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# **OPEN ITEM TRACKING SYSTEM REQUIREMENTS DEFINITION**

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# 1 INTRODUCTION

## 1.1 PURPOSE

The Open Item Tracking System (OITS) is an automated data base management system used to track the resolution status of regulatory, institutional, and technical uncertainties within the Division of High-Level Waste Management (HLWM) during the prelicensing and licensing phases of a high-level radioactive waste repository.

## 1.2 BACKGROUND

HLWM is investigating the use of automated information management systems for status and summary reports generation and tracking capabilities. These reports would contain information used to track resolution status and documents related to resolution of regulatory, institutional, and technical uncertainties identified in "Second Update of the Regulatory Strategy and Schedules for the High-Level Waste Repository Program" (SECY-91-225), and comments, questions, and objections identified in "NRC Staff Site Characterization Analysis of the Department of Energy's Site Characterization Plan, Yucca Mountain Site, Nevada" (NUREG-1347) and future documents associated with the licensing of a high-level radioactive waste repository. Until they are resolved, these items are all referred to as open items. HLWM, in conjunction with the Center for Nuclear Waste Regulatory Analyses (CNWRA or Center), is conducting a planning and requirements definition study to define the needs and evaluate approaches for applying advanced information management systems technology (advanced electronic hardware and software) to store and deliver information to a growing body of users. This data will be stored in the Program Architecture Data Base (PADB) which is under development at the CNWRA.

CNWRA is assisting HLWM with the OITS project by performing the following tasks:

- Requirements definition and analysis;
- System development;
- Prototype system demonstration and testing;
- Users guide preparation; and
- Staff training and system implementation.

## 1.3 CONCEPT

The staff identifies and documents open items as it conducts its work. Once identified, the staff will conduct appropriate activities to either directly resolve open items or review DOE's resolutions. OITS is a data base for open item management and resolution tracking to facilitate

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the staff's work. To manage the volume of paperwork and reduce the repetitive and nontechnical tasks, an automated data base system is being developed. On an automated system, the Open Item Administrator (OIA) and staff would enter the open items into the system, edit existing open items, search and retrieve specific open items, and generate required reports. With this capability, the OIA could properly supply the staff and management with information concerning an open item and with summary and status reports on demand.

#### **1.4 GENERAL SPECIFICATIONS**

Individuals who are not computer professionals will be able to effectively interact with the system (in a read-only mode) to generate reports and conduct searches to determine whether there are open items in the system that are of particular interest.

Only identified key personnel will be given a password to effect physical changes (update-mode) to the data base (e.g., updating, revising, inputting, etc.).

The system will be "user friendly," and will be implemented such that menu screens presented to the user clearly specify the various options available and prompt the user on how to invoke the desired option. Formatted screens will guide the user. All expected input will be clearly defined. The search facility will have a help screen (accessible by pressing a function key) which will present the user with a list of fields that can be searched. This method of guided data entry and parameter selection will minimize errors and inconsistencies within input fields.

Standard defined reports will be invoked by menu selection. The system will perform the necessary sorts and will generate the standardized reports.

#### **1.5 PROTOTYPE APPROACH TO IMPLEMENTATION**

Based on this concept and general specifications, a joint NRC/Center working group approach, using a prototype system, is being taken in developing the OITS to meet the stated objectives. Eight tasks have been defined over a six month period to complete the design and implementation of the OITS (refer to Schedule Strategy Section).

Following review and approval of the Requirements Definition by the NRC, and in compliance with accepted PADB procedures, a prototype system will be developed that supports input of data (adding, changing, and deleting open items) on an OS/2 workstation supported by the Center. This prototype system will be located on the fourth floor of the White Flint building with controlled access using a single userid with both "WRITE" and "READ" password privileges in the PADB. This workstation will be used for making all changes to open items in OITS. NRC users with the 13 DOS work stations already available in HLW at White Flint will be able to access the OITS open items to generate the output displays and reports. At the conclusion of the prototyping (system design changes and revisions based on actual use by NRC staff) the NRC will have the CNWRA implement the approved design on the workstation

hardware and software of their choice (either IBM DOS or Center supported IBM OS/2 based application) to meet policy, operating, and maintenance standards.

## 2 SYSTEM DESCRIPTION

Each open item entry will have an accession number assigned to it. Key authorized users will be able to add, update, and delete open items. All users will be able to choose to display the contents of an open item or print a report by using its accession number or by selecting an open item from a key word search result. The key word search facility will allow the user to search for specific open items based on key words that are known. The user will also be able to print a list of open items by Branch, Section, status, technical lead, etc.

The data fields and reports described in the remainder of this report are not applicable to technical uncertainties that are categorized as "key" technical uncertainties or "other" technical uncertainties. The requirements for these two types of uncertainties have not been established yet.

### 3 SYSTEM OBJECTIVES

#### 3.1 ENTRY, UPDATE, RETRIEVAL, AND REPORTING

Key authorized users will be able to enter, update, and delete OITS records directly from the OS/2 prototype workstation. Only NRC-approved open items can be entered in the system. NRC approval is also required for implementing changes to existing open item records. Entry of new records will be initiated from a menu entry. Selection of records to be updated or deleted will be accomplished by entering the record accession number.

All users will be able to display or print OITS records. Selection of records to be displayed or printed will be accomplished by entering the record accession number or by entering key words into the key word search facility and selecting the desired record from the resulting selection list.

#### 3.2 DATA FIELDS

The following data fields will be validated by the computer in the manner indicated below:

- ACC\_NO                      The accession number field contains the accession number. This field will be checked to make sure the length is no longer than 13 characters. It will also be checked to make sure that the first character is an "O" and the other 12 characters are numeric. The accession number is generated by the system and cannot be entered or changed.
- TOPIC                        The topic field contains the topic of the open item. This field will be checked to make sure the length is no longer than 254 characters. This is a required field.
- BRANCH                      The Branch field contains the responsible NRC Branch. This field will be validated against a table containing all of the valid Branches of NRC. This is a required field.
- SECTION                     The Section field contains the responsible NRC Section. This field will be validated against a table containing all of the valid Sections of NRC. This is a required field.
- AGENCY                      The agency field contains the agency responsible for resolution of the open item. This field will be validated to make sure it contains either NRC or DOE. This is a required field.

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<b>TECH_LEAD</b>	The technical lead field contains the name(s) of the person(s) responsible for resolution of the open item. This field will be checked to make sure the length is no longer than 50 characters. This is a required field.
<b>ID_DATE</b>	The identification date field contains the date that the open item was identified (i.e., approval date of open item or document contained therein). This field will be checked with the date validation module. This is a required field.
<b>SOURCE_DOC</b>	The source document field contains the name and number of the document that reports the open item. This field will be checked to make sure the length is no longer than 254 characters. This is a required field.
<b>TYPE</b>	The type field contains the type of the open item. This field will be validated against a table containing all of the valid types (regulatory, institutional, or technical). This is a required field.
<b>STATUS</b>	The status field contains the status of the open item. This field will be validated against a table containing all of the valid status codes (open or closed for technical; or identified, analyzed, reduced-draft, or reduced-final for regulatory/institutional). This is a required field.
<b>SP_TECHNICAL_TYPE</b>	The specific technical type field contains the specific technical type of the open item. This field is valid for technical uncertainties only. This field will be validated against a table containing all of the valid specific technical types (comment, question, start work objection, or license application submittal objection). This is a required field.
<b>RED_METHOD</b>	The uncertainty reduction method field contains the reduction method of the open item. This field will be validated against a table containing all of the valid reduction method codes for regulatory and institutional uncertainties (rulemaking-major, rulemaking-minor, guidance, further analysis, or other). This is a required field.
<b>SP_GUIDANCE_MTHD</b>	The specific guidance method field contains the specific guidance method of the open item. This field will be validated against a table containing all of the valid specific guidance methods for regulatory and institutional uncertainties (SP, STP, LARP, FCRG, or Comment Letters). This is a required field.

if the reduction method is "Guidance". Otherwise this field is not valid.

**KEYWORD**

The keyword field contains the keyword(s) associated with the open item. This field is checked to make sure the length is no longer than 50 characters.

**CITATION**

The citation field contains the applicable rule citation(s) of the open item. This field is checked to make sure the length is no longer than 50 characters and that it is in the correct format (no periods and spaces between each section, e.g., 10CFR60 113 (a)).

**SRA**

The SRA field contains the passid(s) of the applicable SRA elements. This field will be checked to make sure the length is no longer than 13 characters, the first 2 characters are "RR", the next 4 characters are numeric, the next character is a "/", the next 2 characters are a valid element code (EP - element of proof, UN - Uncertainty, etc.), and the last 4 characters are numeric. This field will also be checked to make sure it references an active passid.

**LARP\_NO**

The License Application Review Plan number field contains the applicable LARP review plan and number.

The remaining fields are all text fields (statement of item, item rationale/basis, reduction method rationale, history, and references) so the length is unlimited.

Errors detected by the data validation process must be corrected before the information is used to update or create an OITS record.

A further description of the OITS fields (and how they fit into the PADB) is located in Appendix A.

**3.3 KEY WORD SEARCH FACILITY**

The user of the system will be able to retrieve individual open item records by entering key words which occur in various fields.

The user will be able to enter a desired word, or words and a designation of which field is to be searched. The system will search for the designated records and will return a list of selected records to the user.

**3.4 DIRECT ACCESS TO THE SYSTEM FROM THE NRC OR THE CENTER**

The user will be able to access the system from the NRC (White Flint) or the Center (San Antonio Office/Washington Technical Support Office) as long as the user has a valid userid and password on the SwRI IBM mainframe system.

## 4 MAJOR AND SUPPORTING FUNCTIONS

### 4.1 INTERACTIVE WORKSTATION DATA ENTRY FACILITY

When the user chooses to add a new open item, several input screens will be displayed for the user to enter the appropriate information for each open item. After each screen has been filled out, the data will be checked to see if there are any errors that the computer can detect. If any errors are detected then they will be indicated and the input screen will be displayed again for the user to make any corrections.

None of the data will actually be written into the data base table until the data is error-free and the user presses a function key to accept the data.

### 4.2 OPEN ITEM SEARCH FACILITY

When the user chooses to search for an open item, a screen will be displayed for the user to enter the term(s) and the field name to be searched. The following will be valid fields for searches:

ACCESSION NUMBER  
TOPIC  
BRANCH  
SECTION  
AGENCY  
TECHNICAL LEAD  
IDENTIFICATION DATE  
SOURCE DOCUMENT  
TYPE  
STATUS  
TECHNICAL TYPE  
REDUCTION METHOD  
GUIDANCE METHOD  
CITATION  
SRA  
LARP NUMBER  
KEYWORD

The system will search for the designated records and will return a list of selected records to the user. The number of records selected will be displayed on the search result screen. The user may perform additional searches using an "and" logic operator to combine queries. The number of records selected for each query and the composite number of records selected will be displayed. The user may press a function key to view the records that were selected. The accession number and the topic of the selected records will be displayed in a scrollable table.

There will be a selection field preceding the accession number for each record where the user may enter an "S" to select and display the record or a "P" to print the record. There will also be a function key provided to print a list of selected records.

**4.3 INTERACTIVE WORKSTATION OPEN ITEM UPDATE FACILITY**

Key authorized users may choose to update a record by entering the record accession number. When a record is being updated, the input screens will be displayed with the current data. The user may make changes to the data fields. After each screen has been filled out, the data will be checked to see if there are any errors. If any errors are detected then they will be indicated and the input screen will be displayed again for the user to make corrections.

None of the data will actually be written into the data base table until the data is error-free and the user presses a function key to accept the data.

**4.4 INTERACTIVE WORKSTATION OPEN ITEM DELETION FACILITY**

Key authorized users may also choose to delete a record by entering the record accession number. A screen will be displayed showing the current information in the record along with a yes/no field to confirm the deletion of the record. If the user presses "y" then the open item will be deleted from the data base table. Records that are deleted from the data base will be archived.

**4.5 OPEN ITEM DISPLAY FACILITY**

Any user may choose to display a record by entering the record accession number or by selecting the desired record from the selection list resulting from a key word search. The display screen will contain the accession number, topic, branch, section, agency, technical lead, identification date, source document, type, status, specific technical type, reduction method, specific guidance method, open item text, open item basis text, open item history text, citations, key words, SRA element passids, LARP numbers and references. There will also be a function key provided to save the data to a work file that can be downloaded to individual PCs.

**4.6 OPEN ITEM REPORT REQUEST FACILITY**

The user may choose to print a record by entering the record accession number or by selecting the desired record from the resulting selection list of a key word search. The reports menu will contain three reports:

- Standard summary report (technical and regulatory/institutional),
- Regulatory/institutional uncertainties status report, and
- Technical uncertainties status report.

Examples of these reports are shown in Figures 4-1 through 4-4.

**TECHNICAL UNCERTAINTIES STANDARD REPORT  
(Concerns with DOE's Program)**

**ACCESSION NO:** (Identification #)      **REPORT DATE:** (Current Date)

**ITEM TOPIC:** (Topic of the open item)

**RESPONSIBLE BRANCH/SECTION:** (Lead branch and section)

**RESPONSIBLE AGENCY:** (NRC or DOE)

**TECHNICAL LEAD:** (Name of responsible person{s})

**IDENTIFICATION DATE:** (Initial identification date of item)

**SOURCE DOCUMENT:** (Origin of item)

**TYPE:** (Type of item)                      **STATUS:** (Open, closed)

**SPECIFIC TECHNICAL TYPE:** (Start work objection, License Application submittal objection, comment, or question)

**STATEMENT OF ITEM:** (Verbatim statement of item)

**ITEM RATIONALE/BASIS:** (Summary of key points of item)

**HISTORY:**      (Chronology of milestones, interactions, and documents describing progress towards closure)

**KEY WORDS:** (Key descriptive words from the text of the source document)

**CROSS REFERENCE**

**CITATION:** (Applicable citations)

**SRA:** (Applicable SRA element passids)

**LARP NUMBER:** (Applicable License Application Review Plan number)

**REFERENCES:** (Key documents referred to in the item discussion)

**Figure 4-1. Format of technical uncertainties standard report.**

REGULATORY/INSTITUTIONAL UNCERTAINTIES STANDARD REPORT

ACCESSION NO: O199112090001      REPORT DATE: 12/09/91

ITEM TOPIC: Waste Package Containment Time Frame

RESPONSIBLE BRANCH/SECTION: HLGE/M

RESPONSIBLE AGENCY: NRC

TECHNICAL LEAD: R. Weller

IDENTIFICATION DATE: June 7, 1990

SOURCE DOCUMENT: "First Update of the Regulatory Strategy and Schedules for the High-Level Waste Repository Program", June 7, 1990, SECY-90-207.

TYPE: Regulatory Uncertainty      STATUS: Identified

STATEMENT OF ITEM: The 300 to 1,000-year waste package containment time frame in 10 CFR 60.113 could be interpreted to mean the minimum period during which the waste package must remain substantially complete, or the maximum design lifetime for the waste package for which credit could be taken in demonstrating compliance.

ITEM RATIONALE/BASIS:

REDUCTION METHOD: Guidance

SPECIFIC GUIDANCE METHOD: Staff Position

REDUCTION METHOD RATIONALE:

HISTORY:

August 1990: Regulatory uncertainty resolved with final staff position (Reference)

KEY WORDS:

CROSS REFERENCE

APPLICABLE RULE CITATION: 10CFR60 113 (a) (1) (ii) (A)

SRA:

LARP NUMBER:

REFERENCES:

Figure 4-2. Example of regulatory/institutional uncertainties standard report.

REGULATORY/INSTITUTIONAL UNCERTAINTIES SUMMARY STATUS REPORT

Type:

Regulatory	-	#
Institutional	-	#
TOTAL	-	#

Reduction Method:

Guidance Subtotal	-	#
SP	-	#
STP	-	#
LARP	-	#
FCRG	-	#
Comment Letters	-	#
Rulemaking Subtotal	-	#
Minor	-	#
Major	-	#
Further Analysis Subtotal	-	#
Other Subtotal	-	#

Reduction Status:

Identified	-	#
Analyzed	-	#
Reduced (draft)	-	#
Reduced (final)	-	#

Figure 4-3. Example of regulatory/institutional uncertainties summary status report.

TECHNICAL UNCERTAINTIES SUMMARY STATUS REPORT  
(Concerns with DOE's Program)

Type:

License Application Submittal Objection	- #
Start Work Objection	- #
Comment	- #
Question	- #
TOTAL	- #

Status:

	<u># Open</u>	/	<u># Closed</u>
License Application Submittal Objection	- #	/	#
Start Work Objection	- #	/	#
Comment	- #	/	#
Question	- #	/	#
TOTAL	- #	/	#

Figure 4-4. Example of technical uncertainties summary status report.

4.7 MAJOR PROGRAM MODULES

4.7.1 Mainframe

V2O1T051	MAIN MENU
V2O1T052	REPORTS MENU
V2OIT090	DOWNLOAD OPEN ITEM
V2OIT100	ADD/UPDATE AN OPEN ITEM RECORD
V2OIT200	DELETE AN OPEN ITEM RECORD

- V2OIT550 OPEN ITEM SELECTION LIST
- V2OIT610 TECHNICAL OPEN ITEM DISPLAY
- V2OIT620 REGULATORY/INSTITUTIONAL OPEN ITEM DISPLAY
- V2OIT640 TECHNICAL OPEN ITEM STANDARD REPORT
- V2OIT650 REGULATORY/INSTITUTIONAL OPEN ITEM STANDARD REPORT
- V2OIT660 TECHNICAL OPEN ITEM STATUS REPORT
- V2OIT670 REGULATORY/INSTITUTIONAL OPEN ITEM STATUS REPORT
- V2OIT800 OPEN ITEM KEY WORD SEARCH
- V2OIT921 USER AUTHORIZATION

**4.7.2 Prototype Workstation**

- ENTRY PROGRAM TO ENTER NEW RECORDS
- UPDATE PROGRAM TO UPDATE RECORDS
- DELETE PROGRAM TO DELETE RECORDS
- FILE TRANSFER PROGRAM TO TRANSFER DATA BETWEEN WORKSTATION AND MAINFRAME

## 5 SCHEDULE STRATEGY

The schedule for the Open Item Tracking System is shown in Figure 5-1 (see Item 5e). The dates do not reflect the current status. Changes to these dates are in progress.

	BUDGETED COMPLETIONS	BASELINE DATE	PROJECTED COMPLETIONS	CURRENT DATE	ACTUAL COMPLETIONS
A. 5. NWPA, NWPA MANDATED/SUPPORT ACTIONS					
FYP COMMITMENT: REVIEW DOE'S MISSION PLAN AMENDMENTS, PDS, AND OTHER PROGRAMMATIC DOCUMENTS, AS REQUIRED. PREPARE QUARTERLY PROGRESS REPORTS FOR COMMISSION. SUPPORT NWTRB AND NEGOTIATOR, AS REQUESTED.					
a.	REVIEW DOE MISSION PLAN AND PDS UPDATES (K. KALMAN)				
	(1) PROVIDE COMMENTS TO NMSS DIRECTOR		10/91		11/07/91
	(2) PROVIDE NRC COMMENTS TO DOE		11/08/91		11/08/91
b.	SUBMIT QUARTERLY PROGRESS REPORTS TO EDO (K. KALMAN)				
	(1) 1ST QUARTER		10/91		10/18/91
	(2) 2ND QUARTER		01/92		01/21/92
	(3) 3RD QUARTER		04/92		
	(4) 4TH QUARTER		07/92		
c.	SUPPORT NUCLEAR WASTE TECHNICAL REVIEW BOARD (NWTRB) (J. HOLONICH)				
	(1) FULL BOARD MEETING: THERMAL LOADING/REPOSITORY DESIGN		[10/08-10/91]		10/08/91
	(2) PANEL ON SG&G MEETING: SEALS REVIEW		[11/12-13/91]		11/12/91
	(3) FULL BOARD MEETING		[01/07-10/92]		01/07/92
	(4) PANEL ON SG&G: SEISMIC VULNERABILITY		[01/22-23/92]		01/22/92
	(5) PANEL ON EBS: MEETING		[02/10-11/92]		
	(6) PANEL ON T&S: MEETING		[03/10-11/92]		
	(7) FULL BOARD MEETING		[04/08-09/92]		
	(8) PANEL ON EBS: MEETING		[05/10-15/92]		
	(9) FULL BOARD MEETING		[07/07-10/92]		
d.	UPDATE HLWM REGULATORY STRATEGY (SECY-91-225) (R. JOHNSON)				
	(1) SUBMIT COMM PAPER TO NMSS DIR (WITS 9100537)		07/03/92		
	(2) SUBMIT COMM PAPER TO EDO		07/07/92		
	(3) SUBMIT COMM PAPER TO SECY		07/17/92		
e.	OPEN-ITEM TRACKING SYSTEM (OITS) (R. CARLSON)				
	(1) HLPD OITS PLANNING MEETING		09/91		09/27/91
	(2) STAFF INITIATES REVIEW OF OITS FORMAT		10/91		10/04/91
	(3) HLPD/CNWRA PLANNING MEETING		11/91		11/08/91
	(4) CNWRA COMPLETES REQUIREMENTS DEFINITION		[12/91]		12/23/91
	(5) CNWRA COMPLETES SYSTEM DEVELOPMENT		[01/92]		
	(6) EXERCISE PROTOTYPE OITS/RECEIVE DIV DIRECTOR APPROVAL		02/92		
	(7) CNWRA CONDUCTS TRAINING CLASS FOR OITS USE		[03/92]		
	(8) BEGIN DATA INPUT FOR OITS		03/92		

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[ ] INDICATES NMSS DOES NOT CONTROL MILESTONE COMPLETION.

Figure 5-1. FY92 operations plan status report.

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**APPENDIX A**  
**DATA BASE DESIGN**

### DATA BASE DESIGN

#### OITS TABLE

Each of the fields in the OITS table will have only one entry per open item.

**ACC\_NO** CHAR (13)

The accession number field will be 13 characters in length and will contain the unique system-generated accession number for the open item. The accession number will be in the following format:

Oyyyyymmddnnnn

where

- yyyy = year the open item record was added,
- mm = month the open item record was added,
- dd = day the open item record was added,
- nnnn = a four digit number that is incremented for each open item record loaded on the same day.

**TOPIC** VARCHAR (254)

This field will have a maximum of 254 characters and will contain the topic of the open item.

**BRANCH** CHAR (4) VALIDATION TABLE

This field will have a maximum of 4 characters and will contain the acronym for the responsible NRC branch of the open item. (A list of the valid NRC branches and sections is shown in Figure A-1.)

**SECTION** VARCHAR (50) VALIDATION TABLE

This field will have a maximum of 50 characters and will contain the responsible section of the open item. (A list of the valid NRC branches and sections is shown in Figure A-1.)

**AGENCY** CHAR (3)

This field will have a maximum of 3 characters and will contain the acronym for the agency responsible for resolution (NRC or DOE).

DIVISION OF HIGH-LEVEL WASTE STAFF STRUCTURE

- 1. Repository Licensing and Quality Assurance Project Directorate (HLPD)
  - Senior Project Managers/On-Site Representatives
  - Quality Assurance Section
  - Systems Engineering and Special Projects Section
  
- 2. Hydrology and Systems Performance Branch (HLHP)
  - Hydrologic Transport Section
  - Repository Performance Assessment Section
  
- 3. Geology and Engineering Branch (HLGE)
  - Materials Section
  - Geotechnical Engineering Section
  - Geology-Geophysics Section

Figure A-1. Division of High-Level Waste Management organizational structure.

ID\_DATE CHAR (8) (yyyymmdd)

This field will have 8 characters and will contain the identification date of the open item in the format yyyymmdd.

SOURCE\_DOC VARCHAR (254)

This field will have a maximum of 254 characters and will contain the name and number of the document that reports the open item.

TYPE CHAR (15) VALIDATION TABLE

This field will have a maximum of 15 characters and will contain the open item type (e.g., technical, regulatory, or institutional).

**STATUS CHAR (15) VALIDATION TABLE**

This field will have a maximum of 15 characters and will contain the status of the open item (e.g., open or closed for technical; or identified, analyzed, reduced-draft, or reduced-final for regulatory/institutional).

**SP\_TECHNICAL\_TYPE CHAR (22) VALIDATION TABLE**

This field will have a maximum of 22 characters and will contain the specific technical type of the open item (e.g., start work objection, license application submittal objection, comment, or question). This field is only valid for technical uncertainties.

**RED\_METHOD CHAR (16) VALIDATION TABLE**

This field will have a maximum of 16 characters and will contain the reduction method of the open item (e.g., rulemaking-major, rulemaking-minor, guidance, further analysis or other). This field is only valid for institutional and regulatory uncertainties.

**SP\_GUIDANCE\_MTHD CHAR (15) VALIDATION TABLE**

This field will have a maximum of 15 characters and will contain the specific guidance method of the open item (e.g., SP, STP, LARP, FCRG, or Comment Letters). This field is only valid for institutional and regulatory uncertainties that have a guidance reduction method.

**LARP\_NO CHAR (100)**

This field will have a maximum of 100 characters and will contain the applicable License Application Review Plan and number.

**TEXT\_REF TABLE**

The statement of open item, open item rationale/basis, reduction method rationale, history, recommendations, and references will be stored in the TEXT\_REF table with the appropriate accession number. All entries in the TEXT\_REF table will be generated internally and will not be entered by the user. The TEXT\_REF table contains the following fields:

**TEXT\_REF\_NO INTEGER**

This field contains the accession number for the TEXT\_REF table to make each entry unique.

**KEY\_FLD\_1 CHAR (20)**

This field has a maximum of 20 characters and contains the open item accession number.

KEY\_FLD\_1\_TYPE CHAR (2)

This field has a maximum of 2 characters and contains an "O" for open items.

KEY\_FLD\_2 INTEGER

This is an integer field to tie certain text fields to citations. The open item entries will have a 0 in this field.

TEXT\_TYPE CHAR (5)

This field has a maximum of 5 characters and will contain a five character code to identify the different types of text.

OITXT	This will be the code for the statement of open item.
OIRTL	This will be the code for the rationale/basis.
OIRMD	This will be the code for the reduction method.
OIHST	This will be the code for the history.
OIREF	This will be the code for the references.

TEXT\_FN CHAR (8)

This field has a maximum of 8 characters and will contain the file name of the file that the text is stored in. Each file name will end with a 1 and as the file fills up another file will be created that ends with a 2, etc.

OITXT1	File containing the statement of open item text.
OIRTL1	File containing the rationale/basis text.
OIRMD1	File containing the reduction method text.
OIHST1	File containing the history text.
OIREF1	File containing the reference text.

TEXT\_RECNO INTEGER

This field contains the line number in the file where the text begins.

TEXT\_RECcnt INTEGER

This field contains the number of lines in the text.

**TDI\_NAMES TABLE**

The technical lead field will be stored in the TDI\_NAMES table which contains the fields listed below. Multiple technical lead names may be stored for a single open item record.

**NAME\_NO**                      **INTEGER**

This field contains the accession number for the TDI\_NAMES table to make each entry unique.

**DOC\_NUM**                      **CHAR (13)**

This field has a maximum of 13 characters and will contain the accession number for the open item.

**NAME\_TYPE**                      **CHAR (1)**

This field contains 1 character and will contain a "L" for technical lead.

**NAME**                              **VARCHAR (50)**

This field has a maximum of 50 characters and will contain the name of each person entered as a technical lead (last name first followed by a comma and the first name or initial).

**KEYWORD\_REF TABLE**

All of the key words extracted from the topic, technical lead, source document and LARP number along with the supplied key words will be stored in the KEYWORD\_REF table. The KEYWORD\_REF table consists of the following fields.

**KEYWORD**                      **CHAR (25)**

This field has a maximum of 25 characters and contains the key word.

**KEY**                                  **CHAR (13)**

This field has a maximum of 13 characters and contains the open item accession number.

**KEY\_TYPE**                      **CHAR (1)**

This field is one character in length and contains an "O" for open items.

**ELEMENT\_TYPE**                  **CHAR (2)**

This field is not applicable to open items and therefore will be blank.

**FIELD\_NAME**                      **CHAR (5)**

This field has a maximum of 5 characters and describes the field from which the key word was extracted. Key words extracted from the topic will have "TOPIC" in this field.

**FIELD\_POSITION            INTEGER**

This field is an integer field and contains the position of the word in the phrase from which it was extracted.

**EXT\_KEYWORD TABLE**

The EXT\_KEYWORD table contains the explicit key words supplied by the user. This table contains the following fields.

**KEYWORD                    CHAR (50)**

This field has a maximum of 50 characters and contains the explicit key word supplied by the user.

**KEY                            CHAR (13)**

This field has a maximum of 13 characters and contains the open item accession number.

**KEY\_TYPE                    CHAR (1)**

This field is one character in length and will contain an "O" for open items.

**OITS\_SRA\_REF TABLE**

Each open item may have several SRA elements associated with it. This table contains the following fields.

**ACC\_NO                        CHAR (13)**

This field will be 13 characters in length and will contain the accession number of the open item.

**SRA                            CHAR (13)**

This field will have a maximum of 13 characters and will contain the passid of the applicable SRA records.

**CITATIONS TABLE**

The applicable citations will be stored in the CITATIONS table. This table contains the following fields.

CITATION\_NO            INTEGER

This is an integer field which contains a unique accession number for the CITATIONS table.

PASSID                    CHAR (13)

This field has a maximum of 13 characters and contains the accession number of the open item.

CITATION\_TYPE            CHAR (5)

This field will contain the entry "OITS".

CITATION                    CHAR (40)

This field has a maximum of 40 characters and contains the citation. There can be multiple citations for each open item.

REG\_NO                    CHAR (20)

This field has a maximum of 20 characters and contains the part number of the citation (e.g., "10CFR60").

SUB\_NO                    CHAR (20)

This field has a maximum of 20 characters and contains the subpart of the citation (e.g., "A" is the subpart in the citation 10CFR60 A).

SEC1\_NO                    CHAR (20)

This field has a maximum of 20 characters and contains the section 1 of the citation (e.g., "113" is the section 1 in the citation 10CFR60 113).

SEC2\_NO                    VARCHAR (120)

This field has a maximum of 120 characters and contains the section 2 of the citation (e.g., "(a)" is section 2 in the citation 10CFR60 113 (a)).

SEC3\_NO                    CHAR (10)

This field has a maximum of 10 characters and contains the section 3 of the citation (e.g., "(1)" is section 3 in the citation 10CFR60 113 (a) (1)).

SEC4\_NO CHAR (10)

This field has a maximum of 10 characters and contains the section 4 of the citation (e.g., "(i)" is section 4 in the citation 10CFR60 113 (a) (1) (i)).

SEC5\_NO CHAR (10)

This field has a maximum of 10 characters and contains the section 5 of the citation (e.g., "(B)" is section 5 in the citation 10CFR60 113 (a) (1) (i) (B)).

SEC6\_NO CHAR (10)

This field has a maximum of 10 characters and contains the section 6 of the citation (e.g., "(I)" is section 6 in the citation 10CFR60 113 (a) (1) (i) (B) (I)).

REV\_DATE CHAR (8)

This field is not applicable for open items and therefore will be blank.

PRIMARY\_FLAG CHAR (1)

This field is not applicable for open items and therefore will be blank.

REV\_FLAG CHAR (1)

This field is not applicable for open items and therefore will be blank.

PURL\_FLAG CHAR (1)

This field is not applicable for open items and therefore will be blank.

REF\_FLAG CHAR (1)

This field is not applicable for open items and therefore will be blank.

ELEMENT\_TYPE CHAR (2)

This field is not applicable for open items and therefore will be blank.

**OITS\_CTL TABLE**

This table contains the control fields to generate the unique accession numbers for each open item. It contains the following fields:

**KEY** **CHAR (3)**

This field will have a maximum of 3 characters and contains the code "CTL".

**LAST DATE** **CHAR (8)**

This field will have a maximum of 8 characters and contains the last date that an open item record was generated.

**DOCACCS** **VARCHAR (7)**

This field will have a maximum of 7 characters and contains the last accession number that was used to generate the new accession number for the last date.

**OITS\_BRANCH TABLE**

This is the validation table for the Branch field.

**CODE** **CHAR (4)**

This field has a maximum of four characters and contains the valid Branch codes (HLPD, HLHP, and HLGE).

**DESCRIPTION** **VARCHAR (62)**

This field has a maximum of 62 characters and contains the full name of the Branch (e.g. Hydrology and Systems Performance Branch).

**OITS\_SECTION TABLE**

This is the validation table for the Section field.

**BRANCH** **CHAR (4)**

This field has a maximum of four characters and contains the valid Branch codes (HLPD, HLHP, and HLGE).

**SECTION** **VARCHAR (50)**

This field has a maximum of 50 characters and contains the valid Sections for each Branch code (e.g. Hydrologic Transport Section).

**OITS\_TYPE\_STAT TABLE**

This is the validation table for the status field.

**TYPE** CHAR (15)

This field has a maximum of 15 characters and contains the valid types (regulatory, institutional, and technical).

**STATUS** CHAR (15)

This field has a maximum of 15 characters and contains the valid status for each type (e.g. for technical type the status will be either open or closed).

**OITS\_SP\_TECH\_TYPE**

This is the validation table for the specific technical type field.

**SP\_TECHNICAL\_TYPE** CHAR (22)

This field has a maximum of 22 characters and contains the valid specific technical types (comment, question, start work objection, or license application submittal objection).

**OITS\_METHOD\_CLASS TABLE**

**RED\_METHOD** CHAR (16)

This field has a maximum of 16 characters and contains the valid reduction methods for the regulatory/institutional uncertainties (rulemaking-major, rulemaking-minor, guidance, further analysis, or other).

**OITS\_GUIDANCE\_MTHD**

**SP\_GUIDANCE\_MTHD** CHAR (15)

This field has a maximum of 15 characters and contains the valid specific guidance methods for the guidance reduction method (e.g., SP, STP, FCRG, LARP, or Comment Letters).

**DESCRIPTION** CHAR (35)

This field has a maximum of 35 characters and contains the description of the specific guidance method codes (e.g., specific guidance method SP would have description as staff position).