changes

Using ADALOD, Add the following new file with zero records:

```
NEMS-WEB PENDING                               File # 147
  Ty L Field ID                                F Length Occ D U DB S
  *_ - ----- * - ----- * * -- *
    1 PEND-ECN                                 A   7.0   D  AA F
    1 PEND-USER-NO                             A   6.0   D  AB N
    1 PEND-TO-USER-NO                          A   6.0   D  AC N
    1 PEND-TRANS-NO                            A   3.0   AD N
    1 PEND-ACTION-DATE                         N   8.0   AE N
  SP 1 PEND-TO-USER-NO-ECN                     A  13.0   D  AF N
  SP 1 PEND-USER-NO-ECN                       A  13.0   D  AG N
```

*** IMPORTANT ***

NEMS-WEB-PENDING must be added to NATURAL Security and UPDATE linked to the NEMS named library.

Invert the following Superdescriptor:

```
NEMS-EQUIPMENT                               File # 188
  Ty L Field ID                                F Length Occ D U DB S
  *_ - ----- * - ----- * * -- *
  SP 1 USER-NO-ECN                             A  13.0   D  SB N
```

Using the following commands:

```
//DDKARTE DD *
ADAINV INVERT FILE=188
ADAINV TEMPSIZE=??,SORTSIZE=??
ADAINV SUPDE='SB=AX(1,6),AA(1,7)'
/*
```

Add the following fields:

```
NEMS-TABLE                               File # 195
  Ty L Field ID                           F Length Occ  D U DB S
  * - - - - - * - - - - - * - - - - - * * - - *
    1 T-USER-NO                            A   6.0     D   AH N
    1 T-USER-EMAIL-ADRS                    A  50.0     AI N
    1 T-USER-PSWRD                         A   8.0     AJ N
```

Using the following commands:

```
//DDKARTE DD *
ADADBS NEWFIELD FILE=195
ADADBS FNDEF='01,AH,6,A,NU,DE'
ADADBS FNDEF='01,AI,50,A,NU'
ADADBS FNDEF='01,AJ,8,A,NU'
/*
```

Invert the following Superdescriptor:

```
NEMS-TABLE                               File # 195
  Ty L Field ID                           F Length Occ  D U DB S
  * - - - - - * - - - - - * - - - - - * * - - *
  SP 1 TBL-ID-USERID-INST-SUB-TBL-KEY     A  15.0     D   SC N
```

Using the following commands:

```
//DDKARTE DD *
ADAINV INVERT FILE=195
ADAINV TEMPSIZE=??,SORTSIZE=??
ADAINV SUPDE='SC=TA(1,3),UC(1,2),TA(4,13)'
/*
```

5.0 Catalog Source Code

The following modules should be changed before the CATALL is run. Modules NEMS, INV000P0, and MNUC00P1 need to be modified at each center to contain the correct contact name and phone number for each center. Replace the ?? in MSD008P1 and MSD008P5 with your installation number.

Run a batch job to catalog (CATALL) all modules in the NEMS library using the NASA Batch Standard Parameters replacing the existing PS and LS with the following values: PS=23 and LS=80. It is not necessary to catalog the Global Data Area (GDA).

You should receive 38 NATURAL 0303 errors for modules that begin with RPT* that concern page overflow and 32 programs will produce NATURAL 0002 errors. Program MSC005P1 will not compile. There should be a total of 71 NATURAL errors.

A list of errors found above and dispositions of these results follows:

- To compile the NATURAL 0303 errors correctly, run another CATALL for the RPT* modules in the NEMS library using the NASA Batch Standard Parameters. You should receive 12 NATURAL 0002 errors. Ignore the 0002 errors because these objects are dynamic.
- The 32 NATURAL 0002 errors from the first CATALL are to be IGNORED because these objects are dynamic.
- MSX001P1 will only compile for centers that use the NEMS-PRIOR-MONTH file.
- IGNORE any errors for program MSC005P1.

After all objects are compiled, the NEMS application will run under the NASA On-line Standard Parameters.

6.0 Post-Predict Data Conversion

Not applicable with this release.

7.0 Perform Release-Specific Procedures

7.1 Add Table S14

Run UPTBLS14 (online or batch) to add table S14 (Web User ID) as a valid table

7.2 Update Table S02

Run UPTBS02W (online or batch) to add messages to table S02.

8.0 Local JCL Mods

Not applicable with this release.

9.0 Installation Checklist

- 1.0 Back Up Existing Data
- 2.0 Copy Source
- 4.0 Install Predict
- 5.0 Catalog Source Code
- 7.0 Perform Release-Specific Procedures
- 7.1 Add Table S14
- 7.2 Update Table S02