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*Risk-Based Data Management System
Design Specifications and Implementation Plan for*

*the Alaska Oil & Gas Conservation Commission;
the Mississippi State Oil & Gas Board;
the Montana Board of Oil & Gas Conservation; and
the Nebraska Oil & Gas Conservation Commission*

Prepared for

*The Underground Injection Practices
Research Foundation of the GWPC*

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Prepared by

CH2M HILL and **Digital Design Group, Inc.**

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The development of Risk Based Data Management System (RBDMS) design criteria and system specifications proved to be both a highly complicated and extremely meticulous effort. The design effort required the input of representatives from state and federal agencies, industry, and engineering consultants to facilitate the design of a system that could be successfully used by State Oil & Gas and Class II UIC programs that vary in areal extent, number of wells, types of wells, geological conditions, well construction practices, differing state rules and regulations, as well as other complicating factors. Without the input, flexibility, and sometimes extensive participation from these individuals, completion of the system design would have been much more difficult or impossible to complete. The individuals who provided the most substantial input and support to the project are as follows:

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Section 1

Introduction and Design Approach

Overview

The purpose of this document is to present design specifications and an implementation schedule for the development and implementation of Risk Based Data Management Systems (RBDMS's) in the states of Alaska, Mississippi, Montana, and Nebraska. The document presents detailed design information including a description of the system database structure, data dictionary, data entry and inquiry screen layouts, specifications for standard reports that will be produced by the system, functions and capabilities (including environmental risk analyses), and table relationships for each database table within the system. This design information provides a comprehensive blueprint of the system to be developed and presents the necessary detailed information for system development and implementation.

A proposed schedule for development and implementation also is presented. The schedule presents timeframes for the development of system modules, training, implementation, and providing assistance to the states with data conversion from existing systems. However, the schedule will vary depending upon the timing of funding allocations from the United States Department of Energy (DOE) for the development and implementation phase of the project. For planning purposes, the schedule assumes that initiation of the development and implementation phase will commence November 1, 1993, somewhat later than originally anticipated.

This document has been prepared to assist with the development and implementation of the RBDMS system. This document differs from previous reports prepared for the RBDMS project which have presented inventory and assessment information on multiple states; provided information pertaining to the need of an RBDMS in individual states; assessed existing and desired state electronic data management requirements; and assessed data and information pertaining to implementing a RBDMS. The primary function of this document is to facilitate the development and implementation of a system in selected states and to address State's needs for a comprehensive, relational, and fully functional risk based electronic data management system.

The current design/development effort does not include the production accounting, surface facilities, and water tracking (i.e., from source to disposal) modules. These modules were excluded from the original effort because they were not directly related to State Class II UIC programs as stipulated in the Underground Injection Practices Research Foundation (UIPRF's) initial project grant with the DOE. The three additional modules have been tentatively scheduled for design and implementation sometime in FY94/95. The exact implementation schedule for these additional modules has not been finalized.

Background

After the successful execution of two detailed RBDMS pilot tests performed in the Williston Basin (including parts of Montana, North Dakota, and South Dakota) and the Dorr field waterflood project in Kansas, the Underground Injection Practices Research Foundation (UIPRF) initiated a nationwide inventory and needs assessment (CH2M HILL and Digital Design Group, July 1992). The goals and objectives of the inventory and needs assessment were as follows:

- Determine the interest regarding integrating environmental risk management practices into existing UIC programs;
- Determine the willingness and capability of each state to implement a RBDMS and continue utilization/maintenance of such a system if installed;
- Evaluate anticipated training needs that may be required during the implementation phase of the project;
- Identify potential benefits states would accrue by implementing the UIPRF's RBDMS;
- Provide estimates of both personnel and financial resources that states could provide or be willing to seek during development, start-up, and continued operation;
- Gather information pertaining to existing oil and gas data management systems in each state, and if electronic data management systems are used, determine the data elements that are stored;
- Gather data regarding each state's existing UIC program hardware and software utilized for data management purposes;
- Enumerate the specific data processing requirements of each state at a functional level;
- Determine the unique requirements of each state that must be taken into consideration by the UIPRF when addressing the development phase of the project;
- Gather inventory data regarding the number of injection and production wells, number of MIT's performed, number of inspections performed and other information required to estimate the size of the databases that must be maintained and number of transactions that the automated systems must process.

Results of the inventory and needs assessment revealed that 24 of the 25 states surveyed expressed interest in participating in the RBDMS project (CH2M HILL and Digital Design Group, July 1992). This overwhelming positive response was much greater than originally expected by the UIPRF. Furthermore, states did not want a single purpose system to estimate risk. Instead, state representatives expressed a strong interest for a comprehensive system designed to address all agency data processing requirements in a unified fashion. As a result, existing grant funds from the DOE were determined to be inadequate for the implementation effort. In addition, many states requested that the capabilities of RBDMS be expanded to include production accounting, surface facilities, tracking produced water from source to disposal, and other enhancements. As a result of the unexpected positive response from states, the resultant deficiency in grant funding, and the need for further expansion of the system, the UIPRF is currently pursuing additional grant funding for the long-term implementation of the RBDMS project in all interested states.

This document is primarily based upon the findings and results of the inventory and needs assessment.

Design Approach

Selection of States

The design approach selected for the RBDMS project was carefully planned to address the long-term goals of the RBDMS project, which could ultimately result in the implementation of the system in 20+ states. Details regarding the full scope of the RBDMS project are included in the Long-Range RBDMS Implementation Plan (CH2M HILL, March 26, 1993). The plan presents information directly pertaining to database design, systems development and implementation, as well as associated tasks relating to developing new environmental risk assessment protocols and collecting, compiling, and evaluating data and information needed by states for various program functions. A copy of the Long-Range RBDMS Implementation Plan is included in Appendix A.

As presented in the Long-Range Plan (CH2M HILL, March 26, 1993) four states with varying characteristics were selected¹ for the first phase of RBDMS implementation. The states selected were Alaska, Mississippi, Montana, and Nebraska. The combination of these four states' high degree of interest in the project, geographic distribution, variations in oil & gas production and reserves, number of wells, age and well construction attributes, and many other factors provide the project with a wide representation of electronic data management and environmental risk management needs and functional requirements. Performing the design for multiple states through a single effort afforded the opportunity to

¹The first group of states selected to participate in RBDMS implementation were chosen by the UIPRF Board based on many criteria resulting from the RBDMS Inventory and Needs Assessment as well as other sources and criteria.

design the system for national distribution. This results in reduced cost per state as the design and development costs of the system will be realized over many states.

The selection of a second group of states is anticipated shortly following Group I implementation. Additional efforts were also established to assist North Dakota and Texas with the enhancement of their existing systems and the addition of RBDMS features. RBDMS implementation in North Dakota and Texas will not be addressed in this document.

Database Design

A well designed database is the foundation of any successful system, and a great deal of effort was directed toward ensuring that the database contained all data elements required by the system. Reporting forms utilized by the Phase I implementation states were analyzed to develop a list of data elements currently used by the states. Environmental Protection Agency (EPA) lists of mandatory and suggested data elements were reviewed to ensure the system would include all data elements needed to satisfy EPA reporting requirements. Furthermore, the needs assessment and functional requirements documents prepared during the inventory and needs assessment phase of the study were reviewed to detect any additional data elements that would be required by the system.

The RBDMS design team carefully created the table structures to be fully normalized to eliminate redundant data. For example, instead of storing the operator name and address information in every UIC permit record as required by some systems, RBDMS includes an operator number field in tables that relate to a company. RBDMS joins tables via the operator number to the company file to display the operator name and address information. Normalizing the data structure reduces table sizes due to elimination of redundant data, minimizes the occurrence of inconsistent data, and reduces efforts required to update data stored in the system. If an operator address changes, the address need only be updated in one location rather than in multiple tables and records spread throughout the system.

Another benefit of a properly normalized database is that such a database will not limit the number of occurrences of items that occur multiple times. Some systems, for example, provide for storing information on a limited number of cemented intervals per well. To provide for the deep wells and complex geological conditions that exist in many areas of the country, the RBDMS database was designed to allow for an unlimited number of strings of casing, liner, and tubing per well, an unlimited number of cemented and perforated intervals, and an unlimited number of producing zones, injection zones, USDW's, and confining zones per well. Most importantly, this is accomplished without wasting any disk space for simply constructed shallow wells.

In order to allow Oil and Gas Boards and Commissions to generate reports that accurately list and sort wells by operator, field, and/or formation, strict controls were designed into the system on the use of numbers and codes assigned to companies, fields, and formations.

As a result, the Company, Oil Field, and Formation reference tables were included in the system database.

Design Techniques

Rapid application design procedures were also utilized. Prototype data entry and inquiry screens were developed using Microsoft Access version 1.10 screen design tools. By developing the data dictionary, screens, and menus with a high level design tool, system prototypes can be easily generated and customized in the development phase of the project. In fact, an operational prototype of selected RBDMS modules was demonstrated at the 1993 summer meeting of the Ground Water Protection Council (GWPC) in Orlando, Florida. The development of the prototype was facilitated by the selected design approach. The prototype demonstration confirmed the need for a user friendly system capable of handling the complex functional requirements demanded by state regulatory agencies.

The use of prototyping also results in improved feedback from reviewers. Rather than reviewing a paper document, the reviewer can view the actual operation of the prototype. This has resulted in a better understanding of the operation of the modules and the ability to suggest additional refinements as a result of the improved understanding. The productivity gains resulting from a combination of prototyping and rapid application design tools will produce a higher quality system during the development phase of the system.

Hardware, Database Management System, and Application Development Software

FoxPro version 2.5 was chosen as the database system for the initial table and data dictionary design for the following reasons:

- The GWPC and several of the states were already familiar with FoxPro
- FoxPro is owned by a large and stable company (Microsoft)
- FoxPro can handle large tables with excellent performance
- FoxPro's design tools are superior to other XBASE products

The Microsoft Windows version of FoxPro was chosen because of the large installed base of PC's with Windows, overall user familiarity with the Windows environment, and industry trends toward increased use of graphical user interfaces. The Windows version included a superset of the capabilities of the DOS version. Extra features included support for dynamic data exchange (DDE), object linking and embedding (OLE), and a built-in graphics module. The DDE and OLE capabilities allow Windows programs to send commands to other Windows programs, thus allowing several Windows programs to be integrated into a single application. For example FoxPro for Windows can paste data into an Excel worksheet and send commands to Excel to graph the data and/or perform statistical analyses. To the user it would appear that Foxpro and Excel were all the same application.

Microsoft Access was also considered as a potential platform for RBDMS at the beginning of the project. At that time, Access was at version 1.0 with unproven stability and no support for Foxpro tables. In June of 1993, Microsoft released version 1.10 of Access. The new release was very stable and included support for Foxpro files. At that time, the design team decided to switch to Access for the following reasons:

- Access provides for database independence with the use of Open Data Base Connection (ODBC) drivers. This allows Access to connect directly to DBASE, FoxPro, Paradox, SQL Server, Oracle and any other database for which an ODBC driver exists. Access can read and update these databases directly without converting to an Access table. This feature is considered critical to providing support to multiple states with a variety of existing database systems. The ODBC support also means that states will not have to convert existing systems to Access since Access will be able to work with data in its existing format. Using ODBC also allows Access to be used as a "front-end" to a high performance database server such as Oracle or SQL Server in a client/server environment.
- The embedded subform feature of Access allowed development of screens for one-to-many table relationships without writing additional program code. This feature will be used extensively in the RBDMS system. In general, Access requires much less code to generate a data entry screen than FoxPro.
- Prototyping in Access is much faster than FoxPro as Access does not require the generate and compile steps that are necessary in FoxPro.
- Access uses the Visual Basic (VB) programming language. Microsoft has stated that VB will be included as the macro language for all new Microsoft products (Excel 5.0, Word 3.0, Project 4.0,...). VB contains many object oriented features and is much "cleaner" and easier to program than FoxPro's XBASE language.

The minimum hardware and software requirements to operate the RBDMS are as follows:

- **Hardware Configuration**
80386 PC, 6 mb RAM, VGA Monitor, 120 mb Hard Disk, HP III Laser Printer
- **Software Requirements**
DOS 5.0 +, Windows 3.1, Microsoft FoxPro 2.5

The recommended hardware and software requirements for RBDMS are as follows:

- **Hardware**
80486 PC, 8mb + RAM, Super VGA Monitor, Novell Netware 3.x or 4.x Network (or other Access compatible LAN) with 500mb + Hard Disk, Network Interface Card for each PC, Postscript Laser Printer
- **Software**
DOS 5.0 +, Windows 3.1, Microsoft Access version 1.1

Optional software that can be used to enhance the RBDMS include:

- Microsoft Visual Basic version 3.0
- Excel 4.0
- Wellbore

The RBDMS design team studied other database management systems used for similar purposes in order to maintain compatibility with existing systems, ensure the completeness of RBDMS, and learn from others' experiences. One of the database systems examined was the EPA's WATERS database. WATERS is a single user database developed in Clipper, a DOS application. WATERS was developed by the EPA to give the states a tool to assist in the development of reports to EPA such as the 7520 report. The ability to produce the standard EPA reports is needed by the states and the RBDMS design team had to choose between exporting data to WATERS to produce the EPA reports or including the reports within RBDMS. The design team chose to include the 7520 reports within RBDMS to facilitate a more user-friendly atmosphere, to facilitate automatic preparation of the 7520 reports (which is only partially done in WATERS), and to avoid complications of linking to a lower level and differently designed system having different and fewer data elements. In fact, WATERS is only partially automated, requiring states to manually generate portions of the 7520 reports. RBDMS includes full automation of the 7520 reports, thereby making generation of the 7520 reports easier for the end user, without the need for switching and continually downloading between RBDMS and WATERS.

The RBDMS was also designed to include additional information not required by the EPA, but desired by the states to develop a comprehensive system.

Section 2

System Development and Implementation Schedule

System development and implementation will be initiated shortly following release of project grant funding from the DOE, which has been projected by the DOE to occur in early November 1993. The project development phase will consist of system coding and testing, preparation of a system users manual, state personnel training, and assisting states with data conversion from existing systems. Upon completion of the development and implementation phase, states will have a fully operational and functioning Risk Based Data Management System (RBDMS).

As specified in the design approach (Section 1), RBDMS has been designed in a modular type format. Therefore, system development will be phased to allow for the completion of individual system modules and associated users manual modules prior to entire system completion. This will enable states to begin populating and using individual system modules in the early phases of system development. This approach also facilitates rapid feedback from states on the system and effectively allows for desired enhancements or minor modifications to be efficiently performed.

The total estimated completion time for full system development and implementation of RBDMSs in the states of Alaska, Mississippi, Montana, and Nebraska is approximately 6-9 months. Another 3 months (approximately), after system completion, will be reserved to assist states with data conversion from existing systems, state personnel training, and potentially preparing any final enhancements to the users manual. However, actual implementation time may vary somewhat depending on such things as state personnel availability, state feedback, and possibly other unexpected minor complexities that make inflexible schedules impractical.

Ongoing state feedback will be critical throughout development of the RBDMS system to facilitate addressing minor modifications to the various databases within the system, data entry and review screens, standard query functions, standard report functions, and other system functions that states may desire modifications to based on development phase review and pilot testing. These types of minor modifications are anticipated in the development of a system as comprehensive and complex as the UIPRF's RBDMS and will facilitate a more user friendly environment resulting from user interaction throughout system development.

However, similar to the RBDMS design effort, there will be certain milestones that will require more intense review and support by state agency representatives. These milestones will generally include periods when preliminary prototype system modules are completed. States will be expected to provide a detailed review and assessment of individual modules at the prototype level. States will also be expected to provide detailed feedback during

prototype use and data population so the project team can effectively resolve or address outstanding issues concerning the system.

In addition to the actual RBDMS, state personnel will be provided user manual modules as system prototype modules are distributed. Representatives from each of the four participating states will be asked to provide comments on the users manuals.

Section 3

Database Structure and Table Relationships

Table Relationships

Design of the UIPRF's Risk Based Data Management System (RBDMS) was performed under the premise that the system would be fully relational. This premise was a significant factor in determining software for the database design and ultimate development. A fully relational system also means that all of the various tables within the RBDMS can relate to each other if needed or desired by users. However, the various tables within the system also fit into a structured relationship based on the specific data fields to be maintained in each table and the specific purpose of each table.

An additional basic premise used in the system design included the fact that the entire system revolves around data and information pertaining to individual wells; how they are constructed, where they are located, as well as other similar factors. The data and information related to a well's construction and location serve as the heart of the system.

Table Descriptions

The various database tables included in the RBDMS design are listed below in alphabetical order. Each table lists the table name, principle designer (CH2M HILL or DDG), and a short description of the table's purpose. These brief descriptions, provide generalized design results for the RBDMS to be developed and implemented in Alaska, Mississippi, Montana, and Nebraska.

Table Name: AOR **Designer:** DDG

Description: Area of Review

Table Name: BONDS **Designer:** DDG

Description: The BONDS database will store information on all bonds and other financial instruments presented by operators, casing pullers, and other companies required to provide proof of financial responsibility. Each instrument will be issued a unique identifying number and this number will be entered into the record for the bond. A bond's identifying number will also be entered into the well record for each well covered by a particular bond. In the case of blanket bonds, the bond ID number will be stored in each of the wells covered by the bond. This will permit the system to list all wells covered by a particular instrument.

Table Name: CEMENT **Designer:** DDG

Description: The CEMENT database will store information on cemented intervals. This data file is for cement external to the casing and for cement plugs. A separate data record will be stored for each non-contiguous cemented interval or plug.

Table Name: CEMENTCLS **Designer:** DDG

Description: The Cement Class table will store information on the class of cement used on cemented intervals.

Table Name: COMPANY **Designer:** DDG

Description: The COMPANY table will store information on all companies and individuals conducting business with oil and gas boards and commissions including: Operators, Drillers, Bonding Companies, and companies that receive mailings and publications. Information on operator bonds will be stored in a separate Bond database.

Table Name: COMPLY **Designer:** CH2M HILL

Description: The Compliance table will store compliance/non-compliance, violation, and enforcement data for various wells or actions initiated or identified by the state.

Table Name: COUNTY **Designer:** DDG

Description: The COUNTY database is a reference table that will allow the system to prepare reports and display full county names in addition to API and FIPS county numbers. The table will also play a role in editing input data for valid counties. In Alaska, digits 3-5 of the API well number refer to USGS quadrangles instead of counties, and the table will store USGS quadrangle names instead of county names.

Table Name: EMIT **Designer:** CH2M HILL

Description: The External Mechanical Integrity Test (or EMIT) Table stores information for EMITs performed & reported within the state. Data will include specific details regarding when EMI demonstrations are performed, what type of test is used, test results, and other details necessary for evaluation and tracking by state regulatory agencies. Separate records will be stored for each EMIT performed on each well regardless of result.

Table Name: EMITMETH **Designer:** CH2M HILL

Description: The EMITMETH table stores the type(s) of external mechanical integrity tests used for the part 2 MIT demonstration. A separate table was set up to store the various methods used in an EMI demonstration since multiple tests may be applied for the demonstration (e.g., temperature log, cementing records, and cement bond log).

Table Name: FIELDS **Designer:** DDG

Description: The FIELD database will store information on all active and abandoned oil fields in each state. The purpose of this is to provide a list of all fields. The well file is used to store the field in which each well is located.

Table Name: FORMATN **Designer:** DDG

Description: The FORMATION database will store information on all geologic formations in each state and thereby permit the system to prepare reports displaying full formation names in addition to formation codes. The table will also play a role in editing input data for valid geologic formation.

If a well is completed into multiple formations, each formation will be listed separately in the well's zone file.

Table Name: FORMTOPS **Designer:** DDG

Description: The Formation Tops database will store the tops of formations reported by the driller or operator. This database will allow for an unlimited number of tops per well.

Table Name: IDLE **Designer:** DDG

Description: The IDLE WELL REPORTS database will store information reported on idle/inactive well status reports and periodic static fluid level tests. An additional data record will be added for each test and the system will maintain a history of past tests and reports.

Table Name: IMIT **Designer:** CH2M HILL

Description: The Internal Mechanical Integrity Test table (or IMIT) will store information related to all IMITs where testing or annulus monitoring is employed. Data will include specific details regarding when IMI demonstrations are performed, details pertaining to the IMIT method employed, test results, and other details necessary for evaluation and tracking by state regulatory agencies.

Table Name: INCIDENTS **Designer:** DDG

Description: The INCIDENTS database will store information on complaints spills and incidents such as blowouts and fires related to oil and gas operations. Spills are not necessarily related to specific wells, and the system must therefore be able to access records by location.

Table Name: INSPECTION **Designer:** DDG

Description: The INSPECTION/TEST database will store information on all inspections and tests, except for MIT's which will be stored in the MIT database. Types of tests and inspections included in this file include: new wells, workovers, routine site inspections, complaints, BOP tests and inspections, safety valve tests, and meter inspections. A separate record will be entered for each test or inspection performed. The INSPECTION/TEST database will store information on the date the test or inspection was performed, the type of test or inspection, test results, and corrective actions taken. The system will provide for indicating a maximum of ten failed items per test. A separate code table will store a list of the various types of inspections and tests that are performed and for each Inspection/test type, the codes for the individual pass/fail items that comprise the test.

Table Name: INSPFAIL **Designer:** DDG

Description: The INSPECTION/TEST FAIL table will store Fail Codes for all failed items for on all inspections and tests, except MIT's.

Table Name: LOGS **Designer:** DDG

Description: The LOGS database will store information on logs run, cores, and samples.

Table Name: MONITOR **Designer:** DDG

Description: The UIC MONITORING REPORTS database will store reported injection pressures and volumes. A separate record will be written for each report. If an amended report is submitted, the original report will be replaced with the updated information submitted on the amended report.

Cumulative injection volumes will be computed by totaling individual reports. Pre-system cumulatives will be stored in the Well Record.

Table Name: PERFS **Designer:** DDG

Description: The PERFS database will store information on perforated intervals reported by the operator. A separate data record will be added for each perforated interval. If a set of perfs are squeezed off, the system will indicate the date of the squeeze operation. The system will allow for an unlimited number of perforated intervals per wellbore.

Table Name: PERMWELL **Designer:** CH2M HILL

Description: The Well Permit table tracks the API well number(s) for a single or multiple Class II injection wells that may be authorized under an individual well or area permit.

Table Name: POOL **Designer:** DDG

Description: The POOL database will store information on all pools or reservoirs in the state. The pool database serves two primary purposes. First, it establishes a formal set of pools for reports that list production by pool. Second, it permits the system to store information that pertains to individual pools or reservoirs.

The Pool Table and associated data elements are established for the convenience of state oil and gas commissions to allow for the entry of pool specific data. Very few pool data elements are mandatory.

Table Name: PRODTEST **Designer:** DDG

Description: The PRODUCTION TEST (PRODTEST.DBF) database will store information on production tests, gas oil ratio tests, and drill stem tests reported by operators. A separate record will be created for each test.

Table Name: PUBLICATN **Designer:** DDG

Description: The PUBLICATION database will store information on all publication mailing lists.

Table Name: RIGS **Designer:** DDG

Description: The RIGS database will store limited information on each rig operating in the state. The primary purpose of this database is to assist in tracking and monitoring rig BOPE tests and inspections. The date of the last BOPE test and rig inspection are stored in the Inspection database.

Table Name: STRINGPIPE **Designer:** DDG

Description: The STRINGS PIPE table will store information on the Length, Grade, and Weight of the Piping used in the Casing String.

Table Name: STRINGS **Designer:** DDG

Description: The Casing Strings database will store information on existing strings of casing and liner for each well in the system. This file will allow for an unlimited number of casing strings per well.

Table Name: UIC_PERMIT **Designer:** CH2M HILL

Description: The UIC_PERMIT table will maintain permit specific information only. Due to the fact that either single-well or multi-well permits can be issued and because rule-authorized injection wells may exist, well specific data and information will be maintained in the "WELL" table.

Table Name: VIOLTYP **Designer:** CH2M HILL

Description: The Violation Type table will store the type of violation(s) identified for both production and injection wells. The table will store multiple violations or noncompliance activities occurring under a single enforcement action (formal or informal) as tracked under the COMPLY table.

Table Name: WELL **Designer:** DDG

Description: The WELL database will store information on all wells including injection, production, test, and monitoring wells. A separate data record will exist for each well. The WELL database will store current information about the status and construction of each well from data reported on well permits, completion reports, sundry notices, other reporting forms, and verbal notices.

Table Name: WELLHISTORY **Designer:** DDG

Description: The WELL HISTORY database will document changes to the well since the time of the original permit. Such changes will include workovers, change in status, and change of operator. A separate record will be created in the Well History database for each event.

If the activity described in the Well History requires the operator to submit a subsequent document or report to the Oil and Gas Commission, a code for the document and the deadline date will be entered. When the document is received from the operator, the date the document was received will be entered into the Well

History record. This will provide the system with information required to generate reports listing delinquent documents.

Codes will be established for various types of events, and these codes will be stored in the system code table. Users will be able to add new codes as required. Examples of Event Codes will include: Workover, Deepened, Plugged Back, Recompleted into New Formation, Change of Operator. To record a change in a well's status, the code for the new status will be entered.

Table Name: ZONEFMTN **Designer:** DDG

Description: The ZONE FORMATION table will provide for all of the Formation Codes associated with the zones for each permit or well in the system.

Table Name: ZONES **Designer:** DDG

Description: The zones database will provide the ability to store data on all injection zones, production zones, confining zones, USDWs, and aquifers associated with each permit or well in the system. All wells drilled under an area or multi-well UIC permit may not

Additional information on each of the above tables, as well as the specific data fields included in each table are presented in Section 4 "Data Dictionary".

Environmental Risk Assessment Analyses

In addition to the various database tables included in the RBDMS, the system will also include automated functions to analyze the environmental risk associated with Class II injection wells. During the design effort, design criteria and methodologies were developed for two separate environmental risk analysis functions. These functions will utilize data and information stored in multiple database tables within the system and will provide users with the ability to create reports, automatically assess and assign mechanical integrity testing frequencies, and provide other functions. As an overview, generalized descriptions of each function are presented below:

Function Name: Risk Probability Analysis
Designer: CH2M HILL

Description: The Risk Probability function incorporates a risk probability analysis that can be applied to a selected groups of wells within each state. The analysis evaluates the results of IMITs on multiple wells to determine a resultant direct environmental risk probability based on pre-defined selection criteria. Selection criteria can specify the analysis to be performed on all the wells within the entire state, individual or multiple fields, individual or multiple counties, or other easily

specified geographical areas. By performing the automated probability analysis on multiple geographical areas within the state (e.g., all fields in the state), state personnel to evaluate the relative environmental risk being posed throughout the state by delineation of risk levels.

In addition to specifying selection criteria as a single area or group of geographical areas, users will have the options to perform the analyses using alternate selection criteria. Selection criteria may also include such query fields as individual or multiple injection well operators, wells injecting into specified geologic formations, as well as other criteria.

The risk probability analysis will not allow for evaluation of the direct or relative environmental risk posed by a single well. However, the analysis will provide state regulatory personnel with environmental risk data and information for groups of wells based on specified selection criteria which can be used to infer direct risk probabilities for wells meeting the selection criteria specified. The system will also provide the user with the ability to generate reports showing calculated environmental risk by the selection criteria specified by the user.

A summary of the computations utilized in the risk probability analysis is presented in detail in the Inventory and Needs Assessment report (CH2M HILL and Digital Design, July 1992). For this document, a generalized algorithm was prepared which presents the methodology to be applied during the development and implementation phase of the project (Figure 1).

Function Name: Well Specific Risk Analysis

Designer: CH2M HILL

Description: This Function will be used to perform direct environmental risk analyses on an individual well basis through an evaluation which considers the type and number of layers protecting USDWs from possible contamination caused by injection. Users will be able to perform an analysis on a single well or prompt the RBDMS to perform the analysis on groups of wells for assessing environmental risks posed by areas of concern, operators, injection zones, or for other standard selection criteria. Generalized algorithms which presents the methodology employed in the well-specific risk analysis are presented in Figures 2 and 3.

ENVIRONMENTAL RISK PROBABILITY ANALYSIS FOR CLASS II INJECTION WELLS

NOTES: ⁽¹⁾Processing Criteria may be a county, field, or other geographic area. Analysis may also be performed for certain operators, by injection formation, depth of well, etc. The analysis will also allow for analyses to be performed for multiple criteria, such as for every county in the State, etc.

Figure 1
CHM HILL

WELL SPECIFIC ENVIRONMENTAL RISK ANALYSIS BY LEVELS OF PROTECTION

Figure 2
CH2M HILL

Figure 3
CHM HILL

Section 4

Data Dictionary

The data dictionary is a comprehensive listing of all the data elements that will be included in the RBDMS listed in a Table by Table format. The data dictionary includes both table and data element specific information. Table specific information provided in the data dictionary is as follows:

- Table Name
- Description of the Table and its Use
- Table Level Validation Information
- Indexes to be used for the Table

In addition, for each specific data element (or field), the following information is provided:

- Field Name
- Type of Data Field
- Width of Data Field
- Number of Decimal Points (as applicable)
- Data Entry Type Specified
- Description of Field
- Comments Pertaining to the Field
- Field Specific Validation Information

Data fields included in each Table were highly scrutinized by the design team and state regulatory agencies from many perspectives in an effort to meet states' needs.

During system design, data fields in all tables were reviewed and compared to normalize the system. Normalizing the various tables within the system is a standard process for the design and development of large complex data management systems and generally can be defined in the context of this document as designing the system to minimize duplication of data elements stored in the system, excluding unique identifiers. For instance, the RBDMS design included the preparation of a company table that would store company names, addresses, and other information in a single location rather than storing this information within multiple system tables. This minimizes data entry time, errors resulting from entering information differently in different places, and requirements on users by simplifying the system. This approach was implemented throughout the RBDMS effort.

A relatively comprehensive selection process was developed for specific data elements chosen for use in the RBDMS. The selection of each data element presented in the data dictionary was chosen from multiple sources. However, the main source used for data element selection and definition was directly from the states. Detailed site visits were

conducted in each state where numerous state and federal agency representatives were interviewed and questioned regarding state functions and associated electronic data management system needs and functional requirements. Summaries of each of these visits were prepared and are cited in Section 7 of this document for reference.

In addition to state site visits, numerous meetings were held via conference calls and in person to solicit state feed back on the design effort, system requirements, necessary functions, and uses. The various meetings held including participation from all states and also with individual states, depending on the issue in question.

Other significant sources of information included in the design effort are presented below with a brief description of its relationship to the RBDMS design effort:

- State survey results from the UIPRF's Inventory and Needs Assessment (CH2M HILL & DDG, July 1992) were reviewed. Data obtained from the Inventory and Needs Assessment were useful considering states were asked on a field by field basis if particular data fields were needed for storage and potential application in a RBDMS. A print out of the results of the data field survey is included in Appendix B.
- When available, the design team reviewed the existing electronic data management system in each state to gain insight to the priorities of each state, methods currently employed for electronic data storage, and data field specifications.
- Results of RBDMSs developed by the UIPRF for pilot testing in the Williston Basin and Dorr field in Kansas were reviewed in detail (Michie, T.W., September 1989 and March 1991). Many of the system design specifications were obtained from these two initial pilot studies. In fact, the risk probability analysis developed for application in these two pilot tests was refined and modified for use in the current RBDMS. The pilot test information obtained from these studies served to lay the preliminary groundwork for this design effort.
- The United States Environmental Protection Agency's (EPA's) minimum data set guidance was reviewed in conjunction with EPA 7520 reporting forms. Review of both the minimum data set guidance and the 7520 forms was critical to the design effort since states are required to submit 7520 reports to EPA on a quarterly basis. The 7520 reports combined with the minimum data set guidance present the information felt important by the EPA, which oversees each state program. A listing of the EPA minimum data set, including comments related to the RBDMS design effort regarding the applicability or description of each element, is included in Appendix C.

- Electronic data management systems from other state and federal agencies were also reviewed during the design effort. For instance, system specifications were reviewed from electronic data management systems in EPA's Regions V & VIII, Texas Railroad Commission, Colorado Oil & Gas Conservation Commission, North Dakota Industrial Commission, Oklahoma Corporation Commission, Louisiana Department of Natural Resources, and the New York Division of Mineral Resources.
- The EPA's Well Activities Tracking, Evaluation, and Reporting System (WATERS) was reviewed with respect to specific data elements and codes used.
- Standard coding and other information from the United State Department of Energy (DOE), the American petroleum Institute (API), the United States Geological Survey (USGS), and the American Association of Petroleum Geologists (AAPG) were reviewed for application in the RBDMS. Some examples of the information obtained include specifications on API Well Numbers, DOE field codes, and USGS and AAPG formation codes.
- Technical information from several additional publications were used in developing data fields needed for performing environmental risk analyses and assuring tables targeted storing data for engineering calculations and evaluations contained the proper data fields in the appropriate format.

The RBDMS data dictionary is provided in the following pages of this section.

RBDMS Data Dictionary

UIPRF Draft Database Design for the Risk Based Data Management System (RBDMS)

Table name: **AOR**

Table Design Specifications

Description: Area of Review

Validation:

Indexes: UIC Permit Number; API Well Number

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
MULTI_WL	L	1	0		Single or Multiple Well AOR		Y=Multiple Well AOR
UIC_PERMIT	C	10	0		UIC Permit Number	When MULTI_WL = "Y" then UIC_PERMIT must be entered, otherwise API_WELLNO must be entered.	
API_WELLNO	C	14	0		API Well Number		
AOR_VAR	C	1	0		AOR or Variance		A=AOR; V=Variance
DT_APPROV	D	8	0		Date Approved		
TYP	M	10	0		Type of AOR Demonstration Performed	Options include: Radius of Pressure Influence Calculations (ROP); Well Inventory and Construction (WL_IC); Combination of ROPI and WIC (COMBO).	
RADIUS	N	5	2		Radius of the AOR in Miles as proposed by the Operator.		
DT_RADPRES	D	8	0		Date of Radius Pressure Influence		
RAD_PRSINF	N	5	3		Radius of Pressure Influence		

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
INVEN	L	1	0	Check	Is AOR Well Inventory Complete?		
TOPOMAP	L	1	0	Check	Has a Topographic Map been Submitted showing the well or EOR project with appropriate AOR.		
ABANWL	N	3	0		Number of Wells in the AOR - Abandoned		
WLOTHR	N	3	0		Number of Wells in the AOR that are not abandoned		
DFABAN	N	3	0		Number of Defective wells that are in the AOR - Abandoned		
CAABAN	N	3	0		Number of Abandoned Wells in AOR Requiring Corrective Action		
DFOTHR	N	3	0		Number of Defective Wells in AOR - Other (i.e., that are not abandoned)		
CAOTHR	N	3	0		Number of wells in AOR Requiring Corrective Action - Other		
IZABAN	N	3	0		Number of Abandoned Wells in the AOR that Penetrate the Injection Zone.		
IZOTHR	N	3	0		Number of Non-Abandoned		

Table name: AOR

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
					wells in the AOR that penetrate the injection zone.		
PWSWLS	N	3	0		Number of Public Water Supply Wells in the AOR		
DWWLS	N	3	0		Number of Drinking Water Wells Identified in the AOR		
CSGREP	N	3	0		Number of wells in AOR with casing repaired or recommended for repair as a result of the AOR investigation.		
PLGABN	N	3	0		Number of active wells in the AOR that were plugged/abandoned as a result of the AOR investigation.		
REPLUG	N	3	0		Number of abandoned wells in the AOR that have been re-plugged as a result of the AOR investigation.		
CASUM	N	3	0		Number of wells in the AOR with other corrective action performed as a result of the AOR investigation [i.e., excluding CSGREP or PLGABN or REPLUG].		
WHPA	C	1	0		Does AOR intersect well head protection area.		Y=Yes; N=No

Table Name: AOR

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
DT_MOD	D	8	0		Date Record Updated		
COMMENT	M	10	0		Comments		

Table name: AORWELL

Table Design Specifications

Description: Area of Review related file which stores all of the API Well Numbers covered by the AOR.

Validation:

Indexes: AOR Number + API Well Number

Field Name	Data		Width	Decimals	Entry Type	Description	Comments	Validation
	Type							
			0	0				

Table Design Specifications

Description: The BONDS database will store information on all bonds and other financial instruments presented by operators, casing pullers, and other companies required to provide proof of financial responsibility. Each instrument will be issued a unique identifying number and this number will be entered into the record for the bond. A bond's identifying number will also be entered into the well record for each well covered by a particular bond. In the case of blanket bonds, the bond ID number will be stored in each of the wells covered by the bond. This will permit the system to list all wells covered by a particular instrument.

Validation:

Indexes: Bond Number, Operator Number, Guarantor Number

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
BONDNO	C	10	0		Bond ID Number assigned by the state		
PURPOSE	C	1	0		Purpose of Bond		C=Casing Puller Bond, D=Domestic Well, P=Plugging Bond, S=Surface Restoration Bond, F=Facility Bond
TYP_INST	C	2	0		Type of Instrument		B=Bond, CA=Cash or Cashier's Check, CD=Certificate of Deposit, LC=Letter of Credit, FS=Financial Statement
STATUS	C	1	0		Bond Status		A=Active, S=Suspended, E=Expired, R=Released, C=Called, L=Limited
OPERNO	N	9	2		Operator Number	Number of operator covered by the bond.	See COMPANY.CONO for type and width of field
GAURANTOR	N	9	2		Guarantor Number	Number of the Bonding Company assigned by the state. Guarantor's name, address, and phone number will be stored in the	See COMANY.CONO for the type and width of this field

Table name: BONDS

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
Company database							
GUAR_BNDNO	C	20	0		Guarantor Bond Number	The number assigned to the bond by the bonding company	
AMOUNT	N	8	0		Amount of Bond	Dollar Amount of Coverage	
MAX_WELLS	N	3	0		Maximum Number of Wells Under Bond	Enter 1 for individual well bonds; the specified maximum number of wells for bonds that specify a maximum, and 999 for blanket bonds	1=Individual well bonds; 999=Blanket Bonds
DT_EFFECT	D	8	0		Date Effective		
DT_CANCEL	D	8	0		Date Notice of Cancellation		
DT_EXPIRE	D	8	0		Date Bond Expires	Expiration date of the Bond	
DT_LSTRVWD	D	8	0		Date Last Reviewed		
DT_RELEASED	D	8	0		Date Released		
COMMENT	M	10	0		Comments	Comments on the specific coverage of the bond, restrictions, and additional notes.	
DT_MOD	D	8	0		Date record last modified		

Table Name: BONDWELL

Table Design Specifications

Description: Bonds related file which stores all of the API Well Numbers covered by the Bond

Validation:

Indexes: Bond Number + API Well Number

Field Name	Data		Width	Decimals	Entry Type	Description	Comments	Validation
	Type							
			0	0				

Table name: CEMENT

Table Design Specifications

Description: The CEMENT database will store information on cemented intervals. This data file is for cement external to the casing and for cement plugs. A separate data record will be stored for each non-contiguous cemented interval or plug.

Validation:

Indexes: API Well Number + String Cemented + Bottom of Cement

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number	The 14-digit API well number is unique for each individual well and allows for applying a unique identifier for sidetracks stemming from a single well.	
CSG_STRING	C	4	0	List	Casing String Cemented	Code indicating the casing string that was cemented.	COND=Conductor, SURF=Surface Casing, INT1=Intermediate 1 Casing, INT2=Intermediate 2 Casing, INT3=Intermediate 3 Casing, PROD=Production Casing, LNR1=Liner 1, LNR2=Liner 2, LNR3=Liner 3, PKR=Packer, CIBP=Cast Iron Bridge Plug, RBP=Retrievable Bridge Plug
BOC	N	5	0		Bottom	Bottom of cemented interval	
TOC	N	5	0		Top	Top of cemented interval	
METH_TOP	C	1	0		Method by which Top was determined		M=Measured, T=Theoretical, or Blank
DT_CMT	D	8	0		Date Cemented		

Table name: CEMENT

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
DT_MOD	D	8	0		Date Last Modified	Date record was added or last modified.	

Table name: CEMENTCLS

Table Design Specifications

Description: The CEMENT CLASS table will store information on the class of cement used on the cemented intervals.

Validation:

Indexes: API Well Number + Casing String Cemented + Bottom of Cement + Class of Cement

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
CSG_STRING	C	4	0		Casing String Cemented	Code indicating the casing string that was cemented.	COND=Conductor, SURF=Surface, INT1=Intermediate 1, INT2=Intermediate 2, INT3=Intermediate 3, PROD=Production, LNR=Liner, PKR=Packer, CIBP=Cast Iron Bridge Plug, RBP=Retrievable Bridge Plug
BOT	N	5	0		Bottom	Bottom of Cemented interval	
SACKS	N	5	0		Sacks of Cement		
CLASS	C	1	0		Class of Cement		
YIELD	N	4	1		Yield CUFT/Sack		

Table Design Specifications

Description: The COMPANY database will store information on all companies and individuals conducting business with oil and gas boards and commissions including: Operators, Drillers, Bonding Companies, and companies that receive mailings and publications. Information on operator bonds will be stored in a separate Bond database.

Validation:

Indexes: Company Number, Company Name

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
CONO	N	9	2		Company Number	To provide for multiple offices and addresses for each company, the Company Number will consist of a 6 digit number followed by a 2 digit subsidiary number. Example: the main office for a company will have the number 12345.00; additional offices for that company will have the numbers 12345.01, 12345.02, 12345.03, etc.	
STATUS	C	1	0		Status	Because the system will be used to store historical data, company records cannot be deleted when a company ceases to be active. This indicator will be used to indicate inactive companies and prevent new wells from being assigned to the company.	A=Active, I=Inactive
DOE_OPNO	C	10	0		DOE Operator Number	DOE operator number. Six digits left justified with four trailing zeros.	
CONAME	C	30	0		Company Name	Name of a company, or last name of an individual.	
FIRST_NAME	C	20	0		First Name	First name of an individual.	
CONTACT	C	20	0		Contact	Contact person at a company	

Table name: COMPANY

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
ADDR1	C	30	0		Address Line 1		
ADDR2	C	30	0		Address Line 2		
CITY	C	15	0		City		
STATE	C	2	0		State		
ZIP1	C	5	0		Zip Code 1		
ZIP2	C	4	0		Zip Code 2		
COUNTRY	C	15	0		Country	Name of Country if other than USA.	
PHONE	C	12	0		Phone Number	Phone number in the format 999-999-9999	
PH_EXT	C	5	0		Phone Extension		
FAX	C	12	0		FAX Number	Fax Number in the format 999-999-9999	
OPER	L	1	0		Operator	This and the following codes will indicate the functions performed by each company. A "Y" in this data field will indicate that the company is an operator. A company can be designated as performing any combination of the following functions.	"Y" Operator
INJ_OPER	L	1	0		Injection Operator		"Y" = Company operates injection wells
DRILLER	L	1	0		Driller		"Y" = Driller
BOND_CO	L	1	0		Bonding Company		"Y" = Bonding Company
OIL_TRANS	L	1	0		Oil Transporter		"Y" = Oil Transporter

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
GAS_GATHR	L	1	0		Gas Gatherer		"Y" = Gas Gatherer
WATR_HAUL	L	1	0		Water Hauler		"Y" = Water Hauler
CSNG_PULLR	L	1	0		Casing Puller		"Y" = Casing Puller
MISC1	L	1	0		Miscellaneous 1	In addition to the company types listed above, the system will provide for six additional categories that can be used as desired by each state oil and gas agency. These categories can, for example, be used for various mailing lists.	"Y" = Company is in miscellaneous group 1.
MISC2	L	1	0		Miscellaneous 2		"Y" = Miscellaneous group 2.
MISC3	L	1	0		Miscellaneous 3		"Y" = Miscellaneous group 3
MISC4	L	1	0		Miscellaneous 4		"Y" = Miscellaneous group 4
MISC5	L	1	0		Miscellaneous 5		"Y" = Miscellaneous group 5
MISC6	L	1	0		Miscellaneous 6		"Y" = Miscellaneous group 6
ORGRPT_RQD	C	1	0		Organization Report Required?		"Y" = Company is required to submit an Organization Report. "N" = Organization report is not required.
ORGRPT_DT	D	8	0		Date Organization Report		

Table name: COMPANY

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
					Received		
FINRPT_DT	D	8	0		Date Last Financial Report Received		
SECST_DT	D	8	0		Date Qualified with Secretary of State		
PROBLEM	C	1	0		Problem Company Indicator		"Y" Indicates problems associated with the company. Problems and restrictions can be further elaborated in the Comment field.
COMMENT	M	10	0		Comments	Comments. A data type of "memo" is used for this field. A memo field will expand to enable the user to enter a comment of any length and to add additional comments.	
DT_MOD	D	8	0		Modification Date	The date the data record was last updated	
USER	C	8	0		User ID	Name, number, or initials of the last individual to update the data record.	

Table Design Specifications

Description: The Compliance table will maintain compliance, enforcement, and violation data for various wells.

Validation:

Indexes: API Well Number + Violation Date,

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0	Text	API Well Number	The 14-digit API well number is unique for each individual well and includes a unique identifier for sidetracks stemming from a single well.	
VIOL_TYP	C	2	0	Combo	Type of Violation(s)	This field will store the type of violation(s) detected by state personnel. It should be noted that multiple violations may occur for a single well. Therefore, this field will be configured to allow multiple violation or noncompliance codes. This will be a "one-to-many" field (i.e., there may be several violations for an individual enforcement action (formal or informal).	Currently developed violation codes are as follows: Unauthorized Injection; Mechanical Integrity; Pressure and/or Rate; Plugging and Abandonment; Violation of Formal Order; USDW Contamination; Falsification; Operation and Maintenance; Permit Violation Other; Casing and Cementing; Monitoring and Reporting; Financial Responsibility; Other.
UIC_VIOL	C	1	0	Combo	Is violation UIC related?		
DT_VIOL	D	8	0	Text	Date Violation Occurred	The date the violation(s) occurred. If the occurrence date is not available, the date the violation was verified by the state should be entered.	
DT_NOTE	D	8	0	Text	Date Operator Notified	This field will contain the date that the	

Table name: COMPLY

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
						operator was officially notified by the state regarding the referenced violation or non-compliance activity.	
TYP_NOTE	C	2	0	Combo	Type of Notification	This field will store the type of notification used for the date stored in "DT_NOTE". Choices for "TYPE_NOTE" will be stored in a code table that can be added to at the discretion of the state.	Codes describing the type of notification include: Letter; Notice of Violation; Phone Call; Field Visit; Other.
DT_ENF	D	8	0	Text	Date Enforcement Action Taken	This is the date that the state regulatory agency issued a formal enforcement action.	
ENF_TYPE	C	2	0	Combo	Type of Enforcement Action Taken	Users will be able to choose from a look-up table containing various choices of potential formal and informal enforcement actions.	Choices for types of formal and/or informal enforcement actions include: Administrative Orders (Agency Actions): Unilateral Order (UO); Consent Order (CO); Pipeline Severance (PS); Shut-in (SI); Administrative Order Other (AO). Judicial Orders (Court Orders): Consent Decree (CD); Criminal Referral (CR); Civil Referral (CV); Judicial Order Other (JO). Informal Enforcement Actions: Notice of Violation (NV); Field Inspection (FI);

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
							Show Cause Meeting (SC); Consent Agreement (CA); Commence Bond Meeting (CB); Informal Enforcement Action (IO).
DOC_NUM	C	15	0	Text	Docket Number	The unique identifier for a formal enforcement case.	
SNC_Y_N	C	1	0	Combo	Significant Non-Compliance Determination	This field will store whether the well was determined to be in significant non-compliance (SNC) with rules, regulations, or permits as described in USEPA Guidance.	A response of "Y" would indicate SNC was identified and a response of "N" would indicate that no SNC could be identified.
METH_SNC	C	3	0	Combo	Method of Determining SNC	This field will store the specific method used to identify whether the well was in SNC. This field will remain empty if no SNC was identified.	If the "SNC" field contains a response of "N" (which indicated no SNC identified), it will not be possible to enter data into this field.
MULTI_EA	V	3	0		Multiple Enforcement Actions	This will be a calculated field that will query the system to count the number of other enforcement actions taken against this well or operator.	Calculated
DT_COMPREQ	D	8	0	Text	Date Compliance Required	The date that non-compliance must be corrected and compliance achieved.	
CS_WRITEN	C	0	0	Combo	Compliance Schedule Written	"Y" will indicate that a compliance schedule has been written for this well or enforcement case while "N" will indicate that no compliance schedule has been written or agreed to by the operator.	

Table name: COMPLY

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
DT_COMPL	D	8	0	Text	Date Returned to Compliance	The date maintained in this field may also be the date that corrective or remedial action was successfully completed	
TYPE_CA	C	6	0	Combo	Type of Corrective Action	Possible selections include: Casing Repairs/Squeeze Cement Remedial Action (CSGCMT); Tubing/Packer Remedial Action (TBGPKR); Plugging/Abandonment Remedial Action (PLUGAB); Other Remedial Actions (OTHRRA).	Only entries from the associated code table will be allowed. However, users should be able to add additional CA types that may not be included in the associated code table to account for the wide variety of CA types possible.
COST_CA	N	6	0	Text	Cost of Corrective Action	This field is under consideration for deletion from the system due to the complexities and burden associated with getting accurate CA costs from operators and the potential unwillingness of the operators to release this information.	
DT_FINAL	D	8	0	Text	Date Enforcement Action Final	The date that the enforcement action becomes final.	
DTWITHDRAW	D	8	0	Text	Date Enforcement Action Withdrawn		
DT_APFD	D	8	0	Text	Date Appeal Filed		
DT_APCD	D	8	0	Text	Date Appeal Canceled		
DT_APAD	D	8	0	Text	Date Appeal Affirmed		
DT_ASSED	D	8	0	Text	Date Penalty Assessed		

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
ASSESSED	N	6	0	Text	Penalty Assessed (\$)	This field will store the proposed penalty assessment included in any formal enforcement action. This is NOT the actual penalty collected by the state. This will allow states to compare assessed versus collected penalties.	
DT_COLL	D	8	0	Text	Date Penalty Collected		
COLLECTED	N	6	0	Text	Penalty Collected (\$)	This field will store the penalty amount actually collected by the state for the associated enforcement action.	
DT_MOD	D	8	0	Text	Date Record Updated	The last date this individual record was updated by state personnel.	
COMMENT	M	10	0	Text	Comments	Comments regarding the enforcement action or non-compliance activity.	

Table name: COUNTY

Table Design Specifications

Description: The COUNTY database is a reference table that will allow the system to prepare reports and display full county names in addition to API and FIPS county numbers. The table will also play a role in editing input data for valid counties.

In Alaska, digits 3-5 of the API well number refer to USGS quadrangles instead of counties, and the table will store USGS quadrangle names instead of county names.

Validation:

Indexes: COUNTY NAME, STATE NUMBER + API COUNTY CODE

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
STATE_NO	N	2	0		State Number	2 digit API State Number	
CNTY_APINO	N	3	0		County API Number		
FIPS	C	2	0		FIPS County Number		
NAME	C	20	0		County name		

Table Design Specifications

Description: The External Mechanical Integrity Test (or EMIT) Table stores information for EMITs performed & reported within the state. Data will include specific details regarding when EMI demonstrations are performed, what type of test is used, test results, and other details necessary for evaluation and tracking by state regulatory agencies. Separate records will be stored for each EMIT performed on each well regardless of result.

Validation:

Indexes: Company Number + API Well Number + Test Date + Test Method

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0	Text	API Well Number	The 14-digit API well number is unique for each individual well and includes a unique identifier for sidetracks stemming from a single well.	
TST_REAS	C	6	0	Combo	Reason for External Mechanical Integrity Test	Possible Choices would include: Annual IMIT (ANN_TST); 5-year Test (5YR_TST); Post Workover Test (WRKOVTR); Initial Test (INITAL); Other (OTHER).	
DT_TEST	D	0	0	Text	Date EMIT Performed	This field will store the date that the EMIT was performed. In cases where multiple days were required for testing, the EMIT completion date should be used.	
EMIT_METH	C	4	0	Combo	EMIT Method Code	Possible choices [to document the type or types of tests used for the EMI demonstration] are as follows: Cementing Records (CMTR); Cement Evaluation Log (CMTL) (This includes all CEL type logs, including CBLs, CET, etc.); External Temperature Log (TEMP); Noise Log (NOIS); Radioactive Tracer Survey (RTS); Oxygen Activation Log (OAL); Other EMIT (OEMI).	Data fields from the EMIT_METH code table are the only acceptable entries. Changes or additions to the code table should not be allowed without UIC Director approval.

Table name: EMIT

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
EMIT_RSLT	C	1	0	Combo	EMIT Result	"A" = EMI determined adequate & "D" = EMI determined deficient. Check box should show either "Adequate" or "Deficient" depending on the entry (or status of the "check box".	An entry of "A" or "D" are the only acceptable responses.
FAIL_TYPE	C	3	0	Combo	Type of EMI Failure	Possible selections are as follows: Casing (CSG); Tubing (TBG); Packer (PKR); Wellhead Assembly (WHA); Behind Casing (BCF); Cement (CMT); Other Internal Failure (OIF); Other External Failure (OEF).	Data fields included in the FAIL_TYPE code table will be the only acceptable response. Changes or additions to the code table should be approved by the UIC Director.
FAIL_CAUS	C	7	0	Combo	Cause of Failure	Possible Selections include: Mechanical (MECH); Corrosion-General (COR_GEN); Corrosion-Internal (COR_INT); Insufficient or Lack of Cementing Records (ICMT); Inadequate Cement Thickness (CMT_THK); Inadequate Cement Seal (CMTSEAL); Behind Casing Flow from Injection Zone to USDW (BCF_INJ); BCF from Production Zone to USDW (BCFPROD); BCF from Alternate Zone to a USDW (BCF_ALT); BCF Occurring from Alternate USDWs (BCF_USD); BCF to a Non-USDW (BCF_NON); Salt Collapse (SALT_CO); Microannulus (MICRO_A); Other.	Data fields listed in the FAIL_CAUS code table will be the only acceptable response. Changes or additions to the code table should be approved by the UIC Director.
REPAIR_DUE	D	8	0	Text	Date EMI Repair Due	This data field will maintain the required deadline (i.e., final completion date) for a repair which is necessary due to a detected deficiency in a specific well's EMI.	

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
REPAIR_COM	D	8	0	Text	Date Repair Completed	The final date upon which corrective actions procedures were completed for the specific well being referenced.	
REPAIR_S_F	C	1	0	Combo	Repair Result (i.e., success or failure)	"S" = Repair was successful & "U" = Repair was unsuccessful and well continues to have deficient EMI. Depending upon the resultant entry, the words "Successful" or "Unsuccessful" should appear next to the check box.	An entry of "S" or "U" are the only acceptable responses.
WIT_STATE	C	1	0	Combo	EMIT Witnessed by State?	"Y" = EMIT witnessed by State & "N" = EMIT not witnessed by State. The words "Witnessed" or "NOT Witnessed" should appear next to the check box depending upon the entry or status of this data field.	An entry of "Y" or "N" will be the only acceptable responses.
INSP_NAME	C	20	0	Text	Inspector Name	Name of the State inspector witnessing the External Mechanical Integrity Demonstration	
DT_MOD	D	0	0	Text	Date Record Updated or Modified		
COMMENT	M	10	0	Text	EMIT Comments	A memo field will expand to enable the user to enter a comment of any length and to add additional comments if desired.	

Table name: EMITMETH

Table Design Specifications

Description: The EMITMETH table stores type(s) of external mechanical integrity tests used for the part 2 MIT demonstration. A separate table was set up to store the various methods used in an EMI demonstration considering multiple tests may be used for the demonstration (e.g., temperature log, cementing records, and cement bond log).

Validation:

Indexes: API Well Number + Test Date + EMIT Method

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
DT_TEST	D	0	0		Test Date		
EMIT_METH	C	20	0		EMIT Method		

Table Design Specifications

Description: Fields related file which stores all of the counties in the field.

Validation:

Indexes: State Field Number + State Number + API County Number

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
		0	0				

Table name: FIELDS

Table Design Specifications

Description: The FIELDS database will store information on all active and abandoned oil fields in each state. The purpose of this is to provide a list of all fields. The well file is used to store the field in which each well is located.

Validation:

Indexes: STATE FIELD NUMBER; US FIELD NUMBER; FIELD NAME

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
ST_FLDNO	N	6	0		State Field Number		
US_FLDNO	N	6	0		US DOE Field Number		
NAME	C	25	0		Field Name		
SEC	N	3	0		Discovery Well Section		
TWPN	N	5	1		Discovery Well Township		
TWPD	C	1	0		Discovery Well Township Direction		
RNGN	N	5	1		Discovery Well Range		
RNGD	C	1	0		Discovery Well Range Direction		
PM	C	3	0		Discovery Well Principal Meridian		
YR_DISC	C	4	0		Year Discovered		
MO_DISC	C	2	0		Month Discovered		
DAY_DISC	C	2	0		Day Discovered		
YR_ABD	C	4	0		Year Abandoned		

Table name: FIELDS

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
OIL	C	1	0		Oil Indicator	Indicates presence of oil.	
GAS_A	C	1	0		Gas, Associated Indicator	Indicates presence of Associated Gas.	
GAS_N	C	1	0		Gas, Nonassociated Indicator	Indicates presence of Nonassociated Gas.	
HAZ_CODE	L	1	0		Hazardous Conditions Indicator	"Y" indicates the presence of hazardous conditions.	Code indicating type of hazardous conditions present in the field. Codes to be determined.
FLD_RULES	L	1	0		Special Field Rules Indicator	"TRUE" indicates presence of special field rules.	
COMMENTS	M	10	0		Comments	Comments concerning hazardous conditions, special field rules and any other pertinent information.	
DT_MOD	D	8	0		Date Record Last Modified		

Table name: FORMATN

Table Design Specifications

Description: The FORMATION database will store information on all geologic formations in each state and thereby permit the system to prepare reports displaying full formation names in addition to formation codes. The table will also play a role in editing input data for valid geologic formation.

If a well is completed into multiple formations, each formation will be listed separately in the well's zone file.

Validation:

Indexes: AAPG_CD; INDFRM_CD; ST_FMTN_CD; NAME

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
AAPG_CD	C	8	0		AAPG Formation Code	Consists of Geologic System + Geologic Series + Formation Abbreviation + Zone Code	
INDFRM_CD	C	8	0		Industry Formation Code		
ST_FMTN_CD	C	8	0		State Formation Code	Codes for formations that may currently be used by existing state systems.	
NAME	C	40	0		Formation Name		
LITHO	M	10	0		Lithology		

Table Design Specifications

Description: The Formation Tops database will store the tops of formations reported by the driller or operator. This database will allow for an unlimited number of tops per well.

Validation:

Indexes: API Well Number + Top and Formation Code

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
FMTN_CD	C	8	0		Formation Code	Formation code from the FORMATION database.	
TOP	N	5	0		Depth of the Top of Formation		
METH_OBTND	C	1	0		Method by which Top was obtained.		L=Logs, S=Samples
DT_MOD	D	8	0		Date Last Updated	Date record was updated or last modified.	

Table name: IDLE

Table Design Specifications

Description: The IDLE WELL REPORTS database will store information reported on idle/inactive well status reports and periodic static fluid level tests. An additional data record will be added for each test and the system will maintain a history of past tests and reports.

Validation:

Indexes: API Well Number + Date of Report

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
DT_RPT	D	8	0		Report Date	Last day of the reporting period	
FUT_UTIL	C	5	0		Future Utility		NFU=Future Utility; FSWD=Future Salt Water Disposal; FERI=Future Enhanced Recovery Injection; FDR=Future Deepening or Redrill; FRCP=Future Recompletion; FRC=Future Recondition; SIPO=Shut-in Productive Oil; SIPG=Shut-in Productive Gas.
DT_LASTPRD	D	8	0		Date of Last Production		
DT_ABD_SCH	D	8	0		Date Scheduled for Abandonment		
ST_FL_LVL	N	5	0		Static Fluid Level	Depth to fluid from surface	
DT_MOD	D	8	0		Date Record Added or Modified		

Table Design Specifications

Description: The Internal Mechanical Integrity Test table (or IMIT) will store information related to all IMITs where testing or annulus monitoring is employed. Data will include specific details regarding when IMI demonstrations are performed, details pertaining to the IMIT method employed, test results, and other details necessary for evaluation and tracking by state regulatory agencies.

Validation:

Indexes: Company Number + API Well Number + Test Date + Test Method

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0	Text	API Well Number	The 14-digit API well number is unique for each individual well and includes a unique identifier for sidetracks stemming from a single well.	
DT_TEST	D	0	0	Text	Date of the last recorded IMIT		
TST_REAS	C	6	0	Combo	Reason For Test	Possible Choices would include: Annual IMIT (ANN_TST); 5-year Test (5YR_TST); Post Workover Test (WRKOVN); Initial Test (INITAL); Hole or Leak Depth Determination (LKDPN); Standby or Idle Well Demonstration (STNDBY); Other (OTHER).	
IMIT_METH	C	4	0	Combo	IMIT Method Code	Choices include the following: Standard Annulus Pressure Test (SAPT); APT w/ No Tubing (NAPT); Annulus Monitoring (SAMT); Braidenhead Test (BTST); Ada Pressure Test (ADA); Flow Meter Test (FMT); Dual Completion Test (DUAL); Water-In-Annulus Test (WIAT); Internal Temperature Log Other (ITLO); Fluid Level Test (FLT); Radioactive Tracer Survey (IRTS); Single Point Resistivity (SPRT); Water-Brine Interface Test (WBIT); Internal	Only those IMIT methods included in the IMIT_MTHD Code Table will be allowed. Changes or additions to the table should be approved by the UIC Director.

Table name: **IMIT**

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
						Temperature Anomaly (ITAL); Internal Temperature Differential Log (ITDL); Gas Detector Annulus Pressure Test (GDAP); Other Internal MIT (OIMI).	
IMIT_ITP	N	4	0	Text	IMIT Initial Test Pressure	The starting test pressure for a IMIT pressurization test (e.g., the SAPT).	If a state implements a required minimum test pressure, this field should be compared to "IMIT_RTP" to assure that the IMIT_ITP is greater than or equal to "IMIT_RTP"
IMIT_FTP	N	4	0	Text	IMIT Final Test Pressure	The final test pressure for a IMIT pressurization test.	If a state implements a required minimum test pressure, this field should be compared to "IMIT_RTP" to assure that the IMIT_ITP is greater than or equal to "IMIT_RTP"
IMIT_TD	N	4	0	Text	IMIT Test Duration	The elapsed total time of the official IMIT (i.e., the time from the initial test pressure measurement to the final test pressure measurement).	
TST_RSLT	C	1	0	Combo	IMIT Test Result	"P" = Passed & "F" = Failed. Data entry screen will shown "Passed" or "Failed" next to the check box depending on the entry.	Only a "Passed" or "Failed" response will be acceptable.
MON_RSLT	C	1	0	Combo	Annulus Monitoring Results	"A" = Adequate IMI & "D" = Deficient IMI based on annulus monitoring. This field will correspond to the date that annulus	A DT_TEST must be entered for annulus monitoring to accomplish

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
						monitoring results were reviewed by the state (i.e., "TEST_DATE"). This field could also be used for informal annulus monitoring such as is done in some states by field inspectors by performing braidenhead and other tests to informally evaluate the IMI of an injection well.	EPA reporting requirements. Therefore, the system will not accept a MON_RSLT without a DT_TEST. DT_TEST should be the date Monitoring Results were deemed Adequate or Deficient.
WL_STAT	C	1	0	Combo	Well Status (i.e., Static/Shut-in or Dynamic/Injecting).	This field stores the status of the well during the internal mechanical integrity test. This does not apply to the actual well status which is stored in the WELL.DBF. Therefore, "S" = Static and "D" = Dynamic.	
INJ_RATE	N	6	0	Text	Injection Rate During IMIT	This field stores the well's injection rate measured during the IMIT.	
INJ_PRESS	N	4	0	Text	Injection Pressure (psig)	This field stores injection pressure measured during the IMIT and only applies to wells tested under dynamic conditions.	
REPAIR_DUE	D	8	0	Text	Repair Completion Due Date	The required repair completion date.	
REPAIR_COM	D	8	0	Text	Repair Completion Date	The actual IMI repair completion date	
REP_S_F	C	1	0	Combo	Repair Result	"S" = IMI repair was successful and deficiency remedied "F" = IMI repair was not successful and deficiency continues to exist (i.e., well continues to have deficient IMI).	Only a "S" or "F" will be acceptable.
FAIL_TYPE	C	3	0	Combo	Type of IMI Failure	Possible selections are as follows: Casing (CSG); Tubing (TBG); Packer (PKR);	Data fields from the FAIL_TYPE code table are

Table name: **IMIT**

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
						Wellhead Assembly (WHA); Behind Casing (BCF); Cement (CMT); Other Internal Failure (OIF); Other External Failure (OEF).	the only acceptable entries. Changes or additions to the code table should be approved by the UIC Director.
FAIL_CAUS	C	7	0	Combo	Cause of IMI Failure	Possible Selections include: Mechanical (MECH); Corrosion-General (COR_GEN); Corrosion-Internal (COR_INT); Insufficient or Lack of Cementing Records (ICMT); Inadequate Cement Thickness (CMT_THK); Inadequate Cement Seal (CMTSEAL); Behind Casing Flow (BCF) from Injection Zone to USDW (BCF_INJ); BCF from Production Zone to USDW (BCFPROD); BCF from Alternate Zone to a USDW (BCF_ALT); BCF Occurring from Alternate USDWs (BCF_USD); BCF to a Non-USDW (BCF_NON); Salt Collapse (SALT_CO); Microannulus (MICRO_A); Minimum Test Pressure Not Achieved (MIN_P); Insufficient Pressure Differential (P_DIFF); Pressure not maintained within the 30 to 70 percent range on the pressure gauge or recorder chart (30_70); Inadequate annulus monitoring results; Other.	Data fields from the FAIL_CAUS code table are the only acceptable entries. Changes or additions to the code table should be approved by the UIC Director prior to entry into this field.
WITNESS	C	1	0	Combo	Was Test Witnessed by State	"Y" = IMIT witnessed by a State representative; "N" = IMIT not witnessed by a State representative	A response of "Y" or "N" are the only acceptable entires.
INSPTNAME	C	20	0	Text	Inspector Name	The last name (up to 20-digits) of the state staff member who either witnessed the IMIT	Data fields from the list of inspector names are the

Table name: IMIT

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
						or reviewed the results of an unwitnessed IMIT	only ones acceptable. However, considering that state's will add staff periodically, the list should allow for easy revision by data entry personnel or other users.
DT_MOD	D	0	0	Text	Date Record Updated		
COMMENT	M	10	0	Text	Comments on IMIT	A data type of "Memo" is used for this field. A memo field will expand to enable the user to enter a comment of any length and to add additional comments.	

Table name: INCIDENTS
Table Design Specifications

Description: The INCIDENTS database will store information on complaints, spills, and incidents such as blowouts and fires related to oil and gas operations. Spills are not necessarily related to specific wells, and the system must therefore be able to access records by location.

Validation:

Indexes: API Well Number + Date Incident; Location

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
INCDNTNO	N	6	0		Incident Number	Sequential number assigned to each complaint, spill, or incident.	
API_WELLNO	C	14	0		API Well Number		
SEC	N	3	0		Section		
TWPN	N	5	1		Township Number		
TWPD	C	1	0		Township Direction		N=North; S=South
RNGN	N	5	1		Range Number		
RNGD	C	1	0		Range Direction		E=East; W=West
PM	C	3	0		Principal Meridian		
QTR	C	8	0		Quarter-Quarter Location	Location of the incident within the section.	Spot location will be comprised of the following codes: NE, NW, SW, SE, N2, S2, E2, W2, AND C (Center). Free format will allow for entries such as: NESW, E2NESE, CNE, etc.
ST_NO	N	2	0		State Number		

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
CNTY_NO	N	3	0		County Number		
ST_FLDNO	N	6	0		State Field Number		
CONO	N	9	2		Company Number	Number of Company accountable for incident.	
DT_INCDNT	D	8	0		Date of Incident		
TYP_INCDNT	C	5	0		Type of Incident	Codes to be determined	
VOL_SPILLD	N	7	0		Volume spilled in barrels		
UIC	L	1	0		UIC Related		True = Incident is related to an injection facility or an injection activity.
EMERGENCY	L	1	0		Emergency		True = Circumstances require immediate attention to prevent endangerment, fluid migration, or to protect health and the environment.
DT_NOTIFD	D	8	0		Date State Notified		
TM_NOTIFD	N	5	2		Time State Notified		
DT_RSPOND	D	8	0		Date State Response		
TM_RSPOND	N	5	2		Time State Response		
ACTION	C	2	0		Action Taken		
DT_RSLVD	D	8	0		Date Resolved		

Table name: INCIDENTS

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
COMMENT	M	10	0		Comments		
DT_MOD	D	8	0		Date Record Added or Modified		

Table Design Specifications

Description: The INSPECTION/TEST database will store information on all inspections and tests, except for MIT's which will be stored in the MIT database. Types of tests and inspections included in this file include: new wells, workovers, routine site inspections, complaints, BOP tests and inspections, safety valve tests, and meter inspections. A separate record will be entered for each test or inspection performed. The INSPECTION/TEST database will store information on the date the test or inspection was performed, the type of test or inspection, test results, and corrective actions taken. The system will provide for indicating a maximum of ten failed items per test. A separate code table will store a list of the various types of inspections and tests that are performed and for each Inspection/test type, the codes for the individual pass/fail items that comprise the test.

Validation:

Indexes: API WELL NUMBER + DATE OF TEST

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number	The 14-digit API well number is unique for each individual well and includes accounts for applying a unique identifier for sidetracks stemming from a single well.	
TYP_INSP	C	2	0	Combo	Type of Inspection		
DT_REQR	D	8	0		Date Required	In situations where it is known that a future inspection or test will be required before a certain date, the date will be stored in this data element.	
DT_NOTIFY	D	8	0		Date Operator Notified	Date well operator was notified of the required inspection or test. This field will also be updated by programs that automatically notify operator of required periodic inspections.	
DT_SCHED	D	8	0		Date Scheduled	Date the inspection was scheduled to take place.	
DT_PERFM	D	8	0		Date Performed	The date the inspection or test was performed.	

Table name: INSPECTION

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
DURATION	N	4	1		Duration of inspection in hours.		
INSP_NAME	C	15	0		Inspector Name	Last name of inspector.	
VIOL	L	1	0		Violation or Non-Compliance Identified		Y=Yes, N=No
SNC	L	1	0	Check	Was SNC identified?	Indicates the presence of a SNC.	"Y"=SNC was identified during the inspection.
DT_REMDYRQ	D	8	0		Date Remedy Required		
DT_REMEDY	D	8	0		Date Problems Remedied		
INCDNTNO	N	6	0		Incident Number	This field will be entered if the inspection was the result of a complaint/incident. It will tie to the Incident database where detailed information about the complaint/incident will be stored.	
RIGNO	C	5	0		Rig Number	This field will be entered if a rig inspection was performed. It will tie to the Rig database where information about the rig will be stored.	
COMMENT	M	10	0		Comments		
DT_MOD	D	8	0		Date Record Updated		

Table name: **INSPFAIL**

Table Design Specifications

Description: The INSPECTION/TEST FAIL table will store Failure Codes for all failed items for on all inspections and tests, except MIT's.

Validation:

Indexes: API Well Number + Type of Inspection + Date Performed

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
TYP_INSP	C	2	0		Type of Inspection		
DT_PERFM	D	8	0		Date Performed	The date the inspection or test was performed.	
FAIL	N	2	0		Failure Code		

Table name: LOGS

Table Design Specifications

Description: The LOGS database will store information on logs run, cores, and samples.

Validation:

Indexes: API Well Number + Date Logged

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	N	14	0		API Well Number		
DT_RUN	D	8	0		Date Run		
DT_RECV	D	8	0		Date Received by State		
TYP	C	2	0		Log/Core/Cuttings	Code indicating whether the record pertains to a log, a core sample, or a cutting sample. "LG" = Log, "CR" = Core, "CA" = Core Analysis, "CT" = Cuttings.	
TOP	N	5	0		Top	Top of logged, sampled, or cored interval.	
BOT	N	5	0		Bottom	Bottom of logged , sampled or cored interval.	
LOGSRUN	C	30	0		Logs Run	Text field for indicating logs run using standard abbreviations.	
COMMENT	M	10	0		Comments		
DT_MOD	D	8	0		Date Last Modified		

Table Design Specifications

Description: The UIC MONITORING REPORTS database will store reported injection pressures and volumes. A separate record will be written for each report. If an amended report is submitted, the original report will be replaced with the updated information submitted on the amended report.

Cumulative injection volumes will be computed by totaling individual reports. Pre-system cumulatives will be stored in the Well Record.

Validation:

Indexes: API WELL NUMBER + REPORT YEAR + REPORT MONTH

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number	14 digit API Well Number	
YEAR	N	4	0		Report Period Year		
MONTH	N	2	0		Report Period Month	For monthly reports, enter the report month. For quarterly, semi-annual, and annual reports, enter the last month of the report period.	
RPT_FREQ	N	2	0		Report Frequency	Required Report Frequency in Months	
REC_FREQ	C	1	0		Recording Frequency	Required Recording Frequency	C=Continuous; D=Daily; W=Weekly; M=Monthly; Q=Quarterly; S=Semi-Annual; A= Annual
OPNO		0	0		Operator Number		
POOLNO	N	6	0		Pool Number	Pool into which fluids are injected	
ADJUST	L	1	0	Check	Adjusted Report	Indicates whether the report was an original or an adjusted report.	True = Adjusted
CLASS	C	2	0		Well Class		WELL.DBF
INJ_ZONE	C	8	0		Formation Code of Injection		

Table name: MONITOR

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
					Zone		
INJ_FLUID	C	4	0		Type of Injection Fluid		
INJ_DAYS	N	3	0		Number of Days Injecting		
VOL_LIQ	N	9	0		Liquid Injection Volume for Period	Measured in Barrels	
VOL-GAS	N	9	0		Gas Injection Volume for Period	Measured in MCF	
MAXALOWPR	N	4	0		Maximum Allowable Injection Pressure		
PRS_RES	N	4	0		Average Reservoir Pressure for reporting period		
PRS_TBG_AV	N	4	0		Average Tubing Pressure at Surface		
PRS_TBG_MX	N	4	0		Maximum Tubing Pressure at Surface		
PRS_TC_AVE	N	4	0		Average Tubing/Casing Annulus Pressure at Surface		
PRS_TC_MX	N	4	0		Maximum Tubing/Casing Annulus Pressure at Surface		
PRS_CS_AV	N	4	0		Average Casing/Surface Casing Pressure		
PRS_CS_MX	N	4	0		Maximum Casing/Surface Casing Pressure		

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
OIL_SKIM	N	5	0		Barrels of Oil Skimmed		
RPT_STATUS	C	1	0		Report Status		"N" = Report not received; "A" = Report received and accepted; "U" = Report received with missing or incorrect data.
DELINQ	L	1	0		Delinquent		True = Original report was tardy
VIOL_PRS	L	1	0		Injection Pressure Violation		True = Injection pressure exceeded maximum allowable pressure.
VIOL_RATE	L	1	0		Injection Rate Violation		True = Injection rate exceeded maximum allowable rate.
DT_RPT_REC	D	8	0		Date original report received		
DT_MOD	D	8	0		Date record last modified		

Table name: PERFS

Table Design Specifications

Description: The PERFS database will store information on perforated intervals reported by the operator. A separate data record will be added for each perforated interval. If a set of perfs are squeezed off, the system will indicate the date of the squeeze operation. The system will allow for an unlimited number of perforated intervals per wellbore.

Validation:

Indexes: API Well Number + Top Of Perforation

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
TOP_MD	N	5	0		Top of Perforated Interval		
BOT_MD	N	5	0		Bottom of perforated Interval		
TOP_TVD	N	5	0		Top of Perforated Interval - True Vertical Depth		
BOT_TV D	N	5	0		Bottom of Perforated Interval - True Veritcal Depth		
DT_PERF	D	8	0		Date Perforated		
SHOT_DENS	N	2	0		Shots per Foot		
DT_SQUEEZE	D	8	0	Check	Date Squeezed		
COMMENT	M	10	0		Comments		
DT_MOD	D	8	0		Date Last Modified		

Table Design Specifications

Description: The POOL database will store information on all pools or reservoirs in the state. The pool database serves two primary purposes. First, it establishes a formal set of pools for reports that list production by pool. Second, it permits the system to store information that pertains to individual pools or reservoirs.

The Pool Table and associated data elements are established for the convenience of state oil and gas commissions to allow for the entry of pool specific data. Very few pool data elements are mandatory.

Validation:

Indexes: POOL NUMBER; STATE FIELD NUMBER

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
POOLNO	N	6	0		Pool Number	Required	
POOL_NM	C	30	0		Pool Name		
ST_FLDNO	N	6	0		State Field Number	State Field Number of the field in which the pool is located.	
FMTN_CD	C	8	0		Formations	List of all geologic formations contained within each pool. (Separate related files with Pool Number and Formation Code data elements.)	
YR_DISC	N	4	0		Year Discovered	Year pool was discovered	
OG_DSGNTN	L	1	0		Oil/Gas Designation	Indicates whether the pool is designated as an oil or gas pool.	
OIL	L	1	0		Oil Indicator	Indicates presence of oil.	
GAS_A	L	1	0		Associated Gas Indicator	Indicates presence of Associated Gas	
GAS_N	L	1	0		Non-Associated Gas Indicator	Indicates presence of Non-associated gas.	

Table name: **POOL**

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
UNITIZED	L	1	0		Unitized	Indicates whether the pool is unitized.	
PRES_MAINT	L	1	0		Pressure Maintenance		
RCVRY_MTHD	C	5	0		Recovery Method		PRI=Primary, SEC=Secondary, TER=Tertiary
RCV_MTHSUB	C	6	0		Recovery Method Sub-Category		STEAM,FIRE,C02,POLYM ER, and other codes to be established.
PRI_DRIVE	C	6	0		Primary Drive Mechanism		WATER, GASCAP, DISGAS=Dissolved Gas, COMBO=Combination of Drive Mechanisms, GRV=Gravity Drainage
AREA	N	6	0		Area	Area of pool in acres	
POROS	N	5	2		Effective Porosity		
PERM	N	7	2		Intrinsic Permeability		
NETPAY	N	3	0		Net Pay in Feet		
INIT_OFVF	N	6	4		Initial Oil Formation Volume Factor		
CURR_OFVF	N	6	4		Current Oil Formation Volume Factor		
INIT_GFVF	N	6	4		Initial Gas Formation Volume Factor		

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
CURR_GFVF	N	6	4		Current Gas Formation Volume Factor		
OIL_GRAV	N	4	1		Oil Gravity		
GAS_GRAV	N	6	4		Gas Gravity		
INIT_GSBTU	N	4	0		Initial Gas BTU	Gas BTU per Cubic Foot	
CURR_GSBTU	N	4	0		Current Gas BTU		
INIT_GOR	N	6	0		Initial GOR	Gas-Oil Ratio	
CURR_GOR	N	6	0		Current GOR	Gas-Oil Ratio	
INIT_WTRST	N	4	2		Initial Water Saturation		
CURR_WTRST	N	4	2		Current Water Saturation		
INIT_GASCF	N	7	5		Initial Gas Compressibility Factor (Z)		
CURR_GASCF	N	7	5		Current Gas Compressibility Factor (Z)		
INIT_RESPR	N	6	0		Initial Reservoir Pressure		
CURR_RESPR	N	6	0		Current Reservoir Pressure		
RES_TEMP	N	4	0		Reservoir Temperature (Fahrenheit)		
TDS	N	6	0		TDS of Water	Expressed in milligrams per liter.	
H2S_PPM	N	6	0		Hydrogen Sulfide PPM	Hydrogen Sulfide concentration expressed in parts per million.	

Table name: POOL

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
FLD_RULES	M	10	0		Special Field Rules		
COMMENT	M	10	0		Comments		
DT_MOD	D	8	0		Date Last Modified		

Table Design Specifications

Description: The PRODUCTION TEST (PRODTEST.DBF) database will store information on production tests, gas oil ratio tests, and drill stem tests reported by operators. A separate record will be created for each test.

Validation:

Indexes: API Well Number + Date + Type

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
DT_TEST	D	8	0		Date of Test		
TYP_TEST	C	3	0	List	Type of Test	"DST" = Drill Stem Test, "IPT" = Initial Production Test, "PT" = Production Test, "GOR" = Gas Oil Ratio Test, etc. Other codes will be evaluated for inclusion to the available choices from a list box.	
DST_NO	N	2	0		Drill Stem Test Number		
PROD_METH	C	1	0		Production method	"F" = Flowing, "P" = Pumping, "G" = Gas Lift, etc.	
TOP	N	5	0		Top of Interval Tested		
BOT	N	5	0		Bottom of Interval Tested		
FMTN_CD	C	3	0		Formation Code of Formation Tested.		
CHOKE_SIZE	N	5	3		Choke Size	Choke Size in decimal. A conversion table will be provided in the help screen to convert from 32nd or 64th of an inch to a decimal.	
DURATION	N	5	2		Duration of Test	Duration of Test in hours.	

Table name: PRODTEST

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
PRESS_TFLW	N	5	0		Tubing Pressure Flowing		
PRESS_TSI	N	5	0		Tubing Pressure Shut-In		
PRESS_CFLW	N	5	0		Casing Pressure - Flowing		
PRESS_CSI	N	5	0		Casing Pressure - Shut-In		
PRESS_BH	N	5	0		Bottom Hole Pressure		
PROD_OIL	N	6	0		Oil Produced	In BBLS	
PROD_GAS	N	8	0		Gas Produced	In MCF	
PROD_WTR	N	6	0		Water Produced	In BBLS	
RATE_OIL	N	6	0		Oil 24 Hour Rate	In BOPD	
RATE_GAS	N	8	0		Gas 24 Hour Rate	In MCF per Day.	
RATE_WTR	N	6	0		Water 24-Hour Rate	In BWPD.	
OIL_GRAV	N	4	1		API Gravity of Oil		
COMMENT	M	10	0		Comments		
DT_MOD	D	8	0		Date Last Modified	Date record was added or last modified.	

Table Design Specifications

Description: The PUBLICATION database will store information on all publication mailing lists.

Validation:

Indexes: Company Number + Publication

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
CONO	N	9	2		Company Number		
TYP	C	8	0		Publication Type		
DT_START	D	8	0		Publication Start Date	Many state oil and gas agencies charge for various publications. This and the following data elements will assist with the management of publication mailing lists.	
DT_END	D	8	0		Publication End Date	Publication ending or paid through date	
PD_AMT	N	7	2		Publication Amount Paid		
DT_PAID	D	8	0		Publication Date Paid		
DT_MOD	D	8	0		Date Last Modified		

Table name: RIGS

Table Design Specifications

Description: The RIGS database will store limited information on each rig operating in the state. The primary purpose of this database is to assist in tracking and monitoring rig BOPE tests and inspections. The date of the last BOPE test and rig inspection are stored in the Inspection database.

Validation:

Indexes: Rig Number, Driller Number

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
RIGNO	C	5	0		Rig Number		
DRILLNO	N	9	2		Driller Number		See CONO for type and width of field
STATUS	C	1	0		Status		A=Active, I=Inactive
DESCRIPTN	M	10	0		Description	Description of rig and any additional comments	
DT_MOD	D	8	0		Date Last Modified		

Table Design Specifications

Description: The STRINGS PIPE table will store information on the Length, Grade, and Weight of the Piping used in the Casing String.

Validation:

Indexes: API Well Number + Type of Pipe + Bottom Depth + Casing Grade

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
TYP_PIPE	C	4	0		Type of Pipe		
BOT	N	5	0		Bottom		
LENGTH	N	5	0		Length of Piping		
GRADE	C	1	0		Casing Grade	Codes to be specified in the Code Table	
WEIGHT	N	5	1		Weight per foot		

Table name: STRINGS

Table Design Specifications

Description: The Casing Strings database will store information on existing strings of casing and liner for each well in the system. This file will allow for an unlimited number of casing strings per well.

Validation:

Indexes: API Well No. + Bottom Depth

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
TYP_PIPE	C	4	0		Type of String	"COND" = Conductor, "SURF" = Surface Casing, "INT1" = Intermediate 1 Casing, "INT2" = Intermediate 2 Casing, "INT3" = Intermediate 3 Casing, "PROD" = Production Casing, "LNR" = Liner, "PKR" = Packer, "CIBP" = Cast Iron Bridge Plug, "RBP" = Retrievable Bridge Plug.	Store codes in CODE.DBF so that more codes can be added by users. Sames codes are used by both the STRINGS TYP.PIPE and the CEMENT CSG_STRING fields.
DIA	N	6	3		Diameter	Pipe diameter stored as a decimal and not as a fraction.	
HOLE_SIZE	N	6	3		Hole Size	This data field will not be used for tubing.	
TOP	N	5	0		Top		
BOT	N	5	0		Bottom		
DT_MOD	D	8	0		Date Last Modified	Date record was added or last modified.	

Table Design Specifications

Description: The UIC_PERMIT Table will maintain permit specific information only. Due to the fact that either single-well or multi-well permits can be issued and because rule-authorized injection wells may exist, well specific data and information will be maintained in the "WELL" database.

Validation:

Indexes: API Well Number, State UIC Permit Number

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0	Text	API Well Number	The 14-digit API well number serves as a unique identifier for each individual well and accounts for the state in which the well is located, sidetracks, and multiple completions.	The UIC_PERMIT.DBF will be structured to allow for multiple API Well Numbers to be entered into the database for each permit. This will provide a complete record of all the wells covered under a single permit for multi-well or area permits issued by the state.
UICPERMIT	C	10	0		The UIC Permit Number	This field stores the state issued UIC Permit number.	
EPA_PERMIT	C	11	0		EPA Permit Number	For cases where both State and EPA permit numbers are assigned (i.e., in cases where EPA previously implemented the program), this field will store the EPA permit number. This field does not necessarily need to be filled.	The format for EPA UIC permits is as follows: "MS-001-2R-0001". The first 2-letters are the state identifier (e.g., MS, MT, etc.), a 3-digit county code, a 2-character well type code (i.e., 2D, 2R, or 2H), and a 4-digit well identifier.
PERMIT_TYP	C	1	0	List	Type of Well Permit	Users should be able to chose between either an "Area" permit, or an "Individual" permit. Therefore, "A" = Area Permit & "I" = Individual Well Permit.	

Table name: UIC_PERMIT

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
AP_WELLS	N	3	0		Number of Wells Under Area Permit	This field will store the number of wells covered by an area or multi-well injection well permit issued by the state.	This field should remain unaccessible if the PERMIT_TYP = IP (or individual permit). Therefore, entry into this field will only be possible if the permit is an "area permit".
DT_EFFECT	D	0	0	Text	Date Permit or Order Effective		
DT_APPLIC	D	0	0	Text	Application Date	Date permit or order application received by state	
DT_ISSUED	D	0	0	Text	Date Permit or Order Issued by State		
DT_DENIED	D	0	0	Text	Date Permit or Order Denied		
DTWITHDRAW	D	0	0	Text	Date Permit or Order Withdrawn		
DTMODIFIED	D	0	0	Text	Date Permit or Order Last Modified		
MOD_CODE	C	3	0	Combo	Type of Permit or Order Modification (last modification)	Types of modifications codes include: Alteration; New Information; New Regulations; Compliance Schedule Initiated; Permit Transfer; or Other. Additional codes may be required.	
MAJ_MIN	C	3	0	Combo	Major or Minor UIC Permit/Order Modification?		

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
DT_PNOTICE	D	8	0	Text	Date Public Notice Requirements Achieved		
AFFIDAVIT	C	0	0	Combo	Has Operator Provided Affidavit for Permit Application?		
BOARD_PET	C	0	0	Combo	Has Operator Petitioned the Board for Permit Approval?		
DT_FEE	D	8	0	Text	Date Permit Fee Collected		
FEE_AMOUNT	N	4	0	Text	Permit Fee Amount Collected		
DT_PAPLAN	D	0	0	Text	Date Plugging and Abandonment Plan Approved	"A" = Adequate and "D" = Defficient	
DT_MOD	D	0	0	Text	Date Record Updated		
COMMENT	M	0	0	Text	Comments		

Table name: VIOL_TYP

Table Design Specifications

Description: The Violation Type (VIOL_TYP) table will store the type of violation(s) identified for both production and injection wells. The table will facilitate storage of multiple violations or noncompliance activities occurring under a single enforcement action (formal or informal) as tracked under the COMPLY table.

Validation:

Indexes: API_WELLNO + DT_VIOL + VIOL_TYP

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
DT_VIOL	D	0	0		Date Violation		
VIOL_TYP	C	20	0		Type of Violation		

Table Design Specifications

Description: The WELL database will store information on all wells including injection, production, test, and monitoring wells. A separate data record will exist for each well. The WELL database will store current information about the status and construction of each well from data reported on well permits, completion reports, sundry notices, other reporting forms, and verbal notices.

Validation:

Indexes: API Well Number, Operator Number, Sec-Twp-Range, UIC Permit Number, Lease Number

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
STATE	N	2	0		State API Number		
CNTY	N	3	0		State API County Number		
HOLE	N	5	0		API Well Unique Hole Number		
SIDETRACK	N	2	0		API Well Sidetrack Number		
COMP	N	2	0		API Well Completion Number		
WELL_TYP	C	4	0		Well Type	Type of well, i.e., oil, gas, water injection - disposal, water injection - enhanced recovery, test hole, etc. Codes will be maintained in the well type code table.	
WL_STATUS	C	2	0	Combo	Well Status	Codes will be maintained in the WELL_STAT code table. Lehey codes?	
DT_STATUS	D	8	0		Status Date	Date well changed to the current status	
WL_PERMIT	C	11	0		Well Permit Number	Number of the well permit granting permission to drill the well. Another data element is used to store the UIC Permit Number.	

Table name: **WELL**

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
DT_APPROV	D	8	0		Date Well Construction Permit Approved		
DT_EXPIRE	D	8	0		Date Well Construction Permit Expires		
DT_SPUD	D	8	0		Spud Date		
DT_TD	D	8	0		Date TD Reached		
DT_COMP	D	8	0		Date Completed		
DT_COMPRPT	D	8	0		Date Completion Report Received		
DT_CONFID	D	8	0		Date End of Period of Confidential Data	For tight holes, date of the end of the allotted period for confidential data.	
DT_PROD	D	8	0		Date First Production		
DT_INJ	D	8	0		Date of First Injection		
DT_AUTH	D	8	0		Date Authorization to Transport		
DT_PLUGPLN	D	8	0		Date Plugging Plan Approved		
DT_PA	D	8	0		Date of Well P&A		
WH_SEC	N	3	0		Section - Wellhead	The system will provide for irregular townships that have in excess of 36 sections	
WH_TWPN	N	5	1		Township Number - Wellhead	The system will provide for irregular public land surveys containing half townships.	

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
WH_TWPD	C	1	0		Township Direction - Wellhead		"N" = North & "S" = South.
WH_RNGN	N	5	1		Range Number - Wellhead	The system will provide for irregular public land surveys containing half ranges	
WH_RNGD	C	1	0		Range Direction - Wellhead		"E" = East & "W" = West
WH_PM	C	3	0		Principal Meridian - Wellhead		
WH_QTR	C	8	0		Quarter Section - Wellhead	Location of the well within the section. Spot location will be made from combination of the following codes: NE, NW, SW, SE, N2, S2, E2, W2, and C (Center). Free format will allow for entries such as NESW, E2NESE, CNE, etc.	
SEC_ADDT	C	1	0		Section Descriptor, Additional	In some areas of the Public Land Grid, an additional data element is required to uniquely describe a specific section. This data element can be used for that purpose when required.	
WH_FTNS	N	4	0		Feet from North or South Section Line - Wellhead	Distance of the well in feet from the North or South section line.	
WH_NS	C	1	0		North or South Line - Wellhead	Indicates whether the distance was measured from the North or South line of the section. "N" = North & "S" = South.	"N" = North & "S" = South.
WH_FTEW	N	4	0		Feet from E or W Section Line - Wellhead	Distance of the well in feet from the East or West section line	
WH_EW	C	1	0		East or West Line - Wellhead	Indicates whether the distance was measured from the East or West line of the	"E" = East and "W" = West

Table name: **WELL**

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
						section.	
WH_LAT	N	9	6		Latitude - Wellhead	Latitude stored as a decimal	
WH_LONG	N	10	6		Longitude - Wellhead	Longitude stored as a decimal.	
SOURCE_LOC	C	1	0		Source of Location	Codes indicating the source of location. Specific codes will be defined with users. Examples are: GPS Location; Derived from footage calls provided by user; provided by industry data service. Indicative of the accuracy of the location.	
SLANT	C	1	0		Well Configuration (i.e., vertical, directional, horizontal)		"V" = Vertical, "D" = Directional, & "H" = Horizontal.
WL_COMPL	C	4	0		Well Completion	This field will contain specifications regarding the wells configuration, i.e., single completion, dual_completion, multiple or commingled type completion, etc. Code tables to be established	
DIRSRV_RUN	L	1	0	Check	Directional Survey Run	Indicates whether or not a directional survey was run.	
DIRSRV_REC	L	1	0	Check	Directional Survey Received	Indicates whether or not a directional survey was received by the State regulatory agency.	
BH_SEC	N	3	0		Section - Bottom Hole		
BH_TWPN	N	5	1		Township Number - Bottom Hole		

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
BH_TWPD	C	1	0		Township Direction - BH		
BH_RNGN	N	5	1		Range Number - Bh		
BH_RNGD	C	1	0		Range Direction - BH		
BH_PM	C	3	0		PM - BH		
BH_FTNS	N	4	0		Feet from N or S Section Line of the BH Location	Distance of the bottom hole location in feet from the North or South Section Line.	
BH_NS	C	1	0		North or South Line		
BH_FTEW	N	4	0		Feet from E or W Section Line of the Bottom Hole Location	Distance of the bottom hole location in feet from the East or West Section Line.	
BH_EW	C	1	0		East or West Line		
BH_LAT	N	9	6		Latitude of BH Location	Latitude of bottom hole location stored as a decimal	
BH_LONG	N	10	6		Longitude of BH Location	Longitude of bottom hole location stored as a decimal	
OPNO	N	9	2		Operator Number		
ORIG_OPNO	N	9	2		Original Operator Number		
DRNO	N	9	2		Drilling Contractor Number	Driller Number assigned by the State with detailed information stored in the Company database.	
WELL_NM	C	40	0		Well Name	Consists of the Lease/Unit Name plus the Well Number.

AIM

Association for Information and Image Management

1100 Wayne Avenue, Suite 1100
Silver Spring, Maryland 20910
301/587-8202

Centimeter

Inches

MANUFACTURED TO AIM STANDARDS
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Table name: WELL

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
LEASE_NO	N	6	0		State Assigned Lease Number for Production Accounting		
ST_DIST	C	2	0		State District	State OGCC Districts	
BASIN	N	3	0		AAPG Basin Code		
FIELD_NO	N	6	0		Oil Field Number	Oil field number assigned by the state	
OBJ_FMTN	C	8	0		Objective Formation Code		
POOLNO	N	6	0		Pool Number	Pool from which production occurs or into which fluids are injected.	
CMNGL_DWN	L	1	0		Down Hole Commingled		
CMNGL_SURF	L	1	0	Check	Production from Multiple Wells Commingled at Surface		
DT_CMNGLAP	D	8	0		Date Surface Commingling Approved		
SAMP_REQ	L	1	0	Check	Samples Required?	Indicates whether or not samples are required.	
CATHOD	C	4	0		Cathodic Protection	Codes indicating whether cathodic protection is employed and if so, which type. Codes to be determined.	Cathod.DBF
PIT	L	1	0		Open Pit	Indicates the presence of an open pit at the well site.	
WH_PROAREA	L	1	0		Well Head Protection Area		

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
SURF_OWNER	C	1	0	List	Surface Ownership	"F" = Federal, "S" = State, "I" = Indian, "P" = Private	
MI_FEDERAL	L	1	0	Check	Federal Mineral Interest	Indicates presence of Federal Mineral interest in the well.	
MI_INDIAN	L	1	0	Check	Indian Mineral Interest	Indicates presence of Indian mineral interest in the well.	
MI_STATE	L	1	0	Check	State Mineral Interest	Indicates presence of State mineral interest in the well	
FED_LEASE	C	13	0		Federal Lease Number		
BIA_LEASE	C	13	0		Bureau of Indian Affairs Lease Number		
ST_LEASE	C	10	0		State Lease Number	For leasing of State owned lands.	
ELEV_GR	N	5	0		Ground Elevation	Indicates elevation in feet above the National Geodetic Vertical Datum (NGVD).	
ELEV_KB	N	5	0		Kelly Bushing Elevation		
ELEV_DF	N	5	0		Derrick Floor Elevation		
REF_CONST	C	1	0		Reference for Well Construction		Reference point used for determing depths: G=Ground, K=Kelly Bushing, D=Derrick Floor
REF_TOPS	C	1	0		Reference for Formation Tops		Reference point used for determing depths: G=Ground, K=Kelly Bushing, D=Derrick Floor.

Table name: WELL

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
REF_LOGS	C	1	0		Reference for Logs, Samples and Cores		Reference point used for determining depths: G=Ground, K=Kelly Bushing, D=Derrick Floor.
MD	N	5	0		Measured Depth		
TVD	N	5	0		True Vertical Depth		
PB_MD	N	5	0		Plug Back Measured Depth		
PB_TVD	N	5	0		Plug Back True Vertical Depth		
KO_TVD	N	3	0		True Vertical Depth Kickoff		
UIC_PERMIT	C	11	0		UIC Permit Number		
EPA_PERMIT	C	11	0		EPA Permit Number	The format for EPA UIC permits is as follows: "MS-001-2R-0001". The first 2 letters are the state identifier (e.g., MS,MT,etc.), a 3 digit count code, a 2 character well type code (e.g., 2D, 2R, or 2H), and a 4 digit well identifier.	
RULE_AUTH	L	1	0	Check	Rule Authorized?	Indicates whether or not the well is Rule Authorized. Should this Data Element be in the UIC Permit file?	
CLASS	C	2	0		Class of Injection Well		2D, 2R, 2H, etc.
NEW_EXIST	C	1	0		New or Existing Well	Only for Injection Wells. Indicates that injection well was converted from existing well.	N=New; E=Existing

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
COMMERCIAL	L	1	0	Check	Commercial Disposal Well Indicator		
DT_COMPRVW	D	8	0		Date of Last Compliance Review		
CMPRVWRSLT	C	1	0		Compliance Review Result		A=Adequate; D=Defficient
DT_WTRANAL	D	8	0		Date Water Analysis		
MAXALOWPR	N	4	0		Maximum Allowable Injection Pressure		
MAXALOWRA	N	6	0		Maximum Allowable Rate of Injection in Barrels per Day		
IMIT_RTP	N	4	0	Text	IMIT Required Test Pressure	Required testing pressure to use for the IMIT. This data element may not be desired by all states.	
DT_APMAPP	D	8	0		Date Annulus Pressure Monitoring Approved in Lieu of Pressure Testing or other standard IMI testing methods.	This field stores whether an alternative IMIT (i.e., Annulus Monitoring) has been approved for this well. If a "Y" is entered, this well would be taken off of lists for required standard tests (e.g., annulus pressure test) and would be monitored through the IMIT_MON database. If a "N" is entered, then a frequency would be assigned or entered and the system could generate letters to the well operator regarding notification of testing requirements as appropriate.	WELL.DBF
MINREQAP	N	4	0	Text	Minimum Required Annulus Pressure	This field will maintain the miminum required annulus pressure that an operator	

Table name: **WELL**

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
						is required to maintain on an injection well's annulus (if required) for annulus monitoring. States that do not require minimum annulus pressures may not use this field.	
ANN_FLUID	C	4	0	Combo	Type of Fluid in Annulus		Potential Types are as follows: Brine; Fresh Water; Inhibited Brine; Inhibited Fresh Water; Other Suggestions Welcome
SG_ANNULUS	N	5	3		Specific Gravity of Annulus Fluid		
INJ_FLUID	C	4	0	Combo	Type of Injection Fluid		
SG_INJ	N	6	4		Specific Gravity of Injectate		
PH_INJ	N	4	1		PH of Injectate		
CORR_INJ	C	0	0		Corrosivity of Injectate		
DU_ACRES	N	4	0		Acres in Drilling Unit		
DU_DESC	C	8	0		Description Drilling Unit	Short Description of the configuration unit of the drilling unit for the well. Examples: E2NE, SESW, N2.	
CAT	C	1	0	Text	Category		"W" = Wildcat, "D" = Development, "O" = Other.
PROD_CLASS	C	1	0		Production Classification	Code indicating whether well ever produced oil or gas in commercial quantities. Is initial completion status also required/desired?	"O" = Oil Well, "G" = Gas Well

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
PROD_MTHD	C	1	0		Production Method		"F" = Flowing, "P" = Pumping, etc.
DISP_MTHD	C	1	0		Method of Water Disposal		
DISP_WELL	C	14	0		Disposal Well API Number	The API Number of the disposal well used to dispose of brine produced by the well.	
DISP_FACIL	C	14	0		Water Disposal UIC Permit Number	The UIC Permit number of the commercial facility used to dispose of brine produced by the well.	
H2S_GAS	L	1	0		Sour H2S Gas Present	Used to prepare list of sour gas wells	
DT_OPNOT	D	8	0		Date Operator Notified of IMIT Requirement	This field stores the date that the state sent a MIT notification letter to the operator for this well.	
FRQ_EMIT	N	3	0		Frequency of External MI Demonstration	Required frequency of EMIT in months	
NEXT_EMIT	D	8	0	Scroll	Date Next EMIT Scheduled	This data field will maintain the specific required completion date for the next EMI demonstration. However, it should be noted that in some states, a single EMI demonstration is acceptable for the life of the well. Therefore, it is possible that this field may only be used in states requiring regular demonstrations of EMI (e.g., on a 5-year basis).	
FRQ_IMIT	N	3	0		Frequency of Internal MI Demonstration	Required frequency of IMIT in months.	
NEXT_IMIT	D	8	0		Date Next IMIT Due	This field shows the calculated date that the	

Table name: **WELL**

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
						next IMI demonstration is due by. If an IMI demonstration is not completed by the date maintained in this well, a violation could be signified if the well continues to be operate or violates other state regulatory requirements concerning IMI.	
FRQ_MONRPT	N	3	0		Frequency for UIC Monitoring Reports.	The required reporting frequency for annulus monitoring data in months at a specific well as related to the IMI demonstration.	
FRQ_MONREC	C	1	0		Recording Frequency of Annulus Monitoring IMI Demonstration	The required recording frequency for annulus monitoring of a specific well for the IMI demonstration. Data entry personnel or users will be able to chose from a list box of available possibilities such as continuous, daily, monthly, quarterly, annually, etc.	C=Continuous, D=Daily, M=Monthly, Q=Quarterly, A=Annually
FRQ_GOR	N	3	0		Frequency of GOR or Production Tests	Frequency of required GOR or Production tests in months.	
FRQ_IDLWL	N	3	0		Frequency of Idle Well Reports	Required frequency for Idle Well reports in months.	
HYDRO_PATH	C	1	0		Does the well penetrate pressured formations having sufficient reservoir or aquifer pressures to initiate and sustain flow into the lowermost USDW?	Will be manually entered	
LVL_PROTEC	N	1	0		Levels of Protection		
DT_LVLPROT	D	8	0		Date Levels of Protection		

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
					determined		
COMMENT	M	10	0		Comments		
USER	C	8	0		User ID		
DT_MOD	D	8	0		Date Last Modified		
LAST_IMIT	V	3	0		Time Since Last IMIT	Will compare test dates from previous tests to current date when viewing file. Time will be recorded in months. This field will appear on the view screen but will not require data entry.	
LAST_EMIT	V	3	1		Time since last EMIT	Will compare test dates from previous tests to current date when viewing file. Time will be recorded in months. This field will appear on the view screen but will not require data entry.	Calculated

Table name: WELLHISTORY

Table Design Specifications

Description: The WELL HISTORY database will document changes to the well since the time of the original permit. Such changes will include workovers, change in status, and change of operator. A separate record will be created in the Well History database for each event.

If the activity described in the Well History requires the operator to submit a subsequent document or report to the Oil and Gas Commission, a code for the document and the deadline date will be entered. When the document is received from the operator, the date the document was received will be entered into the Well History record. This will provide the system with information required to generate reports listing delinquent documents.

Codes will be established for various types of events, and these codes will be stored in the system code table. Users will be able to add new codes as required. Examples of Event Codes will include: Workover, Deepened, Plugged Back, Recompleted into New Formation, Change of Operator. To record a change in a well's status, the code for the new status will be entered.

Validation:

Indexes: API Well Number + Date Effective + Type of Event

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
TYP_FORM	C	5	0		Type of Form or Verbal Notice Received	Valid codes will include Oil and Gas Commission form numbers plus additional codes for verbal notices.	
TYP_WORK	C	5	0		Type of Work or Event		
DT_EFFECT	D	8	0		Date Effective		
FAIL_TYP	C	3	0		Type of Mechanical Integrity Failure	If the reason for the workover or plugging was mechanical integrity failure, this data element will store the type of failure. This will permit the system to collect data on mechanical integrity failures that may have been detected by methods other than MIT's.	Examples: TBG=Tubing Failure; CSG=Casing Failure; PKR=Packer Failure. Please refer to the FAIL_TYP data elements in the EMIT and IMIT tables for a complete set of codes.
FAIL_CAUSE	C	7	0		Cause of MI Failure	Please see the FAIL_CAUSE data	

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
						elements in the EMIT and IMIT tables for a complete set of codes.	
SBSQNT_RPT	C	5	0		Type of Subsequent Report Required	Valid codes will include Oil and Gas Commission form numbers.	
DT_RPTREQD	D	8	0		Date Subsequent Report Required		
DT_RPTRCVD	D	8	0		Date Subsequent Report Received		
COMMENT	M	10	0		Comments		
DT_MOD	D	8	0		Date Record Added or Modified		

Table name: ZONEFMTN

Table Design Specifications

Description: The ZONE FORMATION table will provide for all of the Formation Codes associated with the zones for each permit or well in the system.

Validation:

Indexes: API WELL NUMBER + TYPE OF ZONE + TOP

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	C	14	0		API Well Number		
TYP_ZONE	C	1	0		Type of Zone		A=Aquifer, C=Confining Zone, I=Injection Zone, P=Production Zone, B=Alternating Production/Injection, L=Lowermost USDW, U=USDW
TOP	N	5	0		Top of Zone	TVD of the zone top	
FMTN_CODE	C	8	0		Formation Code	Code of the geologic formation or aquifer. From the Geologic Formation Table.	FORMATN.DBF

Table Design Specifications

Description: The zones database will provide the ability to store data on all injection zones, production zones, confining zones, USDWs, and aquifers associated with each permit or well in the system.

All wells drilled under an area or multi-well UIC permit may not encounter equivalent zones at identical depths. The system is therefore designed to store the depths stated on each permit and individually for each well drilled under the permit. The system is also designed to provide for an unlimited number of zones of each type per permit or well.

Zone and intervening thicknesses will not be stored. They will be calculated from zone top and bottom depths.

Validation:

Indexes: API Well Number + Type of Zone + Top; API Well Number + Top; UIC NO. + Type of Zone + Top; and UIC NO. + Top.

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
API_WELLNO	N	14	0		API Well Number		
UIC_PERMIT	C	10	0		UIC Permit Number		
TYP_ZONE	C	1	0		Type of Zone	"A" = Aquifer, "C" = Confining Zone, "I" = Injection Zone, "P" = Producing Zone, "B" = Alternating Production/Injection, "L" = Lowermost USDW, "U" = USDW.	
TOP	N	5	0		Top of Zone	TVD of the zone top	
BOT	N	5	0		Bottom of Zone	TVD of the zone bottom.	
LITHO	C	30	0		Lithology	Description of rock materials in the zone. (EPA Mandatory Data Element)	
TDS	N	6	0		Total Dissolved Solids	Expressed in milligrams per liter.	
EXEMPT	L	1	0	Check	Exempted Aquifer	Indicates whether the formation is an exempted aquifer.	
PERM	N	7	2		Permeability	Permeability expressed in millidarcies.	

Table name: ZONES

Field Name	Data Type	Width	Decimals	Entry Type	Description	Comments	Validation
POROS	N	5	2		Porosity	Porosity expressed in percentage	
FRACP	N	6	0		Fracture Pressure		
FRAC_MTHD	C	1	0		Source of Fracture Pressure		S=Step Rate Test, I= Instantaneous Shut-In Pressure (ISIP), C=Calculated
PRESSURE	N	6	0		Pressure		
DT_MOD	D	8	0		Date Last Modified	Date record was added or last modified.	

Section 5

System Screens

System screen design specifications are presented in this section. Specifications are presented as a screen snapshot. This enables reviewers to envision what the system screens will actually look like. Each of the screens were developed using the screen design tools in Access version 1.1. Screens presented in this section are grouped by RBDMS Module.

The RBDMS screens provide a visual interface between the system and the user and serve two purposes. Screens are used as a vehicle for entering information into the system and to display information that is already stored in the system database. In the past, screens commonly consisted of 24 lines of 80 characters per line. The older screens were therefore referred to as character based screens. Screens that allow for a multitude of font sizes, colors, and graphics are becoming more and more common. These newer screens provide what is commonly referred to as a Graphical User Interface or "GUI". The WINDOWS and ACCESS products used to develop the RBDMS screens provide for a Graphical User Interface and RBDMS will utilize these features.

The RBDMS screens are comprised of several components.

Text Boxes provide space for the entry and display of text and numeric data. A text box is used to enter information such as a company name. Single line text boxes are used to display one line of data. If the text box is not big enough to show all of the data in the field, the user may use the arrow key to scroll to the right. Multi-line text boxes are used for the entry and display of very long text fields such as comments. Multi-line text boxes automatically wrap data onto successive lines. If the text field contains more data than the multi-line text box will accommodate, the arrow keys may be used to scroll up and down to view the rest of the data.

Check Boxes, Toggle Buttons and Option Buttons are used to enter or display a simple Yes/No value. The only difference between these three is how they appear to the user. Check Boxes, Toggle Buttons and Option Buttons are used to enter and display information such as whether an aquifer is exempt or whether a field produces oil.

List Boxes allows the user to select a value from a list of valid options. An example of a List Box is the selection of the Type of Well from the list of valid well types.

A Combo Box is similar to a List Box, but the user may also type in a valid entry without having to move the cursor to the correct choice and selecting the choice.

The RBDMS data entry programs will perform extensive edits on data entered into the system, and List and Combo Boxes are widely used throughout the system. In some situations the valid choices presented in the list are stored in tables maintained by the user. An example of such a table would be the Company Name and Address table. New companies are added to the system as needed. In other circumstances, the list of valid choices remains fairly constant throughout the life of the system. For example, the production method of a well is either Flowing, Pumping, or Gas Lift. In situations where the valid selections do not often change, the valid selections are stored in a Code Table maintained by one designated individual. A single Code Table is used to store the valid codes for many of the system data elements.

A Command Button is used to carry out a command or set of commands.

Many factors were taken into consideration in the design of the RBDMS screens. One of the most important, is the decision regarding the amount of information presented on any screen. All of the well data stored by the system, for example, will not fit on a single screen. In many respects, the question of the amount of information presented on any screen is a matter of personal preference. Some individuals prefer uncluttered screens with a great deal of white space between data fields, while others prefer having as much data as possible on each screen to reduce the need to switch between screens to view all required data. In general, when individuals first use a system they prefer simple screens that are easy to follow. As experience with a system increases, users tend to desire more information on any given screen.

Another question regards which data elements should be grouped together to form a screen. Both the logical relationships between data elements and the agency forms used to collect data from operators were taken into consideration in the design on the screens. For data entry purposes, the data entry screens should closely agree with agency reporting forms.

In general, the inquiry screens were designed to display the most commonly used information on the main screen and infrequently used information on the subsequent screens that the user must display by entering additional keystrokes or using the mouse. An example of this approach is the first well screen which displays the section, township, range, footage calls, latitude, and longitude of the wellhead. The screen also indicates whether or not the well is directionally drilled. The user must depress an additional key to pop up the well's bottom-hole location. This decision was made because only a small percentage of wells have known bottom-hole locations, and there is little benefit to using valuable screen space to regularly present these infrequently used data elements.

One screen that may at first appear to present an inordinate amount of data is the screen used to enter and display information on casing strings, cemented intervals, perforations, and zones (production, injection, USDW's and confining intervals). All of this information

was purposefully presented on one screen to facilitate the comparison of the tops and bottoms of all of these related items.

In some instances, an entire screen is used to enter information on a single data record. This method is employed when the data record contains more information than will comfortably fit on a single line. The Company Name and Address screen is an example of such a screen. The user must display an additional screen to view each additional company. In situations where all information stored in a data record will fit on a single line, the "data sheet" approach is used. In this approach, multiple records are displayed on a single screen, and the user may use the arrow keys to scroll up and down through the list. The County screen is an example of a multi-record screen.

While a mouse is not necessary for the operation of the system, all RBDMS screens will support the use of a mouse.

Examples of State-Specific Cover Screens

RBDMS

Risk Based Data Management System

Developed Through the

UIPRF

Customized for the
**Montana Board of Oil & Gas
Conservation**

Digital Design Group

RBDMS

Risk Based Data Management System

Developed Through the

UPRF

Customized for the
**Nebraska Oil & Gas Conservation
Commission**

Digital Design Group

RBDMS

**Risk Based Data
Management System**

Developed Through the

UIPRF

Customized for the
**Alaska Oil & Gas Conservation
Commission**

Digital Design Group

RBDMS

Risk Based Data Management System

Developed Through the

UIPRA

Customized for the
Mississippi State Oil & Gas Board

Digital Design Group

Specifications for RBDMS Menu System

RBDMS MENUS

Due to the large number of menu choices available to the user, pull-down menus will be employed. The top line of all RBDMS screens will be reserved for a menu bar. The menu bar will be used to display the titles of the menus available to the user. The desired menu may be selected by using either the keyboard or the mouse. When the user selects a particular menu title, the list of options for that menu will then cascade down from the menu title. Again, the desired option may be selected via either the keyboard or the mouse. There are many benefits to utilizing menu bars and pull-down menus, and this approach is now in common use for PC based systems.

It is anticipated that RBDMS will be utilized by a diverse group of users ranging from systems administrators who have access to all programs within the system to members of the public that are permitted very limited access. For this reason, RBDMS will allow different menu choices to be presented to different users based upon information entered in the user logon screen.

During the implementation of the system, oil and gas boards and commissions may wish to develop custom menus for different work groups within each agency. Custom menus streamline work for the user by only presenting menu choices that are actually used by that user while eliminating access to unauthorized programs and data files.

The following tables illustrate two sets of pull-down menus. The "Full System" menu selections allow access to all programs and data within the system. The "Inquiry" menu selections, on the other hand, only provide access to the inquiry programs and prohibit the user from entering or modifying any data stored in the system database.

RBDMS - Full System - Pull Down Menu Selections

WELLS INQUIRY	WELLS DATA ENTRY	REFERENCE TABLE INQUIRY	REFERENCE TABLE DATA ENTRY	REFERENCE FILE REPORTS	PERMIT, CONSTRUCTION, MONITORING RPTS	INSPECTION, COMPLIANCE REPORTS
UIC Permits	UIC Permits	Companies	Companies	Companies	Wells, Comprehensive	EPA 7520 Part I
AOR's	AOR's	Bonds	Bonds	Mailing Labels	Wells, Summary	EPA 7520 Part II-a
Well Permit, History & Construction Data	Well Permit, History & Construction Data	Oil & Gas Fields	Oil & Gas Fields	List Bonds	UIC Permit, One Well	EPA 7520 Part II-b
Inspections	Scheduled Inspections	Geologic Formations	Geologic Formations	Bond & Covered Wells	UIC Permits Status Rpt	EPA 7520 Part III
IMIT's	Inspection Data	Pools/Reservoirs	Pools/Reservoirs	Oil and Gas Fields	Drilling Statistics	EPA 7420 Part IV
EMIT's	IMIT's	Rigs	Rigs	Geologic Formations	Sour Wells by County	MIT - Pressure Test
UIC Monitoring Rpts	EMIT's	Publications	Publications	Pools/Reservoirs	Tight Holes	MIT - Monitoring
Violations & Compliance	UIC Monitoring Reports	Inspection Items	Inspection Items	Rigs	AOR's	MIT Failures
Incidents	UIC Monitoring Report Adjustments	Counties		Publications by Company	Wells with AOR's	MIT Scheduling
Idle Well Reports	Violations & Compliance			Subscribers by Company	Expired Permits & Delinquent Forms	Inspections By Well
	Incidents			Bill Expiring Subscriptions	List Delinquent Tests	Wells Requiring Inspections
	Idle Well Reports			List Inspection Items	Injection Volumes & Pressures	P&A'd Wells Require Surface Inspections
				List Counties	List Delinquent UIC Monitoring Reports	Failed Inspections Reqr Remedial Action
					Injection Pressures > Permitted Maximums	Inspection Statistics
					Inactive UIC Wells	Enforcement Status - Single Well
					Well Specific Environmental Risk	Enforcement Status - Multi-Well
					Multiple Well Environmental Risk	Rigs By Last BOP Inspection
					Incidents By Location	Inspections by Rig
					Delinqnt Idle Well Rpt	Expired TA Approvals

RBDMS - Inquiry - Pull Down Menu Selections

WELLS INQUIRY	REFERENCE TABLE INQUIRY
UIC Permits	Companies
AOR's	Bonds
Well Permit, History & Construction Data	Oil & Gas Fields
Inspections	Geologic Formations
IMIT's	Pools/Reservoirs
EMIT's	Rigs
UIC Monitoring Rpts	Publications
Violations & Compliance	Inspection Items
Incidents	Counties
Idle Well Reports	

Data Entry Screen

for

Company Name and Address Data

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Company: ABCDEFGHIJKLMNOPQRSTUVWXYZABCD First: ABCDEFGHIJKLMNOPQRST Contact: Address: ABCDEFGHIJKLMNO CO 80004 9345		Phone: 999-999-9999 X: 999 FAX: 999-999-9999																		
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Data Entry Screen

for

BONDS

Data Entry Screens

for

Well Permit and Well Construction Data

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Latitude: 99.999999 Longitude: 999.999999 Slant: A BH Locn:										Auth Tms: 7/15/93	
Field No: 999999 ABCDEFGHIJKLMNOPQRSTUVWXYZ Basin: 999										Plug Plan: 7/15/93	
Obj Fmtr: ABCDEFGH ABCDEFGHIJKLMNOPQRSTUVWXYZA										P/A: 7/15/93	
Pool: 999999 MORE OF THE SAME											
ELEVATION KB: 99999 DF: 99999 Gr: 99999		Const: A Meas TVD Kickoff: 99999 Plug Back: 99999 99999 Hole: 99999 99999		Comments: ABCDEFGHIJKLMNOPQRSTUVWXYZ							
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Note: This screen shows an example of the bottom hole location "pop-up" window.

Crescent Softwa																	
File Edit View Records Window Help								File Capture Help									
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> </div> <div>Filter/Sort </div> <div>Field: UIC PERMIT </div> <div> </div> </div>																	
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> API Well No.: 12 345 67890 12 34 </div> <div style="width: 55%;"> Operator: ABCDEFGHIJKLMNOPQRSTUVWXYZABCD </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 45%;"> Cnty Name: </div> <div style="width: 55%;"> Well Name: THIS IS TO TEST ALL 40 CHARACTERS OF THE </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 45%;"> Field Name: ABCDEFGHIJKLMNPOQRS </div> <div style="width: 55%;"> Well Location: 999 999.9 N 999.9 W ABC ABCDEFGH </div> </div> <div style="margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> UIC Permit: ABCDEFGHIJ </div> <div style="width: 10%;"> Rule Auth: ☐ </div> <div style="width: 10%;"> Class: AB </div> <div style="width: 10%;"> Nw/Exst: N </div> <div style="width: 40%;"> Commercial: ☐ </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 30%;"> EPA Permit: ABCDEFGHIJK </div> <div style="width: 10%;"> Dt Let Capinc: 7/15/93 </div> <div style="width: 60%;"> Capl Rsk: A </div> </div> </div>																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 25%;">Maximum Allowable</th> <th style="width: 25%;">Annulus Press Monitng</th> <th style="width: 25%;">Water Analysis</th> <th style="width: 25%;">Freq Next Dt</th> </tr> <tr> <td> Rate: 999999 Inj Press: 9999 IMIT Req Test Pres 9999 </td> <td> Dt Approvd: 7/15/93 Min. Req.: 9999 Typ of Fluid: ABCD SG of Fluid: 9.999 </td> <td> Date: 7/15/93 Inj Fld: ABCD SG Inj: 9.9999 PH Inj: 99.9 Conn Inj: ABCDEFGH </td> <td> EMIT: 999 7/15/93 IMIT: 999 7/15/93 Monit Rpt: 999 Annulus Mon: 999 Dt Oper Notfd 7/15/93 IMIT Req 7/15/93 </td> </tr> </table>										Maximum Allowable	Annulus Press Monitng	Water Analysis	Freq Next Dt	Rate: 999999 Inj Press: 9999 IMIT Req Test Pres 9999	Dt Approvd: 7/15/93 Min. Req.: 9999 Typ of Fluid: ABCD SG of Fluid: 9.999	Date: 7/15/93 Inj Fld: ABCD SG Inj: 9.9999 PH Inj: 99.9 Conn Inj: ABCDEFGH	EMIT: 999 7/15/93 IMIT: 999 7/15/93 Monit Rpt: 999 Annulus Mon: 999 Dt Oper Notfd 7/15/93 IMIT Req 7/15/93
Maximum Allowable	Annulus Press Monitng	Water Analysis	Freq Next Dt														
Rate: 999999 Inj Press: 9999 IMIT Req Test Pres 9999	Dt Approvd: 7/15/93 Min. Req.: 9999 Typ of Fluid: ABCD SG of Fluid: 9.999	Date: 7/15/93 Inj Fld: ABCD SG Inj: 9.9999 PH Inj: 99.9 Conn Inj: ABCDEFGH	EMIT: 999 7/15/93 IMIT: 999 7/15/93 Monit Rpt: 999 Annulus Mon: 999 Dt Oper Notfd 7/15/93 IMIT Req 7/15/93														
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> </div> <div>Record 1</div> <div> </div> </div>																	
<div style="display: flex; justify-content: space-between;"> <div>UIC Permit Number</div> <div>NUM</div> </div>																	

Crescent Software									
File Capture Help									
<div style="display: flex; justify-content: space-between;"> File Edit View Records Window Help STATE </div>									
<div style="display: flex; justify-content: space-around;"> </div>									
<div style="display: flex; justify-content: space-between;"> <div> AP# Well No.: [12] [345] [67890] [12] [34] Crty Name: _____ Field Name: [ABCDEFGHIJKLMNOPQRS] </div> <div> Operator: [ABCDEFGHIJKLMNOPQRSTUVWXYZABCD] Well Name: _____ Well Location: [999] [999] [N] [999] [W] [ABC] [ABCDEFGH] </div> </div>									
<div style="display: flex; justify-content: space-between;"> <div> Date of Test [9/7/93] Type [DST] DST No. [99] Top: [99999] Bottom [99999] Formation: [ABCDEFGH] </div> <div> Method [F] Choke Size [9999] </div> </div>									
<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 5px; width: 45%;"> <h3 style="margin-top: 0;">PRESSURES</h3> <div style="display: flex; justify-content: space-between;"> <div>Flowing Shut-In Tubing [99999] [99999] Casing [99999] [99999]</div> <div>Mod Dt [9/7/93] Duration [99.99]</div> </div> </div> <div style="border: 1px solid black; padding: 5px; width: 45%;"> <h3 style="margin-top: 0;">PRODUCTION</h3> <div style="display: flex; justify-content: space-between;"> <div>Oil [999999] Gas [99999999] Water [999999]</div> <div>24 Hours [999999] Gravity [99.9]</div> </div> </div> </div>									
Comments: THIS IS TEST DATA									

Data Entry Screen

for

Well History

Microsoft Access - Form: VTL HISTORY				Crescent Software	
File Edit View Records Window Help				File Capture Help	
		Filter/Sort:	Field: TYP_FORM		
API Well No.: <input type="text" value="12"/> <input type="text" value="345"/> <input type="text" value="67890"/> <input type="text" value="12"/> <input type="text" value="34"/>		Operator: <input type="text" value="ABCDEFGHIJKLMNOPQRSTUVWXYZABCD"/>			
Cnly Name: <input type="text"/>		Well Name: <input type="text"/>			
Field Name: <input type="text" value="ABCDEFGHJKLMNOPQRS"/>		Well Location: <input type="text" value="999"/> <input type="text" value="999.9"/> <input type="text" value="N"/> <input type="text" value="999.9"/> <input type="text" value="W"/> <input type="text" value="ABC"/> <input type="text" value="ABCDEFGH"/>			
Type of Form <input type="text" value="ABCDE"/> Type of Work <input type="text" value="ABCDE"/> Date Effective <input type="text" value="9/7/93"/>		Type of MI Failure <input type="text" value="TBG"/> Cause of MI Failure <input type="text" value="ABCDEFGH"/> Modify Date <input type="text" value="9/7/93"/>		Subsequent Rpt Req <input type="text" value="ABCDE"/> Date Rpt Req <input type="text" value="9/7/93"/> Date Rpt Rcvd <input type="text" value="9/7/93"/>	
Comments:		THIS IS TEST DATA			
<div> <div>14</div> <div> <div>Record 1</div> <div> <div>Previous</div> <div>Next</div> </div> </div> </div>					
Type of Form or Verbal Notice Received				NUM	

Data Entry Screen
for
Area of Review Data

Microsoft Access - AREA OF REVIEW				Crescent Software	
File Edit View Records Window Help				File Capture Help	
Filter/Sort: ☒ Y ☒ Y ☒ Y		Field: MULTI_WL			

AREA OF REVIEW

Multi?: ☒	UIC Permit: ABCDEFGHIJ	API Well#: ABCDEFGHIJKLMNOP	Dt Mod: 8/11/93
AOR/Var: A	Dt Apprvd: 8/11/93	Radius: 99.99	WHPA: ☐
Type of AOR: <div style="border: 1px solid black; height: 20px; width: 100%;"></div>			<div style="border: 1px solid black; padding: 5px;"> API Well No: </div> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> <div style="border: 1px solid black; text-align: center;"> 1 / 1 Record </div>
Dt Rds Prs: 8/11/93	Rds Prs Inflr: 9.999	INVENT: ☐ Topo Map: ☐	

Number of Wells in AOR

		Deffectv	Require Corr Actn	Pea Inj Zn	Water Wells	Results of Investigation	
Abandoned	999	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Public <input type="text" value="0"/>	Csg Rep <input type="text" value="0"/>	P/A <input type="text" value="0"/>
Not Abandnd	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Drinkg <input type="text" value="0"/>	Oth Corr <input type="text" value="0"/>	Replug <input type="text" value="0"/>

Comments:

1 / 1 Record		NUM	
Single or Multiple Well AOR			

Data Entry/User Screens
for
Class II Injection Well UIC Permits/Orders

UIC Permits and Orders

API Well Number.
▶ 50-670-00431-00-00
50-670-00432-00-00
50-670-00433-00-00
* ☐
Record: 1 ☐

Exit

Print

UIC-1

EPA-1

Area Permit

3

6/1/93

7/1/93

6/18/93

Well Alteration

Yes

No

6/15/93

100

6/15/93

Example of multiple wells assigned to an area permit.

Data Entry/User Screens

for

**Mechanical Integrity Testing
(Internal and External)**

Internal MIT Data

API #: 50-670-00431-00-00

Well Name/Number: MT00431

Operator Number: CVR01

Field Number:

Date	Result
7/25/93	
7/24/93	A
7/23/93	A

Exit

Print

Add Test Date >>

7/23/93

Adequate

100

300

60

Acceptable

Yes

Tim Conway

5-year Test

Ada Pressure Test

Static

200

500

Behind CSG Flow

BCF: Alt. Zone to USDW

7/23/93

Success

First test for this well.

Result

23-J-93

Record: 1

11

Data Entry Screen
for
INSPECTIONS

Microsoft Access - INSPECTIONS										Crescent Software							
File Edit View Records Window Help										File Capture Help							
Filter/Sort:										Field: STATE							
<div style="display: flex; justify-content: space-between;"> <div> API Well No.: 12 345 67890 12 34 </div> <div> Operator: ABCDEFGHIJKLMNOPQRSTUVWXYZABCD </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> Cnty Name: </div> <div> Well Name: </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> Field Name: ABCDEFGHIJKLMNOPQRS </div> <div> Well Location: 999 999.9 N 999.9 W ABC ABCDEFGH </div> </div>																	
<div style="display: flex; justify-content: space-between;"> <div> API Well No: 12345678901234 </div> <div> Type: AB </div> <div> Complaint#: 999999 </div> <div> Dt Mod: 8/20/93 </div> </div>																	
<div style="margin-bottom: 5px;">Dt Required: 8/20/93</div> <div style="margin-bottom: 5px;">Dt Notified: 8/20/93</div> <div style="margin-bottom: 5px;">Dt Scheduled: 8/20/93</div> <div style="margin-bottom: 5px;">Dt Rmdy Req: 8/20/93</div> <div>Dt Remedied: 8/20/93</div>				<div style="margin-bottom: 5px;">Dt Performed: 8/20/93</div> <div style="margin-bottom: 5px;">Duration: 99.9</div> <div style="margin-bottom: 5px;">SNC?: ☐</div> <div style="margin-bottom: 5px;">Violation: ☐</div> <div style="margin-bottom: 5px;">Inspector: ABCDEFGHIJKLMNO </div>				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Fail Code</th> </tr> </thead> <tbody> <tr><td>95</td></tr> <tr><td>96</td></tr> <tr><td>97</td></tr> <tr><td>98</td></tr> <tr><td>99</td></tr> </tbody> </table> <div style="margin-top: 5px;"> 4 Record 1 </div>				Fail Code	95	96	97	98	99
Fail Code																	
95																	
96																	
97																	
98																	
99																	
<div style="display: flex;"> <div style="flex: 1;"> Comments: </div> <div style="flex: 4; border: 1px solid black; min-height: 100px;"></div> </div>																	
<div style="display: flex; justify-content: space-between;"> <div> Record 1 </div> <div> </div> </div>																	
API State Number										CAPS NUM							

Data Entry Screen
for
UIC Monitoring Reports

Crescent Software										
File Edit View Records Window Help										
<div style="display: flex; justify-content: space-between;"> Field: APIST ? </div>										
API Well No.: 12 345 67890 12 34					Operator: ABCDEFGHIJKLMNOPQRSTUVWXYZABCD					
Cnty Name:					Well Name:					
Field Name: ABCDEFGHIJKLMNOPQRS					Well Location: 999 999.9 N 999.9 W ABC ABCDEFGH					
Yr Mth Freq Report 93 8 12 Recording M			Adjusted?: ☒ DLQ: ☐ Class: AB		Oper: 999999.99 Phone: 999-999-9999 X: 999 ABCDEFGHIJKLMNOPQRSTUVWXYZABCD ABCDEFGHIJKLMNOPQRST ABCDEFGHIJKLMNOPNO CO 80004 9345					
Pool: 999999					Inj Zone: ABCDEFGH #Name?					
INJECTING			Volumes:		Rsrv/Alw Tbg Tb/Cs Cs				VIOLATIONS:	
Typ Fld: ABCD		Liquid: 9999999999		Avg Prs: 9999 9999 9999 9999				Pressure ☐		
Days: 180		Gas: 9999999999		Max Prs: 9999 9999 9999 9999				Rate ☐		
		Oil Skim: 32000		Rpt Status: A		Dt Orig Rcvd: 8/30/93		Dt Mod: 8/30/93		
<div style="display: flex; justify-content: space-between;"> API State Number CAPS NUM </div>										

Data Entry Screen

for

Idle Well Reports

[illegible]

Data Entry Screen

for

Complaints, Spills and Other Incidents

Microsoft Access - INCIDENTS				Crescent Software	
File Edit View Records Window Help				File Capture Help	
Filter/Sort				Field: INCDNTNO	
INCIDENTS					
Incident#: <input type="text" value="0"/>		Dt Incident: <input type="text"/>		Type: <input type="text"/>	
Vol Spilled: <input type="text" value="0"/>		UIC: ☐		Emergency: ☐	
API Well No: <input type="text"/>		Dt Mod: <input type="text"/>			
Date/Time Notified: <input type="text"/>		Location: Sec: <input type="text" value="0"/> Twp: <input type="text" value="0"/> Range: <input type="text" value="0.0"/> PM: <input type="text"/> Qtr: <input type="text"/>			
Date/Time Response: <input type="text"/>		State/Cnty: <input type="text" value="0"/> <input type="text" value="0"/> <input type="text"/>			
Date Resolved: <input type="text"/>		Field/Name: <input type="text" value="0"/> <input type="text"/>			
Action: <input type="text"/>					
Comments:		<div></div>			
Record 2					
Incident Number				CAPS NUM	

Data Entry/User Screens

for

Enforcement, Violation, AND Compliance Tracking Data

Compliance Information

API #: 50-670-00431-00-00

Well Name/Number: MT00431

Operator Number: CVR01

Field Number:

123

9/5/93

Casing/Cemen

9/3/93

9/3/93

Phone Call

9/4/93

FI

9/5/93

Yes

9/5/93

Casing Repair

1000

Record: 1

Data Entry Screens
for
System Reference Files

Microsoft Access COUNTY Crescent Software

File Edit View Records Window Help File Capture Help

Fields/Sort: Y Y Z Field: STATE_NO

COUNTY

State#	API#	FIPS#	Cnty Name
1	2		ABCDEFGHIJKLMNQRST
12	123	12	12345678901234567890
99	99	99	ABCDEFGHIJKLMNQRST
99	999	99	ABCDEFGHIJKLMNQRST
*			

Record 1 CAPS NUM

State Number

Crescent Software																
File Edit View Records Window Help																
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> </div> <div>Filter/Sort: Y Y Z</div> <div>Field: ST_FLDNO</div> <div> </div> </div>																
<h2 style="margin: 0;">FIELDS</h2>																
<div style="display: flex; justify-content: space-between;"> <div>St Fld No: 999999</div> <div>Name: ABCDEFGHJKLMNOPQRSTUVWXYZ</div> <div>DOE Fld No: 999999</div> <div>Fld Rules: ☐</div> </div>																
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <div style="display: flex; justify-content: space-between;"> <div>Discovery</div> <div>Sec:</div> <div>Twp:</div> <div>Rng:</div> <div>PM:</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Well Legal</div> <div>999</div> <div>999.9</div> <div>N</div> <div>999.9</div> <div>W</div> <div>ABC</div> </div> </div> <div style="width: 45%;"> <div style="display: flex; justify-content: space-between;"> <div>Date</div> <div>Year</div> <div>Mth</div> <div>Day</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Discovered</div> <div>1993</div> <div>12</div> <div>31</div> </div> </div> <div style="width: 45%;"> <div style="text-align: center;">Yr Abandoned</div> <div style="text-align: center;">1993</div> </div> </div>																
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>State</th> <th>City</th> <th>Entry Name:</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>123</td> <td>12345678901234567890</td> </tr> <tr> <td>99</td> <td>99</td> <td>ABCDEFGHIJKLMNQRST</td> </tr> <tr> <td>99</td> <td>999</td> <td>ABCDEFGHIJKLMNQRST</td> </tr> <tr> <td>*</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div> <div style="width: 60%;"> <div style="display: flex; justify-content: space-between;"> <div>Pressence Of: Oil ☐</div> <div>Assoc Gas ☒</div> <div>Non-Assoc Gas ☐</div> </div> <div style="text-align: right; margin-top: 10px;">Mod Dt: 7/16/93</div> </div> </div>		State	City	Entry Name:	12	123	12345678901234567890	99	99	ABCDEFGHIJKLMNQRST	99	999	ABCDEFGHIJKLMNQRST	*	0	0
State	City	Entry Name:														
12	123	12345678901234567890														
99	99	ABCDEFGHIJKLMNQRST														
99	999	ABCDEFGHIJKLMNQRST														
*	0	0														
<div style="border: 1px solid black; padding: 5px; height: 100px;"> <div style="display: flex; justify-content: space-between;"> <div>Hazardous Conditions:</div> <div>ABC</div> </div> </div>																
<div style="display: flex; justify-content: space-between; align-items: center;"> <div>Record 1</div> <div> </div> </div>																
<div style="display: flex; justify-content: space-between;"> <div>State Field Number</div> <div>CAPS NUM</div> </div>																

The screenshot shows a software application titled "FORMATIONS". The interface includes a menu bar with "File", "Edit", "View", "Records", "Window", and "Help". Below the menu is a toolbar with various icons and a "Filter/Sort" dropdown menu currently set to "Field: AAPG_CD". The main workspace is titled "FORMATIONS" and contains several data entry fields: "AAPG Cd:" with the value "ABCDEFGH", "Industry Cd:" with "ABC", "State Cd:" with "ABCDEFGH", "Name:" with "ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEFGHIJKLMN", and "Lithology:" which is currently empty. At the bottom, a status bar displays "AAPG Formation Code" and "CAPS NUM".

Crescent Software			
File Edit View Records Window Help			
Filter/Sort: [Y] [Y] [Y] Field: RIGNO			
Rig No	VWXYZ	Status	A
Mod Dt	9/7/93	Driller	999999.99
		Phone	999-999-9999 X 999
Description:	Company: ABCDEFGHIJKLMNOPQRSTUVWXYZABCD		
THIS IS TEST DATA	First: ABCDEFGHIJKLMNOPQRST		
	ABCDEFGHIJKLMNO CO 80004 9345		
[N] 1 Record: [P] [N]			
Rig Number		NUM	

Data Entry Screen

for

**POOLS
(Reservoirs)**

File Edit View Records Window Help

Microsoft Access - Form - POOL

File Capture Help

Field Pool Name: TEST DATA THAT STRETCHES FOR

Field Name: ABCDEFGHIJKLMNOPQRSTUVWXYZ

Mod Dt: 9/3/93

Yr Discovered: 1993

OG Design ☒ Gas-Misc ☒ Unizied ☒ Pts Mnt ☒

Formation: ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEFGHIJKLMN

Field: 999999

Field Name: ABCDEFGHIJKLMNOPQRSTUVWXYZ

Pool: 123456

Field: 999999

Field Name: ABCDEFGHIJKLMNOPQRSTUVWXYZ

Pool Name: TEST DATA THAT STRETCHES FOR

Field Name: ABCDEFGHIJKLMNOPQRSTUVWXYZ

Recovery Method/Sub: WATER

Area: 999999

Porosity: 99.99

Permeability: 999

NI Pay: 999999

H2S PPM: 999999

TDS Wt: 999999

Res Temp: 9999

Initial: 9.9999

Gas FVF: 9.9999

Gas BTU: 9999

GOR: 9999999

Gas CF: 9.999999

Wt Sal: 9.99

Rsw Pts: 9999999

Gravity: 99.9

Gas: 9.99999

Field Rules: TEST DATA IN FIELD RULES

Comment: TEST COMMENTS

Record 1

Record 1

Calculating...

NUM

Section 6

System Standard Reports

Several report formats and specifications were developed during the RBDMS design effort. The design specifications developed for these reports will be incorporated as standard functions of the fully developed RBDMS. However, due to the complexities and personal preferences involved with developing standard reports for use by individual states, additional standard reports and automated letters, which are customized for individual states, will be specified and incorporated into individual state systems during the development and implementation phase. For instance, some of the letters anticipated for development during the next phase of the project include:

- MIT Notification Letters
- MIT Overdue Letters
- MIT Insufficiency Letters
- Notices of Violation (for standard Violations)
- Inspection Notification Letters
- Inspection Violation Notification Letters
- Permit Application Denial or Insufficiency Letters
- Requests for Information (if applicable)
- Additional letters as appropriate

Design specifications for these various letters and reports that may not be standard for all states have not been included in the design effort. The four states participating in the design currently have required or standard formats for these and other letters. Participating states also have certain criteria that they typically track on both injection and production wells based on state regulations, field rules, or other criteria that can best be addressed once the RBDMS is in the prototype stage and states have the opportunity to realize the full capabilities of the system. Therefore, specifying design criteria for these automated letters and reports is not required at this early stage of system and has not been included in this document.

Design specifications for standard reports generally applicable to all states (including EPA 7520 reports) are provided on the following pages.

**Specifications
for
EPA 7520 Reports**

RBDMS Report Specifications
EPA 7520 Part I: Permit Review and Issuance/Wells in Area of Review Report

Summary:

The 7520 Part I report is used to list data automatically assessed and complied from several database tables within RBDMS for reporting purposes to EPA.

Media and Format:

8.5" x 11.0" Portrait, See attached report for specific format and legend to specific alpha-numeric numbers presented in the report body detail (below).

Report Frequency:

Quarterly or as needed

Database Tables Processed:

AOR; COMPANY; UIC_PERMIT; WELL

User Selection Options:

Reporting Period

User Sort Options:

Report is pre-sorted as presented in the attached report legend

Report Header:

Report Header is pre-determined as presented in the attached report legend

Report Body Detail

No.	Field Name	Comment
A1	For WELL.CLASS=2D, Count summation of UIC_PERMIT.DT_APPLIC for specified period.	Number of Permit Applications Received?
A2	For WELL.CLASS=2D, Count UIC_PERMIT.PERMIT_TYP=I and WELL.NEW_EXIST=N.	Number of Individual Permits Issued (one well) - New Wells?
A3	For WELL.CLASS=2D, Count UIC_PERMIT.PERMIT_TYP=I and WELL.NEW_EXIST=E.	Number of Individual Permits Issued (one well) - Existing wells?
A4	For WELL.CLASS=2D, Count UIC_PERMIT.PERMIT_TYP=A and WELL.NEW_EXIST=N.	Number of Area Permits issued (multiple wells) - New Well Field?
A5	For WELL.CLASS=2D, Count UIC_PERMIT.PERMIT_TYP=A for WELL.NEW_EXIST=E	Number of Area Permits Issued (multiple wells) - Existing Well Field?

RBDMS Report Specifications
EPA 7520 Part I: Permit Review and Issuance/Wells in Area of
Review Report

A6	For each permit identified in A4 count the number of wells indicated in UIC_PERMIT.AP_WELLS. Put total number of wells in this field.	Number of Wells in Area Permits - New Wells?
A7	For each permit identified in A5 count the number of wells indicated in UIC_PERMIT.AP_WELLS. Put total number of wells in this field.	Number of Wells in Area Permits - Existing Wells?
A8	For WELL.CLASS=2D, Count UIC_PERMIT.DT_DENIED.	Number of Permits Deied/ Withdrawn (after technical review)?
A9	For WELL.CLASS=2D, Count UIC_PERMIT.MAJ_MIN=MAJ	Number of Major Permit Modifications Approved?
A10	For WELL.CLASS=2D, Count WELL.NEW_EXIST=N and WELL.DT_COMP within the date-range specified by the user for this reporting period.	Number of New Wells Drilled?
A11	For WELL.CLASS=2D and WELL.RULE_AUTH=Y, Count WELL.DTCOMPRVW for specified period.	Number of Rule Authorized Wells Reviewed (total reviewed)?
A12	For WELL.CLASS=2D and WELL.RULE_AUTH=Y, Count COMPLY.COMPL_5 and WELL.CMPRVWRSLT=A.	Number of Rule Authorized Wells Reviewed (wells passing)?
A13	For WELL.CLASS=2D and WELL.RULE_AUTH=Y, Count WELL.DTCOMPRVW and WELL.CMPRVWRSLT=A.	Number of Rule Authorized Wells Reviewed (wells defficient)?
A14	For WELL.CLASS=2D, Count summation of AOR.ABANWL.	Number of Wells in AOR (abandoned wells)?
A15	For WELL.CLASS=2D, Count summation of AOR.WLOTHR.	Number of Wells in AOR (other wells)?

RBDMS Report Specifications
EPA 7520 Part I: Permit Review and Issuance/Wells in Area of
Review Report

A16	For WELL.CLASS=2D, Count summation of AOR.CAABAN.	Number of Wells Identified for Corrective Action - Abandoned Wells?
A17	For WELL.CLASS=2D, Count summation of AOR.CAOTHR.	Number of Wells Identified for Corrective Action - Other Wells?
A18	For WELL.CLASS=2D, Count summation of AOR.CSGREP.	Number of Wells in AOR with Casing Repaired/Recommended?
A19	For WELL.CLASS=2D, Count summation of AOR.PLGABN.	Number of Active Wells in AOR Plugged/Abandoned?
A20	For WELL.CLASS=2D, Count summation of AOR.REPLUG.	Number of Abandoned Wells in AOR Plugged?
A21	For WELL.CLASS=2D, Count summation of AOR.CASUM.	Number of Wells in AOR with Other Corrective Action?
B1 to B21	Use same specifications as above, except change WELL.CLASS=2R.	See Above
C1 to C21	Use same specifications as above, except change WELL.CLASS=2H.	See Above
Report Footer: Standard per attaced report legend		

United States Environmental Protection Agency
Office of Ground Water and Drinking Water
Washington, DC 20480
UIC Federal Reporting System
**Part I: Permit Review and Issuance/
Well in Area of Review**
(This information is solicited under the
authority of the Safe Drinking Water Act)

I. Name and Address of Preparing Agency 26

II. Date Prepared (Mo., day, yr) 22

III. State Contact (name, telephone No.) 23

IV. Recording Period (Month/Year)

From: 24

To: 25

Class and Type of Injection well

Item

SWD

ER

LHS

V. Permit
Application

Number of Permit Applications Received

A1

B1

C1

VI.
Permit
Determin-
ation

Permits
Issued

A

Number of Individual
Permits Issued (One Well)

New Wells

A2

B2

C2

Existing Wells

A3

B3

C3

B

Number of Area Permits
Issued (Multiple Wells)

New Well Field

A4

B4

C4

Existing Well Field

A5

B5

C5

C

Number of Wells in Area
Permits

New Wells

A6

B6

C6

Existing Wells

A7

B7

C7

Permits Not
Issued

D

Number of Permits Denied/Withdrawn (after
complete technical review)

A8

B8

C8

Modification
Issued

E

Number of Major Permit Modifications Approved

A9

B9

C9

New Wells

F

Number of New Wells Drilled

A10

B10

C10

VII.
Permit
File
Review

Number of Rule-Authorized
Class II Wells Reviewed

Wells Reviewed

A11

B11

C11

Wells Passing

A12

B12

C12

Wells Deficient

A13

B13

C13

VIII.
Area
of
Review
(AOR)

Wells
Reviewed

A

Number of Wells in Area
of Review

Abandoned Wells

A14

B14

C14

Other Wells

A15

B15

C15

Wells
Identified for
C/A

B

Number of Wells Identified
for Corrective Action

Abandoned Wells

A16

B16

C16

Other Wells

A17

B17

C17

Wells
with
C/A

C

1. Number of Wells in AOR with Casing
Repaired/Recommended

A18

B18

C18

2. Number of Active Wells in AOR
Plugged/Abandoned

A19

B19

C19

3. Number of Abandoned Wells in AOR Plugged

A20

B20

C20

4. Number of Wells in AOR with Other Corrective
Action

A21

B21

C21

IX. Remarks/Ad Hoc Report (Attach additional attachments as necessary)

Certification

I certify that the statements I have made on this form and all attachments thereof are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under appropriate law.

Signature and Typed or Printed Name and Title of Person Completing Form

Date

Phone No.

RBDMS Report Specifications
EPA 7520 Part II-a: Compliance Evaluation (all applicable wells)

Summary:

The 7520 Part II-a report is used to list data automatically assessed and complied from several database tables within RBDMS for reporting purposes to EPA.

Media and Format:

8.5" x 11.0" Portrait, See attached report for specific format and legend to specific alpha-numeric numbers presented in the report body detail (below).

Report Frequency:

Quarterly or as needed

Database Tables Processed:

COMPANY; COMPLY; WELL

User Selection Options:

Reporting Period

User Sort Options:

Report is pre-sorted as presented in the attached report legend

Report Header:

Report Header is pre-determined as presented in the attached report legend

Report Body Detail

No.	Field Name	Header/Comment
D1	Count COMPLY.DT_VIOL for WELL.CLASS=2D.	All summations will be based on the dates selected in fields 34 and 35.
D2	Count COMPLY.DT_VIOL for COMPLY.VIOL_TYPE=UI for WELL.CLASS=2D.	Number of unauthorized injection violations?
D3	Count COMPLY.DT_VIOL for COMPLY.VIOL_TYPE=MI for WELL.CLASS=2D.	Number of Mechanical Integrity Violations?
D4	Count COMPLY.DT_VIOL for COMPLY.VIOL_TYPE=PR for WELL.CLASS=2D.	Number of Injection Pressure/Rate Violations?
D5	Count COMPLY.DT_VIOL for COMPLY.VIOL_TYPE=PA for WELL.CLASS=2D.	Number of Plugging and Abandonment Violations?

RBDMS Report Specifications
EPA 7520 Part II-a: Compliance Evaluation (all applicable wells)

D6	Count COMPLY.DT_VIOL for COMPLY.VIOL_TYPE=OM for WELL.CLASS=2D.	Number of Operation/Maintenance Violations?
D7	Count COMPLY.DT_VIOL for COMPLY.VIOL_TYPE=MR for WELL.CLASS=2D.	Number of Monitoring/Reporting Violations?
D8	Count COMPLY.DT_VIOL for COMPLY.VIOL_TYPE=FO for WELL.CLASS=2D.	Number of Violations of Formal Orders?
D9	Count COMPLY.DT_VIOL for COMPLY.VIOL_TYPE=CC for WELL.CLASS=2D.	Number of Casing/Cementing Violations?
D10	Count COMPLY.DT_VIOL for COMPLY.VIOL_TYPE=FA for WELL.CLASS=2D.	Number of Falsification Violations?
D11	Count COMPLY.DT_VIOL for COMPLY.VIOL_TYPE=FR for WELL.CLASS=2D.	Number of Financial Responsibility Violations?
D12	Count COMPLY.DT_VIOL for COMPLY.VIOL_TYPE=OT or PT for WELL.CLASS=2D.	Number of Other Violations?
D13	Count COMPLY.DT_ENFORCE for WELL.CLASS=2D.	Number of Wells with Enforcement Actions?
D14	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=NV for WELL.CLASS=2D.	Number of Notices of Violation?
D15	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE={UO and CO and PS and SI and AO} for WELL.CLASS=2D.	Number of Administrative Orders?
D16	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=UO for WELL.CLASS=2D.	Number of Unilateral Orders?

RBDMS Report Specifications EPA 7520 Part II-a: Compliance Evaluation (all applicable wells)		
D17	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=CO for WELL.CLASS=2D.	Number of Consent Orders?
D18	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=PS for WELL.CLASS=2D.	Number of Pipeline Severences?
D19	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=SI for WELL.CLASS=2D.	Number of Wells Shut In?
D20	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=AO for WELL.CLASS=2D.	Number of Other Administrative Orders?
D21	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=CD for WELL.CLASS=2D.	Number of Consent Decrees?
D22	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=CV for WELL.CLASS=2D.	Number of Civil Referrals?
D23	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=CR for WELL.CLASS=2D.	Number of Criminal Referrals?
D24	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=FI for WELL.CLASS=2D.	Number of Emergency Inspections?
D25	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=SC for WELL.CLASS=2D.	Number of Show Cause Hearings?
D26	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=CB for WELL.CLASS=2D.	Number of Commence Bond Forfeitures?
D27	Count COMPLY.DT_ENFORCE for COMPLY.ENF_TYPE=IO or JO for WELL.CLASS=2D.	Number of Other Enforcement Actions Against Violations?

RBDMS Report Specifications
EPA 7520 Part II-a: Compliance Evaluation (all applicable wells)

D28	Count COMPLY.DATE_COMPL for WELL.CLASS=2D for Quarter.	Number of Wells Returned to Compliance this Quarter?
D29	Count COMPLY.DATE_COMPL for WELL.CLASS=2D Year to Date.	Number of Wells Returned to Compliance this Year?
D30	Count COMPLY.DT-VIOL for COMPLY.VIOL_TYPE=US for WELL.CLASS=2D.	Number of Cases of Alleged Contamination of a USDW?
D31	Specific counting method varies, will require states to complete manually.	Percent of MIT Violations Resolved in 90 Days?
E1 to E31	Substitute WELL.CLASS=2R and use same format as for D1 through D31	See Above
F1 to F31	Substitute WELL.CLASS=2H and use same format as for D1 through D31	See Above

Report Footer:

Pre-determined as Specified on attached report legend

United States Environmental Protection Agency
Office of Ground Water and Drinking Water
Washington, DC 20480
UIC Federal Reporting System
Part II-a: Compliance Evaluation

I. Name and Address of Preparing Agency: 36

(This information is solicited under the authority of the Safe Drinking Water Act)

II. Date Prepared (M/D/Y) 32

III. State Contact (name, phone No.) 33

IV. Recording Period (Month/Year)

From: 34

To: 35

			Class and Type of Injection well					
Item			SWD	ER	LHS			
V. Summary of Significant Non- Compliance (SNC)	Total Wells	A	Number of Wells With Violations	D1	E1	F1		
	Total Violations	B	1. Number of Unauthorized Injection Violations	D2	E2	F2		
			2. Number of Mechanical Integrity Violations	D3	E3	F3		
			3. Number of Injection Pressure/Rate Violations	D4	E4	F4		
			4. Number of Plugging and Abandonment Violations	D5	E5	F5		
			5. Number of Operation/Maintenance Violations	D6	E6	F6		
			6. Number of Monitoring/Reporting Violations	D7	E7	F7		
			7. Number of Violations of Formal Orders	D8	E8	F8		
			8. Number of Casing/Cementing Violations	D9	E9	F9		
			9. Number of Falsification Violations	D10	E10	F10		
			10. Number of Financial Responsibility Violations	D11	E11	F11		
			11. Number of Other Violations (Specify)	D12	E12	F12		
VI. Summary of Enforcement Against SNC Violations	Total Wells	A	Number of Wells with Enforcement Actions	D13	E13	F13		
	Total Enforcement Actions	B	1. Number of Notices of Violations	D14	E14	F14		
			2. Number of Administrative Orders	D15	E15	F15		
			a. Unilateral Order	D16	E16	F16		
			b. Consent Order	D17	E17	F17		
			c. Pipeline Severance	D18	E18	F18		
			d. Well Shut-in	D19	E19	F19		
			e. Other	D20	E20	F20		
			3. Number of Consent Decrees	D21	E21	F21		
			4. Number of Civil Referrals	D22	E22	F22		
			5. Number of Criminal Referrals	D23	E23	F23		
			6. Number of Emergency Inspections	D24	E24	F24		
			7. Number of Show Cause Hearings	D25	E25	F25		
			8. Number of Commence Bond Forfeitures	D26	E26	F26		
			9. Number of Other Enforcement Actions Against Violations (Specify)	D27	E27	F27		
			VII. Summary of Compliance	Number of Wells Returned to Compliance	A. This Quarter	D28	E28	F28
					B. This Year	D29	E29	F29
VIII. Contamination	Number of Cases of Alleged Contamination of a USDW		D30	E30	F30			
IX. MIT Resolved	Percent of MIT Violations Resolved in 90 days		D31	E31 -	F31			

Certification

I certify that the statements I have made on this form and all attachments thereof are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under appropriate law.

Signature and Typed or Printed Name and Title of Person Completing Form

Date

Phone No.

RBDMS Report Specifications
EPA 7520 Part II-b: Compliance Evaluation,
Significant Noncompliance (all applicable wells)

Summary:

The 7520 Part II-b report is used to list data automatically assessed and compiled from several database tables within RBDMS for reporting purposes to EPA.

Media and Format:

8.5" x 11.0" Portrait, See attached report for specific format and legend to specific alpha-numeric numbers presented in the report body detail (below).

Report Frequency:

Quarterly or as needed

Database Tables Processed:

COMPANY; COMPLY; WELL

User Selection Options:

Reporting Period

User Sort Options:

Report is pre-sorted as presented in the attached report legend

Report Header:

Report Header is pre-determined as presented in the attached report legend

Report Body Detail

No.	Field Name	Header/Comment
G1	Count COMPLY.DT_VIOL for COMPLY.SNC=Y for WELL.CLASS=2D.	Number of Wells with SNC Violations?
G2	Count COMPLY.DT_VIOL for COMPLY.SNC=Y and COMPLY.VIOL_TYPE=UI for WELL.CLASS=2D.	Number of Unauthorized Injection SNC Violations?
G3	Count COMPLY.DT_VIOL for COMPLY.SNC=Y and COMPLY.VIOL_TYPE=MI for WELL.CLASS=2D.	Number of Mechanical Integrity SNC Violations?

RBDMS Report Specifications
EPA 7520 Part II-b: Compliance Evaluation,
Significant Noncompliance (all applicable wells)

G4	Count COMPLY.DT_VIOL for COMPLY.SNC=Y and COMPLY.VIOL_TYPE=PR for WELL.CLASS=2D.	Number of Injection Pressure SNC Violations?
G5	Count COMPLY.DT_VIOL for COMPLY.SNC=Y and COMPLY.VIOL_TYPE=PA for WELL.CLASS=2D.	Number of Plugging and Abandonment SNC Violations?
G6	Count COMPLY.DT_VIOL for COMPLY.SNC=Y and COMPLY.VIOL_TYPE=FO for WELL.CLASS=2D.	Number of SNC Violations of Formal Orders?
G7	Count COMPLY.DT_VIOL for COMPLY.SNC=Y and COMPLY.VIOL_TYPE=FA for WELL.CLASS=2D.	Number of Falsification SNC Violations?
G8	Count COMPLY.DT_VIOL for COMPLY.SNC=Y and COMPLY.VIOL_TYPE=[US or OM or PV or CC or MR or FR or OT] for WELL.CLASS=2D.	Number of Other SNC Violations?
G9	Count COMPLY.SNC=Y for COMPLY.DT_ENFORCE for WELL.CLASS=2D.	Number of Wells with Enforcement Actions Against SNC Violations?
G10	Count COMPLY.SNC=Y for COMPLY.DT_ENFORCE and COMPLY.ENF_TYPE=NV for WELL.CLASS=2D.	Number of Notices of Violation?
G11	Count COMPLY.SNC=Y for COMPLY.DT_ENFORCE and COMPLY.ENF_TYPE=CO for WELL.CLASS=2D.	Number of Consent Agreements/Orders?

RBDMS Report Specifications
EPA 7520 Part II-b: Compliance Evaluation,
Significant Noncompliance (all applicable wells)

G12	Count COMPLY.SNC=Y for COMPLY.DT_ENFORCE and COMPLY.ENF_TYPE=AO for WELL.CLASS=2D.	Number of Administrative Orders?
G13	Count COMPLY.SNC=Y for COMPLY.DT_ENFORCE and COMPLY.ENF_TYPE=CV for WELL.CLASS=2D.	Number of Civil Referrals?
G14	Count COMPLY.SNC=Y for COMPLY.DT_ENFORCE and COMPLY.ENF_TYPE=CR for WELL.CLASS=2D.	Number of Criminal Referrals?
G15	Count COMPLY.SNC=Y for COMPLY.DT_ENFORCE and COMPLY.ENF_TYPE=SI for WELL.CLASS=2D.	Number of Shut In Wells?
G16	Count COMPLY.SNC=Y for COMPLY.DT_ENFORCE and COMPLY.ENF_TYPE=PS for WELL.CLASS=2D.	Number of Pipeline Severences?
G17	Count COMPLY.SNC=Y for COMPLY.DT_ENFORCE and COMPLY.ENF_TYPE=[Sum of all other enforcement actions] for WELL.CLASS=2D.	Number of Other Enforcement Actions Against SNC Violations?
G18	Count COMPLY.SNC=Y for COMPLY.DATE_COMPL for Quarter for WELL.CLASS=2D.	Number of Wells in SNC Returned to Compliance this Quarter?
G19	Count COMPLY.SNC=Y for COMPLY.DATE_COMPL for WELL.CLASS=2D Year to Date.	Number of Wells in SNC Returned to Compliance this Year?
G20	Specific counting method varies and will require manual entry by states.	Number of Alleged Cases of Contamination to a USDW?

RBDMS Report Specifications
EPA 7520 Part II-b: Compliance Evaluation,
Significant Noncompliance (all applicable wells)

H1 to H20	Change WELL.CLASS=2R and use same format as for G1 through G20	See Above
J1 to J20	Change WELL.CLASS=2H and use same format as for G1 through G20	See Above
Report Footer: Pre-determined as shown on attached report legend		

United States Environmental Protection Agency
Office of Ground Water and Drinking Water
Washington, DC 20480
UIC Federal Reporting System
Part II-b: Compliance Evaluation
Significant Noncompliance

(This information is solicited under the authority of the Safe Drinking Water Act)

I. Name and Address of Preparing Agency:

25

II. Date Prepared (M/D/Y)

21

III. State Contact (name, phone No.)

22

IV. Recording Period (Month/Year)

From: 23

To: 24

Class and Type of Injection Well

Item

SWD

ER

LHS

Total Wells

A

Number of Wells With SNC Violations

G1

H1

J1

V.

Summary
of
Significant
Non-
Compliance
(SNC)

Total
Violations

B

1. Number of Unauthorized Injection SNC Violations

G2

H2

J2

2. Number of Mechanical Integrity SNC Violations

G3

H3

J3

3. Number of Injection Pressure SNC Violations

G4

H4

J4

4. Number of Plugging and Abandonment SNC Violations

G5

H5

J5

5. Number of SNC Violations of Formal Orders

G6

H6

J6

6. Number of Falsification SNC Violations

G7

H7

J7

7. Number of Other SNC Violations (Specify)

G8

H8

J8

Total Wells

A

Number of Wells with Enforcement Actions Against SNC Violations

G9

H9

J9

VI.

Summary
of
Enforcement
Against
SNC
Violations

Total
Enforcement
Actions

B

1. Number of Notices of Violation

G10

H10

J10

2. Number of Consent Agreements/Orders

G11

H11

J11

3. Number of Administrative Orders

G12

H12

J12

4. Number of Civil Referrals

G13

H13

J13

5. Number of Criminal Referrals

G14

H14

J14

6. Number of Shut-In Wells

G15

H15

J15

7. Number of Pipeline Severences

G16

H16

J16

8. Number of Other Enforcement Actions Against SNC Violations (Specify)

G17

H17

J17

VII. Summary
of Compliance

Number of Wells in SNC Returned to Compliance

A. This Quarter

G18

H18

J18

B. This Year

G19

H19

J19

VIII.
Contamination

Number of Cases of Alleged Contamination of a USDW

G20

H20

J20

Certification

I certify that the statements I have made on this form and all attachments thereof are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under appropriate law.

Signature and Typed or Printed Name and Title of Person Completing Form

Date

Phone No.

RBDMS Report Specifications
EPA 7520 Part III:
Inspections/Mechanical Integrity Testing Report

Summary:

The 7520 Part III report is used to list data automatically assessed and compiled from several database tables within RBDMS for reporting purposes to EPA.

Media and Format:

8.5" x 11.0" Portrait, See attached report for specific format and legend to specific alpha-numeric numbers presented in the report body detail (below).

Report Frequency:

Quarterly or as needed

Database Tables Processed:

COMPANY; EMIT; EMITMETH; IMIT; INSPECTION; WELL

User Selection Options:

Reporting Period

User Sort Options:

Report is pre-sorted as presented in the attached report legend

Report Header:

Report Header is pre-determined as presented in the attached report legend

Report Body Detail

No.	Field Name	Comment
<i>EPA 7520 Part 3: Inspections/Mechanical Integrity Testing</i>		
K1	Count INSPECTION.DT_PERFM for WELL.CLASS=2D between the dates provided in fields 56 and 57. This total should then be the overall total for inspections for all 2D wells and fields A2 through A6 should equal A1. If this is not the case, there is an error.	Number of Wells Inspected?
K2	Count INSPECTION.TYPE_INSP= MW by INSPECTION.DT_PERFM for INSPECTION.CLASS=2D	Number of Mechanical Integrity Tests Witnessed?
K3	Count INSPECTION.EMERGENCY= ER by INSPECTION.DT_PERFM for INSPECTION.CLASS=2D	Number of Emergency Response or Complaint Response Inspections?

**RBDMS Report Specifications
EPA 7520 Part III:
Inspections/Mechanical Integrity Testing Report**

K4	Count INSPECTION.TYPE_INSP= CO by INSPECTION.DT_PERFM for INSPECTION.CLASS=2D	Number of Well Constructions Witnessed?
K5	Count INSPECTION.TYPE_INSP= PW by INSPECTION.DT_PERFM for INSPECTION.CLASS=2D	Number of Well Pluggings Witnessed?
K6	Count INSPECTION.TYPE_INSP= RP by INSPECTION.DT_PERFM for INSPECTION.CLASS=2D	Number of Routine/Periodic Inspections?
K7	Count and total EMIT.DT_TEST + IMIT.DT_TEST for WELL.CLASS = 2D by EMIT.DT_TEST and IMIT.DT_TEST between the dates provided in fields 56 and 57. The resultant total must be the cummulative total of fields A8 through A11. Additionally, the resultant total IMIT.DT_TEST for the period between teh dates selected in fields 56 and 57 must be the cummulative total of fields A12 through A37. Similarly, the resultant total EMIT.DT_TEST for the same period must be the cummulative total for fields A38 through A47. If the above criteria are not met, the form will be in error.	Number of Wells Tested or Evaluated for Mechanical Integrity?
K8	For all permitted wells (i.e., WELL.RULE_AUTH=N), count the sum of EMIT.EMIT_RSLT = A and IMIT.TST_RSLT = P for WELL.CLASS = 2D between the above specified dates by IMIT.DT_TEST and EMIT.DT_TEST.	Number of Permitted Wells Tested or Evaluated for Mechanical Integrity - Passed 2-Part Test (IMI & EMI)?

RBDMS Report Specifications
EPA 7520 Part III:
Inspections/Mechanical Integrity Testing Report

K9	For all permitted wells (i.e., WELL.RULE_AUTH=N), count sum of EMIT.EMIT_RSLT=D AND IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST and EMIT.DT_TEST	Number of Permitted Wells Tested or Evaluated for Mechanical Integrity - Failed 2-Part Test (IMI or EMI)?
K10	For all Rule Authorized wells (i.e., WELL.RULE_AUTH=Y), Count sum of EMIT.EMIT_RSLT=A AND IMIT.TST_RSLT=P for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST and EMIT.DT_TEST	Number of Rule-Authorized Wells Tested or Evaluated for Mechanical Integrity - Passed 2-Part Test (IMI & EMI)?
K11	For all Rule Authorized wells (i.e., WELL.RULE_AUTH=Y), Count sum of EMIT.EMIT_RSLT=D AND IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST and EMIT.DT_TEST	Number of Rule-Authorized Wells Tested or Evaluated for Mechanical Integrity - Failed 2-Part Test (IMI or EMI)?
K12	Count IMIT.IMIT_METH= SAMT AND IMIT.MON_RSLT=A for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Casing/Tubing Pressure Monitoring Record Evaluations - Wells Passed?
K13	Count IMIT.IMIT_METH= SAMT AND IMIT.MON_RSLT=D for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Casing/Tubing Pressure Monitoring Record Evaluations - Wells Failed?
K14	Count IMIT.IMIT_METH=SAPT FOR IMIT.TST_RSLT=P between above specified dates by IMIT.DT_TEST	Number of Casing/Tubing Pressure Tests - Wells Passed?
K15	Count IMIT.IMIT_METH=SAPT FOR IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Casing/Tubing Pressure Tests - Wells Failed?

**RBDMS Report Specifications
EPA 7520 Part III:
Inspections/Mechanical Integrity Testing Report**

K16	Same as K12	Number of Monitoring Record Evaluations - Wells Passed?
K17	Same as K13	Number of Monitoring Record Evaluations - Wells Failed?
K18	Count IMIT.IMIT_METH=ADA for IMIT.TST_RSLT=P for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Ada Pressure Tests (Gas Displacement) - Wells Passed?
K19	Count IMIT.IMIT_METH=ADA for IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Ada Pressure Tests (Gas Displacement) - Wells Failed?
K20	Count IMIT.IMIT_METH=IRTS for IMIT.TST_RSLT=P for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Internal Radioactive Tracer Surveys (i.e., for Part 1 of MIT) - Wells Passed?
K21	Count IMIT.IMIT_METH=IRTS for IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Internal Radioactive Tracer Surveys (i.e., for Part 1 of MIT) - Wells Failed?
K22	Count IMIT.IMIT_METH=DUAL for IMIT.TST_RSLT=P for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Dual-Completion Tests - Wells Passed?
K23	Count IMIT.IMIT_METH=DUAL for IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Dual Completion Tests - Wells Failed?
K24	Count IMIT.IMIT_METH=WLAT for IMIT.TST_RSLT=P for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Water-In-Annulus Tests - Wells Passed?

**RBDMS Report Specifications
EPA 7520 Part III:
Inspections/Mechanical Integrity Testing Report**

K25	Count IMIT.IMIT_METH=WIAT for IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Water-In-Annulus Tests - Wells Failed?
K26	Count IMIT.IMIT_METH=GDAP for IMIT.TST_RSLT=P for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Gas Detector (Annulus Pressure) Tests - Wells Passed?
K27	Count IMIT.IMIT_METH=GDAP for IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Gas Detector (Annulus Pressure) Tests - Wells Failed?
K28	Count IMIT.IMIT_METH=ITAL for IMIT.TST_RSLT=P for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Temperature Anomaly Tests - Wells Passed?
K29	Count IMIT.IMIT_METH=ITAL for IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Temperature Anomaly Tests - Wells Failed?
K30	Count IMIT.IMIT_METH=ITDL for IMIT.TST_RSLT=P for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Differential Temperature Tests - Wells Passed?
K31	Count IMIT.IMIT_METH= ITDL for IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Differential Temperature Tests - Wells Failed?
K32	Count IMIT.IMIT_METH= WBIT for IMIT.TST_RSLT=P for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Water/Brine Interface Tests - Wells Passed?

**RBDMS Report Specifications
EPA 7520 Part III:
Inspections/Mechanical Integrity Testing Report**

K33	Count IMIT.IMIT_METH= WBIT for IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Water/Brine Interface Tests - Wells Failed?
K34	Count IMIT.IMIT_METH= SPRT for IMIT.TST_RSLT=P for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Single Point Resistivity Tests - Wells Passed?
K35	Count IMIT.IMIT_METH= SPRT for IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Single Point Resistivity Tests - Wells Failed?
K36	Count IMIT.IMIT_METH= NAPT+BTST+FMT+FLT+OIMI for IMIT.TST_RSLT=P for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Other Significant Leak Tests/Evaluations (Specify) - Wells Passed?
K37	Count IMIT.IMIT_METH= NAPT+BTST+FMT+FLT+OIMI for IMIT.TST_RSLT=F for WELL.CLASS=2D between above specified dates by IMIT.DT_TEST	Number of Other Significant Leak Tests/Evaluations (Specify) - Wells Failed?
K38	Count EMIT.EMIT_METH= CMTR for EMIT.EMIT_RSLT=A for WELL.CLASS=2D between above specified dates by EMIT.DT_TEST	Number of Cement Record Evaluations - Wells Passed?
K39	Count EMIT.EMIT_METH= CMTR for EMIT.EMIT_RSLT=D for WELL.CLASS=2D between above specified dates by EMIT.DT_TEST	Number of Cement Record Evaluations - Wells Failed?
K40	Count EMIT.EMIT_METH= TEMP+NOIS for EMIT.EMIT_RSLT=A for WELL.CLASS=2D between above specified dates by EMIT.DT_TEST	Number of Temperature/Noise Log Tests - Wells Passed?

RBDMS Report Specifications
EPA 7520 Part III:
Inspections/Mechanical Integrity Testing Report

K41	Count EMIT.EMIT_METH=TEMP+NOIS for EMIT.EMIT_RSLT=D for WELL.CLASS=2D between above specified dates by EMIT.DT_TEST	Number of Temperature/Noise Log Tests - Wells Failed?
K42	Count EMIT.EMIT_METH=ERTS+CMTL for EMIT.EMIT_RSLT=A for WELL.CLASS=2D between above specified dates by EMIT.DT_TEST	Number of Radioactive Tracer/Cement Bond Tests - Wells Passed?
K43	Count EMIT.EMIT_METH=ERTS+CMTL for EMIT.EMIT_RSLT=D for WELL.CLASS=2D between above specified dates by EMIT.DT_TEST	Number of Radioactive Tracer/Cement Bond Tests - Wells Failed?
K44	Count EMIT.EMIT_METH= OAL for EMIT.EMIT_RSLT=A for WELL.CLASS=2D between above specified dates by EMIT.DT_TEST	Number of Oxygen Activation Log Tests - Wells Passed?
K45	Count EMIT.EMIT_METH= OAL for EMIT.EMIT_RSLT=D for WELL.CLASS=2D between above specified dates by EMIT.DT_TEST	Number of Oxygen Activation Log Tests - Wells Failed?
K46	Count EMIT.EMIT_METH= OEMI for EMIT.EMIT_RSLT=A for WELL.CLASS=2D between above specified dates by EMIT.DT_TEST	Number of Other Fluid Migration Tests/Evaluations (Specify) - Wells Passed?
K47	Count EMIT.EMIT_METH= OEMI for EMIT.EMIT_RSLT=D for WELL.CLASS=2D between above specified dates by EMIT.DT_TEST	Number of Other Fluid Migration Tests/Evaluations (Specify) - Wells Failed?

**RBDMS Report Specifications
EPA 7520 Part III:
Inspections/Mechanical Integrity Testing Report**

K48	Count and total COMPLY.DT_COMPL for WELL.CLASS=2D between the above two dates specified in fields 56 and 57. This resultant total must equal the cumulative total of fields A49 through A52 to avoid errors in reporting.	Number of Wells with Remedial Action?
K49	Count and total COMPLY.TYPE_CA=CSGCMT for CLASS=2D between the above specified dates by COMPLY.DT_COMPL	Number of Casing Repairs/Squeeze Cement Remedial Actions?
K50	Count and total COMPLY.TYPE_CA=TBGPKR for WELL.CLASS=2D between the above specified dates by COMPLY.DT_COMPL	Number of Tubing/Packer Remedial Actions?
K51	Count and total COMPLY.TYPE_CA=PLUGAB for WELL.CLASS=2D between the above specified dates by COMPLY.DT_COMPL	Number of Plugging/Abandonment Remedial Actions?
K52	Count and total COMPLY.TYPE_CA=OTHRRA for WELL.CLASS=2D between the above specified dates by COMPLY.DT_COMPL	Number of Other Remedial Actions (Specify)?
53	Automatically enter date report prepared	
54	Automatically enter the name and telephone number of the UIC Director	
55	Automatically enter the name and address of the preparing agency	
56	Report Starting Date (entered by State)	
57	Report Ending Date (entered by State)	
L1 to L52	Use same criteria for K1 through K52, except set WELL.CLASS=2R	See Above

RBDMS Report Specifications
EPA 7520 Part III:
Inspections/Mechanical Integrity Testing Report

M1
to
M52

Use same criteria for K1 through K52,
except set WELL.CLASS=2H

See Above

Report Footer:

Pre-determined as specified on attached report legend

United States Environmental Protection Agency
Office of Ground Water and Drinking Water
Washington, DC 20480
UIC Federal Reporting System

Part III: Inspections
Mechanical Integrity Testing

(This information is solicited under the authority of the Safe Drinking Water Act)

I. Name and Address of Preparing Agency: 55

II. Date Prepared: 53

III. State Contact (name, telephone No.) 54

IV. Recording Period

From 56

To 57

Type of Class II Injection Well

Item

SWD

ER

LHC

V. Summary of Inspections	Total Wells	A	Number of Wells Inspected		K1	L1	M1	
	Total Inspections	B	1. Number of Mechanical Integrity Tests (MITs) Witnessed		K2	L2	M2	
			2. Number of Emergency Responses or Complaint Response Inspections		K3	L3	M3	
			3. Number of Well Constructions Witnessed		K4	L4	M4	
			4. Number of Well Pluggings Witnessed		K5	L5	M5	
			5. Number of Routine/Periodic Inspections		K6	L6	M6	
VI. Summary of Mech. Integrity (MI)	Total Wells	A	Number of Wells Tested or Evaluated for Mechanical Integrity (MI)		K7	L7	M7	
		B	No. of Permitted Wells Tested/Evaluated for MI	Passed 2-part test (IMI & EMI)	K8	L8	M8	
				Failed 2-part test (IMI & EMI)	K9	L9	M9	
		No. of Rule-Authorized Wells Tested/Evaluated for MI	Passed 2-part test (IMI & EMI)	K10	L10	M10		
	Failed 2-part test (IMI & EMI)		K11	L11	CM1			
	For Significant Leak	C	1. Number of Annulus Pressure Monitoring Record Evaluations	Wells Passed	K12	L12	M12	
				Wells Failed	K13	L13	M13	
			2. Number of Casing/Tubing Pressure Tests	Wells Passed	K14	L14	M14	
				Wells Failed	K15	L15	M15	
			3. Number of Monitoring Record Evaluations	Wells Passed	K16	L16	M16	
				Wells Failed	K17	L17	M17	
			4. Number of Ada Pressure Tests (Gas Displacement)	Wells Passed	K18	L18	M18	
				Wells Failed	K19	L19	M19	
			5. Number of Internal Radioactive Tracer Surveys	Wells Passed	K20	L20	M20	
Wells Failed				K21	L21	M21		
6. Number of Dual-Completion Tests			Wells Passed	K22	L22	M22		
			Wells Failed	A23	L23	M23		
7. Number of Water-In-Annulus Tests	Wells Passed	K24	L24	M24				
	Wells Failed	K25	L25	M25				
8. Number of Gas Detector (Annulus Pressure) Tests	Wells Passed	K26	L26	M26				
	Wells Failed	K27	L27	M27				
9. Number of Temperature Anomaly Tests	Wells Passed	K28	L28	M28				
	Wells Failed	K29	L29	M29				

United States Environmental Protection Agency Office of Ground Water and Drinking Water Washington, DC 20480 UIC Federal Reporting System Part III: Inspections Mechanical Integrity Testing (This information is solicited under the authority of the Safe Drinking Water Act)						I. Name and Address of Preparing Agency: 55			
II. Date Prepared: 53			III. State Contact (name, telephone No.) 54			IV. Recording Period			
						From 56		To 57	
			10. Number of Differential Temperature Tests	Wells Passed	K30	L30	M30		
				Wells Failed	K31	L31	M31		
			11. Number of Water/Brine Interface Tests	Wells Passed	K32	L32	M32		
				Wells Failed	K33	L33	M33		
			12. Number of Single Point Resistivity Tests	Wells Passed	K34	L34	M34		
				Wells Failed	K35	L35	M35		
		13. Number of Other Significant Leak Tests/Evaluations (Specify)	Wells Passed	K36	L36	M36			
			Wells Failed	K37	L37	M37			
		For Fluid Migration	D	1. Number of Cement Record Evaluations	Wells Passed	K38	L38	M38	
					Wells Failed	K39	L39	M39	
				2. Number of Temperature/Noise Log Tests	Wells Passed	K40	L40	M40	
					Wells Failed	K41	L41	M41	
	3. Number of Radioactive Tracer/Cement Bond Tests			Wells Passed	K42	L42	M42		
				Wells Failed	K43	L43	M43		
	4. Number of Oxygen Activation Log Tests	Wells Passed	K44	L44	M44				
		Wells Failed	K45	L45	M45				
	5. Number of Other Fluid Migration Tests/Evaluations (Specify)	Wells Passed	K46	L46	M46				
		Wells Failed	K47	L47	M47				
VII. Summary of Remedial Actions	Total Wells	A	Number of Wells with Remedial Action		K48	L48	M48		
	Total Remedial Actions	B	1. Number of Casing Repairs/Squeeze Cement Remedial Actions		K49	L49	M49		
			2. Number of Tubing/Packer Remedial Actions		K50	L50	M50		
			3. Number of Plugging/Abandonment Remedial Actions		K51	L51	M51		
			4. Number of Other Remedial Actions (Specify)		K52	L52	M52		
IX. Remarks/Ad Hoc Report (Attach additional sheets as necessary)									
Certification I Certify that the statements I have made on this form and all attachments thereof are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under appropriate law.									
Signature and Typed or Printed Name and Title of Person Completing Form							Date		

RBDMS Report Specifications
EPA 7520 IV: Quarterly Exceptions List (all applicable wells)

Summary:

The 7520 Part IV report is used to list data automatically assessed and complied from several database tables within RBDMS for reporting purposes to EPA.

Media and Format:

8.5" x 11.0" Portrait, See attached report for specific format and legend to specific alpha-numeric numbers presented in the report body detail (below).

Report Frequency:

Quarterly or as needed

Database Tables Processed:

COMPANY; COMPLY; WELL

User Selection Options:

Reporting Period

User Sort Options:

Report is pre-sorted as presented in the attached report legend

Report Header:

Report Header is pre-determined as presented in the attached report legend

Report Body Detail

No.	Field Name	Comment
1	Report Starting Period	Entered by State?
2	Report Ending Period	Entered by State?
3A	WELL.CLASS	Class?
4A	COMPANY.CONAME + COMPANY.CONTACT + COMPANY.ADDR1 + COMPANY.ADDR2 + COMPANY.CITY + COMPANY.STATE + COMPANY.ZIP1 + COMPANY.ZIP2	Operator Name and Address?
5A	WELL.UIC_PERMIT	State UIC Permit Number?
6A	COMPLY.DT_VIOL	Date of Violation?
7A	COMPLY.VIOL_TYP	Type of Violation?

RBDMS Report Specifications EPA 7520 IV: Quarterly Exceptions List (all applicable wells)		
8A	COMPLY.DT_ENF	Date Enforcement Taken?
9A	COMPLY.ENF_TYP	Type of Enforcement Action?
10A	COMPLY.DT_COMPL	Date Compliance Achieved?
	Additional exceptions listings	Utilize same format for all exceptions listings (i.e., 3B-10B, 3C-10C, 3D-10D, etc.).
Report Footer: Pre-determined as specified in attached report legend		

United States Environmental Protection Agency

Office of Ground Water and Drinking Water
Washington, DC 20460
UIC Federal Reporting System

Simulated form based on OMB Form No. 2040-0012

I. Reporting Period:

From: 1

To: 2

Part IV: Quarterly Exceptions List

(This information is collected under the authority of the Safe Drinking Water Act)

II. Well Class and Type	III. Name and Address of Owner/Operator	IV. Well ID. (State UIC Permit No.)	V. Summary of Violations		VI. Summary of Enforcement		VII. Date Compliance Achieved
			Date of Violation	Violation Type	Date of Enforcement	Enforcement Type	
3A	4A	5A	6A	7A	8A	9A	10A
3B	4B	5B	6B	7B	8B	9B	10B

Certification

I certify that the statements I have made on this form and all attachments thereof are true, accurate, and complete. I acknowledge that any knowledge false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature of Person Completing List

Typed or Printed Name and Title

Date

Telephone Number

**Specifications
for
Reports Related to
Well Construction, Characteristics,
History, and Permitting**

AIM

Association for Information and Image Management

1100 Wayne Avenue, Suite 1100
Silver Spring, Maryland 20910
301/587-8202

Centimeter

Inches

MANUFACTURED TO AIM STANDARDS
BY APPLIED IMAGE, INC.

3 of 4

RBDMS Report Specifications LIST OF SOUR WELLS BY COUNTY

Summary:

This report will list Sour Gas (H₂S) Wells by County.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

WELL, COUNTY, FIELD, POOL, COMPANY

User Selection Options:

The user may select all counties or specify a single county.

User Sort Options:

None. The report will list Sour Wells sorted by County, Field, Pool, Principal Meridian, Range, Township, and Section.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	COUNTY.NAME	County Name
2	FIELDS.NAME	Field Name
3	POOL.POOL_NM	Pool Name
4	WELL.SEC	Section
5	WELL.TWPN	Township Number
6	WELL.TWPD	Township Direction
7	WELL.RNGN	Range Number
8	WELL.RNGD	Range Direction
9	WELL.PM	Principal Meridian
10	WELL.QTR	Location of Well within section.
11	COMPANY.NAME	Operator Name
12	WELL.WELL_NM	Well Name

No.	Data Field Name	Description
13	WELL.WELL_TYP	Well Type
14	WELL.WL_STATUS	Well Status
15	WELL.DT_COMP	Date Well Completed
Report Footer1: Sub-total of number of Sour Wells for each County.		
Report Footer2: Total Number of Sour Wells listed in the report.		

RBDMS Report Specifications DRILLING STATISTICS

Summary:

This report will compute and print Monthly, Quarterly, and Annual drilling statistics that summarize drilling activity in the state. Information printed in the report will include the number of new wildcat and development wells completed by field, county and operator and classified by dry holes, oil producers, and gas producers. The report will also include the number of drilling permits approved and old producing wells plugged and abandoned during the time period selected by the user.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

Monthly or Quarterly per State needs.

Database Tables Processed:

WELL, COMPANY, FIELDS, COUNTY

User Selection Options:

The user will specify the Beginning and Ending Dates for the time period covered by the report.

User Sort Options:

The user will select whether the report will be sorted and subtotaled by Field, by County, or by Operator.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	<div style="display: flex; justify-content: space-between;"> <div> <u>Data Field</u> COUNTY.NAME FIELDS.NAME COMPANY.CONAME </div> <div> <u>For Sort by</u> County Field Operator </div> </div>	County Name Field Name Operator Name
2	Computed by totalling all wells with WELL.DT_APPROV within report dates.	Number of Permits Approved

No.	Data Field Name	Description
	Computed by totalling all wells with WELL.CAT = Wildcat; and WELL.WELL_TYP = Oil; and WELL.DT_COMP within report dates.	Number of Wildcat Wells Classified as Oil Producers
	Computed by totalling all wells with WELL.CAT = Wildcat; and WELL.WELL_TYP = Gas; and WELL.DT_COMP within report dates.	Number of Wildcat Wells Classified as Gas Producers
	Computed by totalling all wells with WELL.CAT = Wildcat; and WELL.WELL_TYP = Dry; and WELL.DT_COMP within report dates.	Number of Wildcat Wells Classified as Dry Holes
	Computed by totalling all wells with WELL.CAT = Wildcat; and WELL.WELL_TYP = Oil; and WELL.DT_COMP within report dates.	Number of Development Wells Classified as Oil Producers
	Computed by totalling all wells with WELL.CAT = Wildcat; and WELL.WELL_TYP = Gas; and WELL.DT_COMP within report dates.	Number of Development Wells Classified as Gas Producers
	Computed by totalling all wells with WELL.CAT = Wildcat; and WELL.WELL_TYP = Dry; and WELL.DT_COMP within report dates.	Number of Development Wells Classified as Dry Holes
	Computed by totalling all wells with WELL.DT_PA within report dates; and WELL.WELL_TYP = Oil or Gas.	Number of Old Producers Plugged and Abandoned
Report Footer: State Totals for each of the columns listed in the report.		

RBDMS Report Specifications COMPREHENSIVE WELL REPORT

Summary:

This report will list all well construction and well history data stored in the system for a specified well. If a well has multiple sidetracks and completions, the user may specify one or all sidetracks and completions for the wellbore.

Media and Format:

8.5" x 11.0" Landscape

Report Frequency:

As Needed

Database Tables Processed:

WELL, WELL HISTORY, CEMENT, CEMENT CLASS, FORMATION TOPS, LOGS, PERFORATIONS, PRODUCTION TESTS, STRINGS, STRINGPIPE, ZONES, ZONE FORMATIONS, COMPANY, COUNTY, FIELDS, FORMATIONS

User Selection Options:

The user will specify the API Number of the desired well. If the "completion" portion of the API Number is left blank, the report will list all completions for the specified wellbore and sidetrack. If the "sidetrack" portion of the API Number is left blank, the system will list information on all sidetracks and completions for the wellbore.

User Sort Options:

None.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
The following data originates in the WELL Table.		
1	WELL.API_WELLNO	API Well Number
2	COMPANY.CONAME	Operator Name
3	WELL.WELL_NM	Well Name
4	COUNTY.NAME	County
5	WELL.BASIN	Basin

No.	Data Field Name	Description
6	FIELDS.NAME	Field
7	POOL.POOL_NM	Pool Name
8	WELL.OBJ_FMTN	Objective Formation
9	WELL.WELL_TYP	Type of Well
10	WELL.WL_STATUS	Well Status
11	WELL.DT_STATUS	Date of current status
12	WELL.WL_PERMIT	Well construction Permit Number
13	WELL.DU_ACRES_	Acres in Drilling Unit
14	WELL.DU_DESC	Description of Drilling Unit
15	WELL.CAT	Well Category - (W)ildcat, (D)evelopment, (O)ther
16	WELL.PROD_CLASS	Production Classification - (O)il, (G)as, (C)O2
17	WELL.PROD_MTHD	Production Method
18	WELL.DISP_MTHD	Method of Water Disposal
19	WELL.DISP_WELL	API Number of Disposal Well used to dispose of produced saltwater.
20	WELL.DISP_FACIL	UIC Permit Number of the commercial facility used to dispose of produced saltwater.
21	WELL.DT_APPROV	Date well construction permit approved.
22	WELL.DT_SPUD	Spud Date
23	WELL.DT_TD	Date Total Depth reached.
24	WELL.DT_COMP	Date Completed
25	WELL.DT_COMPRPT	Date Completion Report Received
26	WELL.DT_CONFID	Ending Date of the confidential period for data on tight holes.
27	WELL.DT_PROD	Date of First Production

No.	Data Field Name	Description
28	WELL.DT_INJ	Date of First Injection
29	WELL.DT_AUTH	Date of Authorization to transport oil and gas from a producing well.
30	WELL.DT_PLUGPLN	Date Plugging Plan Approved
31	WELL.DT_PA	Date well Plugged and Abandoned
32	WELL.WH_SEC	Wellhead Section
33	WELL.WH_TWPN	Wellhead Township Number
34	WELL.WH_TWPD	Wellhead Township Direction
35	WELL.WH_RNGN	Wellhead Range Number
36	WELL.WH_RNGD	Wellhead Range Direction
37	WELL.WH_PM	Wellhead Principal Meridian
38	WELL.WH_QTR	Wellhead Quarter-Quarter Location
39	WELL.WH_FTNS	Distance of the wellhead in feet from the North or South section line.
40	WELL.WH_NS	Indicates whether the wellhead was measured from the North or South Section Line.
41	WELL.WH_FTEW	Distance of the wellhead in feet from the East or West section line.
42	WELL.WH_EW	Indicates whether the wellhead was measured from the East or West Section Line.
43	WELL.WH_LAT	Wellhead Latitude
44	WELL.WH_LONG	Wellhead Longitude
45	WELL.SLANT	Well configuration - Vertical, Directional, or Horizontal
46	WELL.DIRSRV_RUN	Indicates whether a Directional Survey was run.

No.	Data Field Name	Description
47	WELL.DIRSRV_REC	Indicates whether a Directional Survey was Received.
48	WELL.WL_COMPL	Well Completion
49	WELL.BH_SEC	Bottom Hole Section
50	WELL.BH_TWPN	Bottom Hole Township Number
51	WELL.BH_TWPD	Bottom Hole Township Direction
52	WELL.BH_RNGN	Bottom Hole Range Number
53	WELL.BH_RNGD	Bottom Hole Range Direction
54	WELL.BH_PM	Bottom Hole Principal Meridian
55	WELL.BH_FTNS	Distance of the wellhead in feet from the North or South section line.
56	WELL.BH_NS	Indicates whether the wellhead was measured from the North or South Section Line.
57	WELL_BH_FTEW	Distance of the wellhead in feet from the East or West section line.
58	WELL.BH_EW	Indicates whether the wellhead was measured from the East or West Section Line.
59	WELL.BH_LAT	Bottom hole Latitude
60	WELL.BH_LONG	Bottom hole Longitude
61	WELL.ELEV_GR	Ground Elevation
62	WELL.ELEV_KB	Kelly Bushing Elevation
63	WELL.ELEV_DF	Derrick Floor Elevation
64	WELL.REF_CONST	Reference used for determining depths: (G)round, (K)elly, (D)errick Floor
65	WELL.MD	Measured Depth
66	WELL.TVD	True Vertical Depth

No.	Data Field Name	Description
67	WELL.PB_MD	Plug Back Measured Depth
68	WELL.PB_TVD	Plug Back True Vertical Depth
69	WELL.KO_TVD	True Vertical Depth of Kickoff
70	WELL.H2S_GAS	Sour (H ₂ S) gas present.
71	WELL.COMMENT	Comments
The following information is stored in the ZONES table and will repeat for each Zone.		
72	ZONES.TYP_ZONE	Type of Zone
73	ZONES.TOP	Top
74	ZONES.BOT	Bottom
75	ZONES.LITHO	Lithology
76	ZONES.TDS	Total Dissolved Solids
77	ZONES.EXEMPT	Indicates Exempt Aquifer
78	ZONES.PERM	Permeability
79	ZONES.POROS	Porosity
80	ZONES.FRACP	Fracture Pressure
81	ZONES.FRAC_MTHD	Source of Fracture Pressure
82	ZONES.PRESSURE	Pressure
The following information is stored in the ZONEFMTN table and will repeat for each geologic formation within a defined zone.		
83	ZONEFMTN.FMTN_CODE	Geologic Formation Code
84	FORMATN.NAME	Geologic Formation Name
The following information is stored in the STRINGS table and will repeat for each string of casing, tubing, or liner.		
85	STRINGS.TYP_PIPE	Type of String
86	STRINGS.DIA	Diameter
87	STRINGS.HOLE_SIZE	Hole Size
88	STRINGS.TOP	Top

No.	Data Field Name	Description
89	STRINGS.BOT	Bottom
The following information is stored in the STRINGPIPE table and will repeat for each string of pipe with a different grade and/or weight.		
90	STRINGPIPE.TYP_PIPE	Type of Pipe
91	STRINGPIPE.BOT	Bottom of String
92	STRINGPIPE.LENGTH	Length
93	STRINGPIPE.GRADE	Grade
94	STRINGPIPE.WEIGHT	Weight
The following information is stored in the CEMENT table and will repeat for each cemented interval.		
95	CEMENT.CSG_STRING	Casing string cemented.
96	CEMENT.BOC	Bottom of Cemented Interval.
97	CEMENT.TOC	Top of Cemented Interval.
98	CEMENT.METH_TOP	Method by which TOC was determined.
99	CEMENT.DT_CMT	Date Cemented
The following information is stored in the CEMENTCLS table and will repeat for each class of cement used in each cemented interval.		
100	CEMENTCLS.SACKS	Sacks of Cement
101	CEMENTCLS.CLASS	Class of Cement
102	CEMENTCLS.YIELD	Yield CUFT/Sack
The following information is stored in the PERFS table and will repeat for each Perforated Interval.		
103	PERFS.TOP_MD	Measured Depth to Top of Perforated Interval
104	PERFS.BOT_MD	Measured Depth to Bottom of Perforated Interval
105	PERFS.TOP_TVD	True Vertical Depth to Top of Perforated Interval

No.	Data Field Name	Description
106	PERFS.BOT_TVD	True Vertical Depth to Bottom of Perforated Interval
107	PERFS.DT_PERF	Date Perforated
108	PERFS.SHOT_DENS	Shot Density measured in shots per foot.
109	PERFS.DT_SQUEEZE	Date perforations were squeezed.
110	PERFS.COMMENT	Comments pertaining to the Perforated Interval
The following information is stored in the FORMTOPS table and will repeat for each formation top reported by the driller or operator.		
111	FORMTOPS.FMTN_CD	Formation Code
112	FORMATN.NAME	Formation Name
113	FORMTOPS.TOP	Top of Formation
114	FORMTOPS.METH_OBTND	Method by which top was obtained.
The following information is stored in the LOGS table and will repeat for each log run, or series of cores or samples taken.		
115	LOGS.DT_RUN	Date log was run or cores or samples taken.
116	LOGS.DT_RECV	Date logs, cores, or samples were received by the State.
117	LOGS.TYP	Codes indicating "LG"=Log, "CR"=Core, "CA"=Core Analysis, "CT"=Cuttings.
118	LOGS.TOP	Top of Series
119	LOGS.BOT	Bottom of Series
120	LOGS.LOGSRUN	Name of Log Run
121	LOGS.COMMENT	Comment pertaining to log, core, or sample series.

No.	Data Field Name	Description
The following information is stored in the PRODUCTION TEST table and will repeat for each test performed on the well that was reported to the state. Tests include Drillstem Tests, Initial Production Tests, Production Tests, and GOR Tests.		
122	PRODTEST.DT_TEST	Date of Test
123	PRODTEST.TYP_TEST	Type of Test
124	PRODTEST.DST_NO	Drillstem Test Number
125	PRODTEST.PROD_METH	Production Method
126	PRODTEST.TOP	Top of Interval Tested
127	PRODTEST.BOT	Bottom of Interval Tested
128	PRODTEST.FMTN_CD	Code of Formation Tested
129	FORMATN.NAME	Name of Formation Tested
130	PRODTEST.CHOKE_SIZE	Choke Size
131	PRODTEST.DURATION	Duration of Test in Hours
132	PRODTEST.PRESS_TFLW	Tubing Pressure - Flowing
133	PRODTEST.PRESS_TSI	Tubing Pressure - Shut-in
134	PRODTEST.PRESS_CFLW	Casing Pressure - Flowing
135	PRODTEST.PRESS_CSI	Casing Pressure - Shut-in
136	PRODTEST.PRESS_BH	Bottom Hole Pressure
137	PRODTEST.PROD_OIL	Oil Produced
138	PRODTEST.PROD_GAS	Gas Produced
139	PRODTEST.PROD_WTR	Water Produced
140	PRODTEST.RATE_OIL	Oil 24 hour rate
141	PRODTEST.RATE_GAS	Gas 24 hour rate
142	PRODTEST.RATE_WTR	Water 24 hour rate
143	PRODTEST.OIL_GRAV	API Gravity Oil
144	PRODTEST.COMMENT	Comment pertaining to the test

No.	Data Field Name	Description
The following information is stored in the WELL HISTORY table and will repeat for each event stored for the well.		
145	TYP_FORM	Type of Form or Verbal Notice Received
146	TYP_WORK	Type of Work or Event
147	DT_EFFECT	Date Effective
148	FAIL_TYPE	Type of Mechanical Integrity Failure
149	FAIL_CAUSE	Cause of Mechanical Integrity Failure
150	SBSQNT_RPT	Type of Subsequent Report required
151	DT_RPTREQD	Date Subsequent Report Required
152	DT_RPTRCVD	Date Subsequent Report Received
153	COMMENT	Comment pertaining to the well history event.
Report Footer: None.		

RBDMS Report Specifications
LIST OF "TA" WELLS PAST APPROVAL ENDING DATE

Summary:

This report will list Temporarily Abandoned Wells that have not been approved or the system date is past the IDLE WELL REPORT Approval Ending Date.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

WELL, IDLE, COMPANY, FORMATION, FIELDS, POOL, COUNTY

User Selection Options:

None.

User Sort Options:

Alphabetically by:
 Operator Name and Wellhead Location;
 or
 County Name and Wellhead Location;

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	WELL.API_WELLNO	API Well Number
2	WELL.WELL_TYP	Well Type
3	WELL.WL_STATUS	Well Status "TA" only
4	WELL.DT_STATUS	Status Date
5	IDLE.DT_APPREND	Approval Ending Date; or blank when no Idle Well Report record is found.
6	COUNTY.NAME	County Name
7	WELL.WL_COMPL	Well Completion

No.	Data Field Name	Description
8	WELL.WL_PERMIT	Well Permit Number
9	COMPANY.CONAME	Operator Name
10	COMPANY1.CONAME	Driller Name
11	WELL.WELL_NM	Well Name; consists of the Lease/Unit Name plus the Well Number.
12	WELL.WH_SEC	Section - Wellhead
13	WELL.WH_TWPN	Township Number - Wellhead
14	WELL.WH_TWPD	Township Direction - Wellhead
15	WELL.WH_RNGN	Range Number - Wellhead
16	WELL.WH_RNGD	Range Direction - Wellhead
17	WELL.WH_PM	Principal Meridian - Wellhead
18	WELL.WH_QTR	Quarter Section - Wellhead
19	WELL.WH_FTNS	Feet from North or South Section Line - Wellhead
20	WELL.WH_NS	North or South Line - Wellhead
21	WELL.WH_FTEW	Feet from East or West Section Line - Wellhead
22	WELL.WH_EW	East or West Line - Wellhead
23	WELL.WH_LAT	Latitude - Wellhead
24	WELL.WH_LONG	Longitude - Wellhead
25	WELL.SLANT	Well Configuration
26	FIELDS.NAME	Field Name
27	FORMATN.NAME	Objective Formation Name
28	POOL.POOL_NM	Pool Name
29	WELL.DT_COMP	Date Well Completed
Report Footer: Total Wells listed in report.		

RBDMS Report Specifications

LIST & OPERATOR LETTERS OF MISSING IDLE WELL REPORTS

Summary:

This program will generate a hardcopy report and print letters to operators listing wells for which IDLE WELL REPORTS have not been received. The Well Status field (WELL.WL_STATUS) and the Frequency of Idle Well Reports field (WELL.FRQ_IDLWL) will be used in determining which wells are idle and whether a report is due.

Media and Format:

List - 8.5" x 11.0" Portrait; Letters - 8.5" x 11.0" Letterhead Portrait

Report Frequency:

As Needed

Database Tables Processed:

IDLE, WELL, COMPANY

User Selection Options:

Single Operator Number, Range of Operator Numbers, or All Operators

User Sort Options:

None. The report will be sorted Alphabetically by Operator Name and then by Wellhead Location.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	LETTER DATE	System Date at time run.
The following is the Operators mailing address which will be printed at the top of the Letter to fit window envelopes. Only the Operator Name will be listed in the report.		
2	COMPANY.CONAME	Operator Company Name
3	COMPANY.FIRST_NAME	First Name of an Individual
4	COMPANY.CONTACT	Contact
5	COMPANY.ADDR1	Address Line 1
6	COMPANY.ADDR2	Address Line 2

No.	Data Field Name	Description
7	COMPANY.CITY	City
8	COMPANY.STATE	State
9	COMPANY.ZIP1	Zip 1 (First 5 Digits of Zip Code)
10	COMPANY.ZIP2	Zip 2 (Last 4 Digits of Zip Code)
11	COMPANY.COUNTRY	Country
12	STATEMENT	Statement of the purpose of the Letter which may include the due date for the missing report, governing statutes, or any other pertinent information.
The following information will repeat for each Missing Report for the listed Operator.		
13	WELL.WH_SEC	Section - Wellhead
14	WELL.WH_TWPN	Township Number - Wellhead
15	WELL.WH_TWPD	Township Direction - Wellhead
16	WELL.WH_RNGN	Range Number - Wellhead
17	WELL.WH_RNGD	Range Direction - Wellhead
18	WELL.WH_PM	Principal Meridian - Wellhead
19	WELL.WH_QTR	Quarter Section - Wellhead
20	WELL.WELL_NM	Well Name; consists of the Lease/Unit Name plus the Well Number.
21	WELL.DT_COMP	Date Well Completed
22	WELL.API_WELLNO	API Well Number
23	WELL.WL_PERMIT	Well Permit Number
24	WELL.WL_STATUS	Well Status
Report Footer: Total Wells listed in report.		

RBDMS Report Specifications
LIST OF CONFIDENTIAL COMPLETION REPORTS
(Tight Holes)

Summary:

This report will list wells for which the operator has decided to invoke the privilege of confidentiality for completion reports and logs. The report will list wells that have been completed but for which completion data has not been delivered to the state or for which the state has not entered completion data into the system because of the confidential nature of the data. The purpose of this report is to ensure that completion reports and logs are received and data entered into the system after the period of confidentiality has expired.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

On demand.

Database Tables Processed:

WELL, COMPANY, FIELDS, COUNTY

User Selection Options:

The Date to be used for selecting wells. If the user enters 12/01/93, wells whose period of confidentiality has expired after 12/01/93 will be listed.

User Sort Options:

None. The report will be sorted by the date of the end of the period of confidentiality (WELL.DT_CONFID).

Report Header:

Report Name, Report Date & Time, User ID, Page Number, Selection Criteria

Processing:

Select those wells with WELL.DT_CONFID not equal to 00/00/00 and less than the selection date entered by the user. (When the previously confidential data is entered into the system, the WELL.DT_CONFID will be set to 00/00/00 by the user.)

Report Body Detail
LIST OF CONFIDENTIAL COMPLETION REPORTS

No.	Data Field Name	Description
1	WELL.DT_CONFID	Date of end of Period of Confidentiality
2	WELL.API_WELLNO	API Well Number
3	WELL.OPNO	Operator Number
4	COMPANY.CONAME	Operator Name
5	COUNTY.NAME	County
6	FIELDS.NAME	Field
7	WELL.WELL_NM	Well Name
8	WELL.WH_SEC	Section
9	WELL.WH_TWPN	Township Number
10	WELL.WH_TWPD	Township Direction
11	WELL.WH_RNGN	Range Number
12	WELL.WH_RNGD	Range Direction
13	WELL.WH_PM	Principal Meridian
14	WELL.WH_QTR	Quarter-Quarter
15	WELL.WELL_TYP	Well Type
16	WELL.DT_APPROV	Date Well Construction Permit Approved
17	WELL.DT_SPUD	Spud Date
18	WELL.DT_COMP	Date Well Completed
19	WELL.WL_STATUS	Well Status
20	WELL.DT_STATUS	Status Date

Report Footer:

Total number of wells for which the period of confidentiality has expired and for which completion report data has not been entered into the system.

RBDMS Report Specifications WELL SUMMARY REPORTS

Summary:

This report will list summary information on the selected wells.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

WELL, COMPANY, COUNTY, FIELDS, FORMATION, POOL

User Selection Options:

By Wellhead Location:

Section, Township, Range;

By Operator:

Single Operator Number, Range of Operator Numbers;

By County:

Single County, All Counties;

By Field:

Single Field, All Fields

User Sort Options:

None. Wellhead Location:

Alphabetically by Wellhead Location;

Operator:

Alphabetically by Operator Name and Wellhead Location;

County:

Alphabetically by County, Field, and Wellhead Location;

Field:

Alphabetically by Field, County, and Wellhead Location

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail - WELL SUMMARY REPORTS

No.	Data Field Name	Description
1	WELL.API_WELLNO	API Well Number
2	WELL.WELL_TYP	Well Type

Report Body Detail - WELL SUMMARY REPORTS		
No.	Data Field Name	Description
3	WELL.CAT	Category
4	WELL.WL_STATUS	Well Status
5	WELL.DT_STATUS	Status Date
6	COUNTY.NAME	County Name
7	WELL.WL_COMPL	Well Completion
8	WELL.WL_PERMIT	Well Permit Number
9	COMPANY.NAME	Operator Name
10	COMPANY1.NAME	Driller Name
11	WELL.WELL_NM	Well Name, consists of the Lease/Unit Name plus the Well Number.
12	WELL.WH_SEC	Section - Wellhead
13	WELL.WH_TWPN	Township Number - Wellhead
14	WELL.WH_TWPD	Township Direction - Wellhead
15	WELL.WH_RNGN	Range Number - Wellhead
16	WELL.WH_RNGD	Range Direction - Wellhead
17	WELL.WH_PM	Principal Meridian - Wellhead
18	WELL.WH_QTR	Quarter Section - Wellhead
19	WELL.WH_FTNS	Feet from North or South Section Line - Wellhead
20	WELL.WH_NS	North or South Line - Wellhead
21	WELL.WH_FTEW	Feet from East or West Section Line - Wellhead
22	WELL.WH_EW	East or West Line - Wellhead
23	WELL.WH_LAT	Latitude - Wellhead
24	WELL.WH_LONG	Longitude - Wellhead

Report Body Detail - WELL SUMMARY REPORTS

No.	Data Field Name	Description
25	WELL.SLANT	Well Configuration
26	FIELDS.NAME	Fields Name
27	WELL.BASIN	AAPG Basin Code
28	FORMATN.NAME	Objective Formation Name
29	POOL.POOL_NM	Pool Name
30	WELL.ELEV_KB	Kelly Bushing Elevation
31	WELL.ELEV_DF	Derrick Floor Elevation
32	WELL.ELEV_GR	Ground Elevation
33	WELL.REF_CONST	Reference for Well Construction
34	WELL.KO_TVD	True Vertical Depth Kickoff
35	WELL.PB_MD	Plug Back Measured Depth
36	WELL.PB_TVD	Plug Back True Vertical Depth
37	WELL.MD	Measured Depth Hole
38	WELL.TVD	True Vertical Depth Hold
39	WELL.DT_APPROV	Date Well Construction Permit Approved
40	WELL.DT_EXPIRE	Date Well Construction Permit Expires
41	WELL.DT_SPUD	Spud Date
42	WELL.DT_TD	Date Total Depth Reached
43	WELL.DT_COMP	Date Completed
44	WELL.DT_PROD	Date of First Production
45	WELL.DT_INJ	Date of First Injection
46	WELL.DT_AUTH	Date Authorization to Transport
47	WELL.DT_PLUGPLN	Date Plugging Plan Approved

Report Body Detail - WELL SUMMARY REPORTS		
No.	Data Field Name	Description
48	WELL.DT_PA	Date of Well P&A
49	WELL.COMMENT	Comments
Report Footer1: By Operator: Total number of Wells per Operator; By County: Total number of Wells Per County, Field and Wellhead Location; By Field: Total number of Wells Per Field, County and Wellhead Location		
Report Footer2: Total number of Wells listed in report.		

RBDMS Report Specifications
LIST WELLS WITH PERFORMED AOR's

Summary:

This report will list all Wells within a specified Section, Township, and Range that have had AOR's performed.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

AOR, AORWELL, WELL, COUNTY, FIELDS, COMPANY

User Selection Options:

Wellhead Section, Township, and Range

User Sort Options:

None. The wells will be sorted alphabetically by Wellhead Location.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail - LIST WELLS WITH PERFORMED AOR's

No.	Data Field Name	Description
1	WELL.API_WELLNO	API Well Number
2	WELL.WELL_TYP	Well Type
3	WELL.CAT	Category
4	WELL.WL_STATUS	Well Status
5	WELL.DT_STATUS	Status Date
6	COUNTY.NAME	County Name
7	WELL.WL_COMPL	Well Completion
8	WELL.WL_PERMIT	Well Permit Number
9	COMPANY.NAME	Operator Name

Report Body Detail - LIST WELLS WITH PERFORMED AOR's		
No.	Data Field Name	Description
10	WELL.WELL_NM	Well Name, consists of the Lease/Unit Name plus the Well Number.
11	WELL.WH_SEC	Section - Wellhead
12	WELL.WH_TWPN	Township Number - Wellhead
13	WELL.WH_TWPD	Township Direction - Wellhead
14	WELL.WH_RNGN	Range Number - Wellhead
15	WELL.WH_RNGD	Range Direction - Wellhead
16	WELL.WH_PM	Principal Meridian - Wellhead
17	WELL.WH_QTR	Quarter Section - Wellhead
18	WELL.SLANT	Well Configuration
19	FIELDS.NAME	Fields Name
20	WELL.BASIN	AAPG Basin Code
21	FORMATN.NAME	Objective Formation Name
22	POOL.POOL_NM	Pool Name
23	WELL.DT_COMP	Date Completed
24	AOR.MULTI_WL	Single or Multiple Well AOR; "Y"=Multiple Well Aor.
25	AOR.AORNO	When MULTI_WL = "Y" then AOR Number = UIC Permit Number, else it = API Well Number.
26	AOR.DT_APPROV	Date Approved
27	AOR.RADIUS	Radius of the AOR in Miles as proposed by the Operator.
28	AOR.WHPA	Does AOR intersect wellhead protection area. (Y,N)

Report Body Detail - LIST WELLS WITH PERFORMED AOR's		
No.	Data Field Name	Description
29	AOR.TYP	Type of AOR Demonstration Performed
30	AOR.ABANWL	Number of wells Abandoned
31	AOR.WLOTHR	Number of wells not Abandoned
Report Footer: Total Number of Wells listed in the report.		

RBDMS Report Specifications
LIST AOR AND ASSOCIATED WELLS

Summary:

This report will list a single AOR and all of the wells covered by the AOR.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

AOR, AORWELL, WELL, COUNTY, FIELDS, COMPANY

User Selection Options:

Single AOR Number

User Sort Options:

None. The wells covered by the AOR will be sorted alphabetically by Wellhead Location.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail - LIST AOR AND WELLS

No.	Data Field Name	Description
1	AOR.MULTI_WL	Single or Multiple Well AOR; "Y"=Multiple Well Aor.
2	AOR.AORNO	When MULTI_WL = "Y" then AOR Number = UIC Permit Number, else it = API Well Number.
3	AOR.AOR_VAR	AOR or Variance
4	AOR.DT_APPROV	Date Approved
5	AOR.RADIUS	Radius of the AOR in Miles as proposed by the Operator.
6	AOR.WHPA	Does AOR intersect wellhead protection area. (Y,N)

Report Body Detail - LIST AOR AND WELLS

No.	Data Field Name	Description
7	AOR.TYP	Type of AOR Demonstration Performed
8	AOR.DT_RADPRES	Date of Radius Pressure Influence
9	AOR.RAD_PRSINF	Radius of Pressure Influence
10	AOR.INVEN	Is AOR Well Inventory Complete?
11	AOR.TOPOMAP	Has a Topographic Map been submitted showing the well or EOR project with appropriate AOR.
12	AOR.ABANWL	Number of we'ls Abandoned
13	AOR.WLOTHR	Number of wells not Abandoned
14	AOR.DFABAN	Number of Defective wells Abandoned
15	AOR.DFOTHR	Number of Defective wells Other
16	AOR.CAABAN	Number of Abandoned wells requiring Corrective Action
17	AOR.CAOTHR	Number of wells requiring Corrective Action - Other
18	AOR.IZABAN	Number of Abandoned wells that Penetrate Injection Zone
19	AOR.IZOTHR	Number of Non-Abandoned wells that Penetrate Injection Zone
20	AOR.PWSWLS	Number of Public Water Supply Wells
21	AOR.DWWLS	Number of Drinking Water Wells Identified
22	AOR.CSGREP	Number of wells with casing repaired or recommended for repair as a result of investigation.

Report Body Detail - LIST AOR AND WELLS		
No.	Data Field Name	Description
23	AOR.CASUM	Number of wells with Other corrective action performed as a result of investigation.
24	AOR.PLGABN	Number of active wells plugged and abandoned as a result of investigation.
25	AOR.REPLUG	Number of abandoned wells re-plugged as a result of investigation.
26	AOR.COMMENT.	Comments
The following information will repeat for every well covered by the AOR when the AOR is for multiple wells.		
27	WELL.API_WELLNO	API Well Number
28	WELL.WELL_TYP	Well Type
29	WELL.CAT	Category
30	WELL.WL_STATUS	Well Status
31	WELL.DT_STATUS	Status Date
32	COUNTY.NAME	County Name
33	WELL.WL_COMPL	Well Completion
34	WELL.WL_PERMIT	Well Permit Number
35	COMPANY.NAME	Operator Name
36	WELL.WELL_NM	Well Name, consists of the Lease/Unit Name plus the Well Number.
37	WELL.WH_SEC	Section - Wellhead
38	WELL.WH_TWPN	Township Number - Wellhead
39	WELL.WH_TWPD	Township Direction - Wellhead
40	WELL.WH_RNGN	Range Number - Wellhead

Report Body Detail - LIST AOR AND WELLS

No.	Data Field Name	Description
41	WELL.WH_RNGD	Range Direction - Wellhead
42	WELL.WH_PM	Principal Meridian - Wellhead
43	WELL.WH_QTR	Quarter Section - Wellhead
44	WELL.SLANT	Well Configuration
45	FIELDS.NAME	Fields Name
46	WELL.BASIN	AAPG Basin Code
47	FORMATN.NAME	Objective Formation Name
48	POOL.POOL_NM	Pool Name
49	WELL.DT_COMP	Date Completed

Report Footer:

Total Number of Wells listed in the report.

RBDMS Report Specifications
LIST & OPERATOR LETTERS OF EXPIRED PERMITS,
DELINQUENT FORMS AND LOGS

Summary:

This program will generate a hardcopy report and print letters to operators listing wells for which Permits have expired, or there are missing forms or logs. To determine Expired Permits the Spud Date must be blank and the Permit Expiration Date must be prior to the expiration date entered by the user. The Well History File will be processed to determine the wells with missing forms such as, Plugging Reports, Completion Reports, Transporter Certificates, and Sundry Notices. When the Date Received by State is blank in the LOGS file or no record is found for the well then the Missing Log message will be printed for the well.

Media and Format:

List - 8.5" x 11.0" Portrait; Letters - 8.5" x 11.0" Letterhead Portrait

Report Frequency:

As Needed

Database Tables Processed:

WELL, WELL HISTORY, LOGS, COMPANY

User Selection Options:

Expiration Date

Single Operator Number, Range of Operator Numbers, or All Operators

User Sort Options:

None. The report will be sorted Alphabetically by Operator Name and Wellhead Location.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail - EXP PERMITS, DLQ FORMS & LOGS

No.	Data Field Name	Description
1	LETTER DATE	System Date at time run.

The following is the Operators mailing address which will be printed at the top of the Letter to fit window envelopes. Only the Operator Name will be listed in the report.

Report Body Detail - EXP PERMITS, DLQ FORMS & LOGS

No.	Data Field Name	Description
2	COMPANY.CONAME	Operator Company Name
3	COMPANY.FIRST_NAME	First Name of an Individual
4	COMPANY.CONTACT	Contact
5	COMPANY.ADDR1	Address Line 1
6	COMPANY.ADDR2	Address Line 2
7	COMPANY.CITY	City
8	COMPANY.STATE	State
9	COMPANY.ZIP1	Zip 1 (First 5 Digits of Zip Code)
10	COMPANY.ZIP2	Zip 2 (Last 4 Digits of Zip Code)
11	COMPANY.COUNTRY	Country
12	STATEMENT	Statement of the purpose of the Letter which may include the due date for the missing forms or logs, governing statutes, or any other pertinent information.
The following information will repeat for each well for the listed Operator.		
13	WELL.WH_SEC	Section - Wellhead
14	WELL.WH_TWPN	Township Number - Wellhead
15	WELL.WH_TWPD	Township Direction - Wellhead
16	WELL.WH_RNGN	Range Number - Wellhead
17	WELL.WH_RNGD	Range Direction - Wellhead
18	WELL.WH_PM	Principal Meridian - Wellhead
19	WELL.WH_QTR	Quarter Section - Wellhead
20	WELL.WELL_NM	Well Name; consists of the Lease/Unit Name plus the Well Number.
21	WELL.API_WELLNO	API Well Number

Report Body Detail - EXP PERMITS, DLQ FORMS & LOGS		
No.	Data Field Name	Description
22	WELL.WL_PERMIT	Well Permit Number
23	WELL.WL_STATUS	Well Status
24	MESSAGE	Message indicating why the well is listed (e.g. Expired Permit; Missing Form; Missing Log, Log not Received).
25	WELL.DT_EXPIRE	Date Well Construction Permit Expires - Expired Permit only.
26	WELL.DT_COMP	Date Completed - All except Expired Permits.
27	WELLHISTORY.SUBSQNT_RPT	Type of Report Required - Missing Forms only.
28	WELLHISTORY.DT_RPTREQD	Date Reported Required - Missing Forms only.
29	LOGS.DT_RUN	Date Log Run - Log not Received only.
30	LOGS.LOGSRUN	Logs Run - Log not Received only.
Report Footer: Total Wells listed in report.		

RBDMS Report Specifications		LIST & OPERATOR LETTERS OF DELINQUENT TESTS	
Summary: This program will generate a hardcopy report and print letters to operators listing wells for which EMI and/or IMI Tests have not been completed by the specified dates in the NEXT_EMIT and NEXT_IMIT fields.			
Media and Format: List - 8.5" x 11.0" Portrait; Letters - 8.5" x 11.0" Letterhead Portrait			
Report Frequency: As Needed			
Database Tables Processed: WELL, EMIT_TST, IMIT_TST, COMPANY			
User Selection Options: Single Operator Number, Range of Operator Numbers, or All Operators			
User Sort Options: None. The report will be sorted Alphabetically by Operator Name and Wellhead Location.			
Report Header: Report Name, Report Date & Time, User ID, Page Number			
Report Body Detail - LIST & LETTERS OF DELINQUENT TESTS			
No.	Data Field Name	Description	
1	LETTER DATE	System Date at time run.	
The following is the Operators mailing address which will be printed at the top of the Letter to fit window envelopes. Only the Operator Name will be listed in the report.			
2	COMPANY.CONAME	Operator Company Name	
3	COMPANY.FIRST_NAME	First Name of an Individual	
4	COMPANY.CONTACT	Contact	
5	COMPANY.ADDR1	Address Line 1	
6	COMPANY.ADDR2	Address Line 2	
7	COMPANY.CITY	City	

Report Body Detail - LIST & LETTERS OF DELINQUENT TESTS

No.	Data Field Name	Description
8	COMPANY.STATE	State
9	COMPANY.ZIP1	Zip 1 (First 5 Digits of Zip Code)
10	COMPANY.ZIP2	Zip 2 (Last 4 Digits of Zip Code)
11	COMPANY.COUNTRY	Country
12	STATEMENT	Statement of the purpose of the Letter which may include any governing statutes and any other pertinent information.
The following information will repeat for each well for the listed Operator.		
13	WELL.WH_SEC	Section - Wellhead
14	WELL.WH_TWPN	Township Number - Wellhead
15	WELL.WH_TWPD	Township Direction - Wellhead
16	WELL.WH_RNGN	Range Number - Wellhead
17	WELL.WH_RNGD	Range Direction - Wellhead
18	WELL.WH_PM	Principal Meridian - Wellhead
19	WELL.WH_QTR	Quarter Section - Wellhead
20	WELL.WELL_NM	Well Name
21	WELL.API_WELLNO	API Well Number
22	WELL.WL_PERMIT	Well Permit Number
23	WELL.WL_STATUS	Well Status
24	WELL.NEXT_EMIT	Date Next EMIT was Scheduled
25	WELL.NEXT_IMIT	Date Next IMIT was Due
26	WELL.DT_COMP	Date Completed
Report Footer: Total Wells listed in report.		

RBDMS Report Specifications INJECTION VOLUMES AND PRESSURES

Summary:

This program will list volumes and pressures reported to state oil and gas boards and commissions on the monthly injection monitoring reports.

Media and Format:

11.0" x 8.5" Landscape

Report Frequency:

Monthly.

Database Tables Processed:

MONITOR, WELL, COMPANY, FIELDS, COUNTY

User Selection Options:

The user will specify:

Beginning Year/Month and Ending Year/Month for the time period covered by the report.

The user may select a report listing injection volumes and pressures for a specific well, all wells in a specified UIC Permit, or all injection wells in the state. If a specified well or specified permit are selected, the user must enter the API Number of the well or the Permit Number of the UIC Permit.

User Sort Options:

None.

For all injection wells in the state, wells will be sorted by County, Field, Pool, Operator, Well API Number.

For a specific UIC Permit, wells will be sorted by API Number.

For each well, injection monitoring reports will be sorted by Injection Year and Injection Month.

Report Header:

Report Name, Report Date & Time, User ID, Page Number, Selection Criteria.

Report Body Detail - INJECTION VOLUMES & PRESSURES		
No.	Data Field Name	Description
For reports prepared for a particular UIC Permit, the following data elements will appear in the report header:		
1	UIC_PERMIT.UICPERMIT	UIC Permit Number
2	UIC_EPA_PERMIT	EPA Permit Number
For reports prepared for all UIC wells, the following information will appear in the header for each new pool:		
3	WELL.CNTY	API County Number
4	COUNTY_NAME	County Name
5	WELL.FIELD_NO	Field Number
6	FIELDS.NAME	Field Name
7	WELL.POOLNO	Pool Number
8	POOL.POOL_NM	Pool Name
The following information will be printed for each injection month for each well:		
9	MONITOR.YEAR	Year
10	MONITOR.MONTH	Month
11	MONITOR.OPNO	Operator Number
12	COMPANY.CONAME	Operator Name
13	MONITOR.INJ_DAYS	Days Injecting
14	MONITOR.VOL_LIQ	Volume of Liquids Injected
15	MONITOR.VOL_GAS	Volume of Gas Injected
16	MONITOR.PRSRES	Average Reservoir Pressure
17	MONITOR.TBG_AV	Average Tubing Pressure
18	MONITOR.MAXALOWPR	Maximum Allowable Injection Pressure

Report Body Detail - INJECTION VOLUMES & PRESSURES

No.	Data Field Name	Description
19	MONITOR.PRS_TC_MX	Maximum Tubing/Casing Annulus Pressure
20	Print "*" if MONITOR.PRS_TC_MX > MONITOR.MAXALOWPR	"*" Indicates Pressure Violation
21	WELL.MAXALOWRA	Maximum Allowable Rate of Injection
22	Average Injection Rate Computed: MONITOR.VOL_GAS divided by MONITOR.INJ_DAYS	Average Rate of Injection
23	Print "*" if computed average injection rate is greater than MONITOR.MAXALOWRA	"*" Indicates Injection Rate Violation
24	MONITOR.PRS_TC_AVE	Average Tubing/Casing Pressure
25	MONITOR.PRS_TC_MX	Maximum Tubing/Casing Pressure
26	MONITOR.PRS_CS_AV	Average Casing/Surface Casing Pressure
27	MONITOR.PRS_CS_MX	Maximum Casing/Surface Casing Pressure
28	MONITOR.RPT_STATUS	Report Status
29	MONITOR.TARDY	Tardy Report Indicator

Report Footer 1:

Add volumes for all months included in the report and print sub-totals of MONITOR.VOL_LIQ and MONITOR.VOL_GAS for each injecting well.

Report Footer 2:

For report of all wells in a UIC Permit:
Tabulate and Print Grand Total of all wells in the Permit.

For report of all wells:
Tabulate and print subtotals of MONITOR.VOL_LIQ and MONITOR.VOL_GAS for Pool, Field, and County.

Report Footer 3:

For report of all wells:

Tabulate and print State Grand Total of MONITOR.VOL_LIQ and
MONITOR.VOL_GAS.

RBDMS Report Specifications
LIST OF INJECTION PRESSURES AND INJECTION RATES
GREATER THAN THE PERMITTED MAXIMUMS

Summary:

This program will generate a hardcopy report listing those wells with UIC Monitoring Reports that have exceeded the Maximum Allowable Injection Pressure and/or the Maximum Allowable Rate of Injection. This program will also write a record to the Compliance File for every violation listed in the report. The report will be processed for the time period entered by the user. The Injection Pressure Violation and Injection Rate Violation fields in the MONITOR file will be checked to determine if the UIC Monitoring Report exceeded the allowable maximums.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

WELL, MONITOR, COMPLIANCE, FIELDS, COMPANY

User Selection Options:

None. The Reporting Period Beginning and Ending Date must be entered by the user.

User Sort Options:

None. The report will be sorted by Operator Name, Field Name, API Well Number, and Monitoring Report Period Date.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail - INJ PRESSURES & RATES > MAXIMUMS

No.	Data Field Name	Description
1	COMPANY.CONAME	Operator Name, from the MONITOR file.
2	FIELDS.NAME	Field Name
3	MONITOR.API_WELLNO	API Well Number
4	MONITOR.YEAR	Report Period Year

Report Body Detail - INJ PRESSURES & RATES > MAXIMUMS		
No.	Data Field Name	Description
5	MONITOR.MONTH	Report Period Month
6	MONITOR.MAXALLOWPR	Maximum Allowable Injection Pressure
7	MONITOR.PRS_TBG_MX	Maximum Tubing Pressure at Surface
8	MONITOR.MAXALLOWRA	Maximum Allowable Rate of Injection in Barrels per Day
9	AVR_RT = MONITOR.VOL_LIQ / MONITOR.INJ_DAYS	Average Rate of Injection in Barrels per day is a computed field.
10	MONITOR.RPT_STATUS	Report Status
11	WELL.WELL_TYP	Well Type
12	WELL.CAT	Category
13	WELL.WL_STATUS	Well Status
16	WELL.WL_COMPL	Well Completion
17	WELL.WL_PERMIT	Well Permit Number
36	WELL.WELL_NM	Well Name, consists of the Lease/Unit Name plus the Well Number.
37	WELL.WH_SEC	Section - Wellhead
38	WELL.WH_TWPN	Township Number - Wellhead
39	WELL.WH_TWPD	Township Direction - Wellhead
40	WELL.WH_RNGN	Range Number - Wellhead
41	WELL.WH_RNGD	Range Direction - Wellhead
42	WELL.WH_PM	Principal Meridian - Wellhead
43	WELL.WH_QTR	Quarter Section - Wellhead
44	WELL.SLANT	Well Configuration
49	WELL.DT_COMP	Date Completed

Report Footer1:

Total Number of Violations per Operator.

Report Footer2:

Total Number of Operators listed in the report.

RBDMS Report Specifications INACTIVE UIC WELL REPORT

Summary:

This program will generate a hardcopy report listing all injection wells that have not injected for the past six (6) months or the number of months entered by the user. The UIC Monitoring Reports File will be searched for zero reports for the specified time period.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

WELL, MONITOR, FIELDS, COMPANY, COUNTY, POOL

User Selection Options:

Reporting Period Beginning and Ending Dates

User Sort Options:

None. The report will be sorted by Field Name, Pool Name, Operator Name, and API Well Number.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail - INACTIVE UIC WELL REPORT

No.	Data Field Name	Description
1	FIELDS.NAME	Field Name
2	POOL.POOL_NM	Pool Name
3	COMPANY.CONAME	Operator Name
4	WELL.API_WELLNO	API Well Number
5	WELL.WELL_TYP	Well Type
6	WELL.CAT	Category
7	WELL.WL_STATUS	Well Status
8	WELL.DT_STATUS	Status Date

Report Body Detail - INACTIVE UIC WELL REPORT

No.	Data Field Name	Description
9	WELL.WL_COMPL	Well Completion
10	WELL.WL_PERMIT	Well Permit Number
11	WELL.WELL_NM	Well Name, consists of the Lease/Unit Name plus the Well Number.
12	WELL.WH_SEC	Section - Wellhead
13	WELL.WH_TWPN	Township Number - Wellhead
14	WELL.WH_TWPD	Township Direction - Wellhead
15	WELL.WH_RNGN	Range Number - Wellhead
16	WELL.WH_RNGD	Range Direction - Wellhead
17	WELL.WH_PM	Principal Meridian - Wellhead
18	WELL.WH_QTR	Quarter Section - Wellhead
19	WELL.SLANT	Well Configuration
20	WELL.DT_COMP	Date Completed
21	WELL.DT_INJ	Date of First Injection

Report Footer:

Total Number of Wells listed in the report.

**Specifications
for
Reports Related to
Mechanical Integrity Testing**

RBDMS Report Specifications

Mechanical Integrity Test Report, Casing or Annulus Pressure Test

Summary:

The Mechanical Integrity Test Report for Casing or Annulus Pressure Tests is a report that can be automatically generated for use by field personnel when witnessing casing or annulus pressure tests. The report lists information pertaining to the well, operator, and previous IMI test which can be confirmed and reviewed by state field personnel prior to testing. The form also allows for testing results and new well information to be entered onto the form for future technical review, referral, and/or data entry.

Media and Format:

8.5" x 11.0" Portrait, See attached report legend for actual format

Report Frequency:

As Needed

Database Tables Processed:

COMPANY; COUNTY; FIELDS; IMIT; PERFS; STRINGS; WELL

User Selection Options:

Individual well; multiple wells which are due within a specified time-frame for an IMI test; or multiple wells for a specified area which are due for IMI testing

User Sort Options:

Pre-determined as specified on attached report legend

Report Header:

Pre-determined headers as shown on attached report legend

Report Body Detail

No.	Field Name	Header/Comment
A1	IMIT.API_WELLNO	See Form
A2	WELL.WH_QTR	See Form
A3	WELL.WH_QTR	See Form
A4	WELL.WH_QTR	See Form
A5	WELL.WH_SEC	See Form
A6	WELL.WH_TWPN	See Form
A7	WELL.WH_TWPD	See Form
A8	WELL.WH_RNGN	See Form

RBDMS Report Sepecifications
Mechanical Integrity Test Report, Casing or Annulus Pressure Test

A9	WELL.WH_RNPD	See Form
A10	COMPANY.CONAME	See Form
A11	COMPANY.CONO	See Form
A12	WELL.WELL_NM	See Form
A13	FIELDS.NAME	See Form
A14	COUNTY.NAME	See Form
A15	IMIT.DT_TEST	See Form
A16	IMIT.TST_RSLT	See Form
A17	IMIT.IMIT_METH	See Form
A18	IMIT.TST_REAS	See Form
A19	IMIT.REPAIR_DUE	See Form
A20	IMIT.REPAIR_COM	See Form
A21	IMIT.FAIL_CAUS	See Form
A22	IMIT.REP_S_F	See Form
A23	IMIT.FAIL_TYPE	See Form
A24	IMIT.WL_STAT	See Form
A25	IMIT.INJ_RATE	See Form
A26	IMIT.INJ_PRESS	See Form
A27	WELL.IMIT_RTP	See Form
A28	STRINGS.TOP for STRINGS.TYPE_PIPE = PKR (if multiple packers exist, print deepest packer on form)	See Form
A29	PERFS.TOP (display top of uppermost perforations)	See Form

Mechanical Integrity Test Report

Casing or Annulus Pressure Test

Mississippi State Oil and Gas Board
500 Greymont Avenue, Suite E
Jackson, Mississippi 39202

State Inspector: _____ Date: __/__/__ Start Time: _____ am/pm
Operator Representative(s): _____
Others Present: _____

General Well Data and Previous MIT Information	
API Well No.: [A1]	Location: [A2][A3][A4] Sec. [A5] Township [A6A7] Range [A8A9]
Operator Name/Number: [A10]	[A11]
Well Name/Number: [A12]	
Field Name: [A13]	County: [A14]
Date Last MIT: [A15]	Result of Last Test: [A16] Type of Test Used: [A17] Reason: [A18]
Corrective Action Due: [A19]	CA Date & Type CA: [A20] and [A21]
Cause of Failure (Last Test): [A22]	Type of Failure (Last Test): [A23]
Well Status at Last Test: [A24]	Inj. Rate and Pressure During Last Test: [A25] bpd and [A26] psig
Required Minimum Test Pressure: [A27] psig	
Pkr Depth: [A28] feet GL	Top of Perfs: [A29] feet GL

Casing/Annulus Pressure Test Results			
Time (minutes)	TEST #1 (psig)	Time (minutes)	TEST #2 (psig)
0		0	
10		10	
20		20	
30		30	
Result (circle)	PASS / FAIL	Result (circle)	PASS / FAIL
Tubing Pressure		Tubing Pressure	

Current Well Data and Information for Testing	
Type of Test Used: _____	Reason For Test: _____
Cause of Failure (this test): _____	Type of Failure (this test): _____
Well Status during Test: Injecting / Shut-in	
Injection Rate During Test: _____ bpd	Injection Pressure During Test: _____ psig
Pkr Depth: _____ feet GL	

Signature of State Inspector/Representative:	
Signature of Operator Representative:	

See back of page for any additional comments
Side 1 of 2

[illegible]

OFFICE USE ONLY: Compliance Followup			
Technical/Compliance Reviewer: _____		Date: _____	
Do you agree that the well passed/failed the test?	☐ YES	☐ NO	
Where the minimum testing requirments achieved?	☐ YES	☐ NO	
Were possible violations identified?	☐ YES	☐ NO	
Is additional followup required?	☐ YES	☐ NO	
Follow-up required: ☐ Data Entry ☐ Compliance ☐ Hard Copy Filing ☐ 2nd Data Entry			

RBDMS Report Specifications
Internal Mechanical Integrity Assessment Report
For Wells Using Annulus Pressure Monitoring

Summary:

The Internal Mechanical Integrity Assessment Report for Wells Using Annulus Pressure Monitoring (APM) lists data and information needed to assess compliance with APM requirements as well as APM results.

Media and Format:

8.5" x 11.0" Landscape

Report Frequency:

As Needed

Database Tables Processed:

COMPANY; IMIT; WELL

User Selection Options:

Individual or all well which utilize APM; Only well in a specified area or own by a specified Operator

User Sort Options:

API Well Number; Operator; Selected Geographical Area

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Field Name	Header
1	IMIT.API_WELLNO	API Well Number
2	COMPANY.CONO	Operator Number
3	WELL.WELL_NM	Well Name and Number
4	WELL.DT_APMAPP	Date APM Approved
5	WELL.FRQ_MONREC	APM Recording Frequency
6	WELL.FRQ_MONRPT	APM Reporting Frequency
7	Calculated Field	Next APM Report Due
8	IMIT.DT_TEST for IMIT.TST_METH = SAMT	Date APM Report Received
9	WELL.MINREQAP	Min. Req. Annulus Pressure (psig)

RBDMS Report Specifications
Internal Mechanical Integrity Assessment Report
For Wells Using Annulus Pressure Monitoring

Summary:

The Internal Mechanical Integrity Assessment Report for Wells Using Annulus Pressure Monitoring (APM) lists data and information needed to assess compliance with APM requirements as well as APM results.

10	IMIT.MON_RSLT	Last APM Result (A/D)
11	IMIT.DT_MOD	Date Record Updated

Report Footer:

Total number of wells included in report

**RBDMS Report Sepecifications
External Mechanical Integrity Testing
Well Failure Summary Report**

Summary:

The External Mechanical Integrity (EMI) Testing Well Failure Summary Report lists data and information well identified as having defficient EMI.

Media and Format:

8.5" x 11.0" Landscape

Report Frequency:

As Needed

Database Tables Processed:

COMPANY; EMIT; EMITMETH; WELL

User Selection Options:

All wells; Single or Range of Companies; Specified geographical Area

User Sort Options:

API Well Number; Operator; SelectedGeographical Area

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Field Name	Header
1	EMIT.API_WELLNO	API Well Number
2	COMPANY.CONO	Operator Number
3	WELL.WELL_NM	Well Name and Number
4	EMIT.DT_TEST	Test Date
5	EMIT.TST_REAS	Reason for Test
6	EMIT.IMIT_METH	EMIT Meth.
7	EMIT.REPAIR_DUE	Date Repair Due
8	EMIT.REPAIR_COM	Date Repair Complete
9	EMIT.TST_RSLT	Rslt
10	EMIT.FAIL_TYPE	Type of Fail.
11	EMIT.FAIL_CAUS	Cause of Fail.

RBDMS Report Sepecifications External Mechanical Integrity Testing Well Failure Summary Report		
12	EMIT.DT_MOD	Date Record Updated

RBDMS Report Specifications

External Mechanical Integrity Testing Results and Scheduling

Summary:

The External Mechanical Integrity (EMI) Testing Results and Scheduling Report lists data and information pertaining to EMI requirements, results, and schedules on an individual well basis.

Media and Format:

8.5" x 11.0" Landscape, columnar style format

Report Frequency:

As Needed

Database Tables Processed:

COMPANY; EMIT; EMITMETH; WELL

User Selection Options:

Single, Range of Companies, or all Companies; Geographical Area such as County, Field, Basin, entire state

User Sort Options:

API Well Number; Operator; Selected Geographical Area

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Field Name	Header/Comment
1	EMIT.API_WELLNO	API Well Number
2	COMPANY.CONO	Operator Number
3	WELL.WELL_NM	Well Name and Number
4	WELL.FRQ_EMIT	EMIT FREQ. (MOs)
5	WELL.LAST_EMIT	Last EMIT
6	EMIT.TST_REAS	Reason for Test
7	EMIT.EMIT_METH	EMIT Meth. Used
8	EMIT.EMIT_RSLT	Rslt (A/D)
9	WELL.NEXT_EMIT	Next EMIT Due
10	WELL.DT_OPNOT	Date Operator Notified

RBDMS Report Sepecifications External Mechanical Integrity Testing Results and Scheduling		
--	--	--

11	EMIT.COMMENT	Comments
12	EMIT.DT_MOD	Date Record Updated
Report Footer: Total Number of wells listed		

**Specifications
for
Reports Related to
Environmental Risk Analysis**

**RBDMS Report Specifications
for the
Well-Specific (or Levels of Protection)
Environmental Risk Analysis Report**

Report Summary:

The Well-Specific Environmental Risk Analysis Report will list resultant information from a levels-of-protection analysis on an individual well (or well-by-well) basis to assess the potential risk a Class II injection well may pose to a USDW.

Media and Format:

8.5" x 11.0" Landscape

Report Frequency:

As Needed

Database Tables Processed:

COMPANY; FORMATN; WELL; IMIT; EMIT; ZONES; STRINGS; CEMENT;
CEMENTCLS; COUNTY; FIELDS; FORMTOPS; PERFS; Others

User Selection Options:

Single well or multiple wells, Single or multiple Companies, specified geographical area (i.e., county, field, basin, entire state), Single or multiple Operators. Additional alternative selection criteria will be available for custom reports.

User Sort Options:

API Well Number; Risk Category; Alphabetically by Operator, Field, County, Basin

Report Header:

Report Name, Report Data & Time, User ID, Page Number

Report Body Detail

No.	Description	Comments
1	Selection specification to be made by user from report screen. Report screen is presented in Section 5 "System Screens".	The selection specification chosen will be shown in the first column of the report. See Selection options (above) for details.
2	WELL.API_WELLNO	API Well Number
3	WELL.WELL_NM	Name of Well

**RBDMS Report Specifications
for the
Well-Specific (or Levels of Protection)
Environmental Risk Analysis Report**

4	COMPANY.CONAME for COMPANY.OPER=Y	Name of Operator
5	FORMATN.NAME for ZONES.TYP_ZONE=I	Name of Injection Zone
6	WELL.LAST_IMIT	Last Internal Mechanical Integrity Test
7	IMIT.TST_RSLT	Result of last Internal Mechanical Integrity Test
8	WELL.LAST_EMIT	Last External Mechanical Integrity Test
9	EMIT.EMIT_RSLT	Result of Last External Mechanical Integrity Test
10	Calculated field, see algorithm for details.	Risk of well causing contamination to a USDW
11	Calculated field, see algorithm for details.	Resultant IMIT Frequency Required for this well.

Additional Comments:

Users will have a variety of alternatives to sort the data for this report. For instance, user may select to sort by risk (i.e., field 10, above) within each area. Users may also choose only to print those wells having a specified level of resultant direct risk (i.e., significant, moderate, minimal, none).

Additionally, depending on information maintained in the system at the time of the analysis, the report will show which wells have insufficient data necessary to perform the analysis.

Report Footer:

Total wells under each risk category

RBDMS Design Specifications Environmental Risk Probability Analysis (Multiple Wells)

Summary:

The Environmental Risk Probability Analysis assesses the USDW contamination probability of Class II injection wells. The associated report specified herein lists the results of the probability analysis (on a multi-well basis) for specified selection criteria used in the analysis. Selection criteria can vary from a specified geographical type area (e.g., County, Field, etc.) or for other specified criteria such as operators; injection zones, well depth, etc.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

IMIT; STRINGS; CEMENT; CEMENTCLS; COUNTY; FORMATN; FIELDS;
FORMTOPS; PERFS; WELL; WELLHISTRY; ZONES; ZONEFMTN

User Selection Options:

Many Options Available

User Sort Options:

Many Options Available

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Description	Comment
1	Selection specification to be selected by user from report screen. Report screen is presented in Section 5 "System Screens".	Selection Specification (i.e, by geographical area {county, field, township, District, entire State, etc.}, operator, etc.)
2	Count number of wells where STRINGS.BOT for STRINGS.TYP_PIPE=SURF is less than ZONES.BOT for ZONES.TYP_ZONE=U	Number of wells without surface casing below the base of the lowermost USDW.

RBDMS Design Specifications
Environmental Risk Probability Analysis (Multiple Wells)

3	Calculated Function. See Algorithm for details.	Risk of injectate reaching a USDW for well with inadequate surface casing within selection specification.
4	Count number of wells where STRINGS.BOT for STRINGS.TYP_PIPE=SURF is greater than ZONES.BOT for ZONES.TYP_ZONE=U	Number of wells with surface casing set and cemented below the base of the lowermost USDW.
5	Calculated Function. See Algorithm for details.	Risk of injectate reaching a USDW for well with adequate surface casing within selection specification.
<p>Additional Comments:</p> <p>Results from the above report will be displayed based on the selection criteria chosen by the user. For instance, if the user selects the analysis to be performed on every county in the state, analysis results would be presented by county. However, users may choose to perform the analysis on a single area (i.e., an individual field or basin) prompting the system to assess and report results for a single analysis. Users may also choose to prompt the system to perform the analysis on all or selected operators within the state, all wells injecting into a certain formation, as well as other frequently used selection criteria. In addition, because state personnel may require the analysis be performed using atypical selection criteria, the report screen allows entry into the databases Relational Query by example. This access will allow users to perform the analysis on virtually any selection criteria.</p>		
<p>Report Footer:</p> <p>Total number of wells evaluated and listed in the report</p>		

**Specifications
for
Reports Related to
Compliance, Violations, or Enforcement**

Report Specifications Enforcement Status Report (multiple wells)

Summary:

The Enforcement Status Report lists status of state initiated enforcement actions for tracking purposes.

Media and Format:

8.5" x 11.0" Landscape (columnar type report)

Report Frequency:

As Needed

Database Tables Processed:

COMPANY; FIELDS; COMPLY

User Selection Options:

All pending wells with violations or non-compliance, only those wells having pending enforcement actions, single or range of companies, or for a selected geographical area.

User Sort Options:

API Well Number; Operator; Type of Violation or Enforcement Action; Selected Geographical Area

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Field Name	Report Column Header
1	COMPLY.API_WELLNO	API Well Number
2	COMPANY.CONO	Operator Number
3	FIELDS.NAME	Field Name
4	COMPLY.DT_VIOL	Violation Date
5	COMPLY.VIOL_TYP	Violation Type
6	COMPLY.SNC_Y_N	SNC?
7	COMPLY.ENF_TYP	Enforcement Action
8	COMPLY.DT_ENF	Date Enf. Act. Taken
9	COMPLY.ASSESSED	Penalty Assessed

<p style="text-align: center;">Report Specifications Enforcement Status Report (multiple wells)</p>			
<p>Summary: The Enforcement Status Report lists status of state initiated enforcement actions for tracking purposes.</p>			
<table border="1"><tr><td>10</td><td>COMPLY.DT_MOD</td><td>Date Record Updated</td></tr></table>	10	COMPLY.DT_MOD	Date Record Updated
10	COMPLY.DT_MOD	Date Record Updated	
<p>Report Footer: Total Number of Wells in Report</p>			

Report Specifications
Enforcement, Violations, Compliance Data Report
(Well by Well)

Summary:

The Enforcement, Violations, Compliance Report displays all of the COMPLY.DBF fields similar as to how they appear on the user screen. Listing the data from the COMPLY.DBF in this manner allows users to create reports on a well by well basis for a selected individual or groups of wells.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

COMPLY

User Selection Options:

Single well or individual wells by Operator(s)

User Sort Options:

API Well Number; Type of Violation or Enforcement Action; Date of Violation

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Field Name	Description
1	All COMPLY.DBF database fields	Database Fields will be printed out as shown on the RBDMS COMPLY screen.

Report Footer:

Total Number of Wells in Report

**Specifications
for
Reports Related to
UIC Permitting**

RBDMS Report Specifications for UIC Permit/Order Status Report

Summary:
The UIC Permit Status report lists UIC permit tracking data needed for following permits/orders for Class II injection wells.

Media and Format:
8.5" x 11.0" Landscape

Report Frequency:
As Needed

Database Tables Processed:
COMPANY; WELL; UIC_PERMIT

User Selection Options:
API Well Number; Company; Type of Permit Function or Action

User Sort Options:
API Well Number; Operator; Selected Geographical Area

Report Header:
Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Field Specification	Description
1	UIC_PERMIT.API_WELLNO	API Well Number
2	UIC_PERMIT.UICPERMIT	UIC Permit Number
	UIC_PERMIT.PERMIT_TYP	Type of Well Permit (i.e., area or individual)
3	COMPANY.CONO	Operator Number
4	WELL.WELL_NM	Well Name and Number
5	UIC_PERMIT.DT_APPLIC	Date Application Received
6	UIC_PERMIT.DT_ISSUED	Date Permit/Order Issued
7	UIC_PERMIT.DT_EFFECT	Date Permit/Order Effective
8	UIC_PERMIT.DT_WITHDRAW	Date Permit/Order Withdrawn
9	UIC_PERMIT.DT_DENIED	Date Permit Denied

**RBDMS Report Specifications
for UIC Permit/Order Status Report**

Summary:

The UIC Permit Status report lists UIC permit tracking data needed for following permits/orders for Class II injection wells.

10	UIC_PERMIT.DT_PNOTICE	Date Public Notice Requirements Achieved
11	UIC_PERMIT.DT_FEE	Date Permit/Order Fee Collected
12	UIC_PERMIT.FEE_AMOUNT	Permit/Order Fee Amount
13	UIC_PERMIT.DT_MOD	Date Record Updated

Report Footer:

Total number of wells included in report

Report Specifications
UIC Permit Data Report
(Well by Well)

Summary:

The UIC Permit Data Report displays all of the UIC_PERMIT.DBF fields similar as to how they appear on the user screen. Listing the data from the UIC_PERMIT database in this manner allows users to create reports on a well by well basis for a selected individual or groups of wells for review or evaluation purposes.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

UIC_PERMIT

User Selection Options:

Single well or group of individual wells by Operator(s)

User Sort Options:

API Well Number; Operator Number; Geographical Area

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Field Name	Description
1	All UIC_PERMIT.DBF database fields	Database Fields will be printed out as shown on the RBDMS COMPLY screen.

Report Footer:

Total Number of Wells in Report

**Specifications
for
Inspection Related Reports**

RBDMS Report Specifications WELLS REQUIRING INSPECTIONS

Summary:

This report will list UIC wells that have not been inspected for the type of inspection entered by the user since the date entered by the user. The purpose of this report is to assist in scheduling inspections.

If a well has not been inspected since the date specified, but the well is scheduled for an inspection, information pertaining to the scheduled inspection will be included in the report.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

Monthly, Quarterly or Annually per State needs.

Database Tables Processed:

INSPECTION, WELL, COMPANY, FIELDS, COUNTY

User Selection Options:

Type of Inspection.

All Wells, Only UIC Wells, or Only Production Wells.

The Date to be used for selecting wells. If the user enters 12/01/91, wells that have not been inspected since 12/01/91 will be listed.

The user may specify a particular State Oil and Gas Commission District, or the report may be run for all districts.

User Sort Options:

The high level sort will be by District.

Within Districts, the user will specify whether the report will be sorted by: County, Field, Range, Township, and Section; or by Operator.

Report Header:

Report Name, Report Date & Time, User ID, Page Number, Selection Criteria

Processing:

In addition to selection criteria entered, only include wells completed prior to the selection date entered by the user.

Report Body Detail - WELLS REQUIRING INSPECTIONS

No.	Data Field Name	Description
1	WELL.ST_DIST	State District
2	WELL.OPNO	Operator Number
3	COMPANY.CONAME	Operator Name
4	COUNTY.NAME	County
5	FIELDS.NAME	Field
6	WELL.API_WELLNO	API Well Number
7	WELL.WELL_NM	Well Name
8	WELL.WH_SEC	Section
9	WELL.WH_TWPN	Township Number
10	WELL.WH_TWPD	Township Direction
11	WELL.WH_RNGN	Range Number
12	WELL.WH_RNGD	Range Direction
13	WELL.WH_PM	Principal Meridian
14	WELL.WH_QTR	Quarter-Quarter
15	WELL.WELL_TYP	Well Type
16	WELL.DT_COMP	Date Well Completed
17	WELL.WL_STATUS	Well Status
18	WELL.DT_STATUS	Status Date
19	INSPECTION.DT_PERFM	Date Last Inspection Performed
20	INSPECTION.DT_REQR	Date Next Inspection Required
21	INSPECTION.DT_NOTIFY	Date Operator Notified of Next Inspection
22	INSPECTION.DT_SCHED	Date Next Inspection Scheduled

Report Footer:

Subtotals by District and Grand Total of Wells Requiring Inspections.

**RBDMS Report Specifications
P & A'd WELLS REQUIRING
SURFACE RESTORATION INSPECTIONS**

Summary:

This report will list P & A'd wells that require surface restoration inspections. The purpose of this report is to assist in scheduling location clearance and surface restoration inspections.

If a surface restoration inspection has not been performed, but the well is scheduled for such an inspection, information pertaining to the scheduled inspection will be included in the report.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

On demand, normally Monthly, or Quarterly per agency requirements.

Database Tables Processed:

INSPECTION, WELL, COMPANY, FIELDS, COUNTY

User Selection Options:

The date to be used for selecting wells. If the user enters 12/01/93, only wells with P & A dates greater than or equal to 12/01/93 will be listed. This will eliminate old wells that do not have Surface Restoration inspection records in the system from being printed in the report.

The user may specify a particular State Oil and Gas Commission District, or the report may be run for all districts.

User Sort Options:

None. The high level sort will be by District.

Within Districts, the report will be sorted by: County, Field, Range, Township, and Section.

Report Header:

Report Name, Report Date & Time, User ID, Page Number, Selection Criteria.

Processing:

In addition to selection criteria, select only wells with:

WELL.DT_PA .GE. Selection Date; .AND. with no Inspection Record with
INSPECTION.TYP_INSP .EQ. SURFACE RESTORATION .AND.
INSPECTION.DT_PERFM .GE. WELL.DT_PA.

**Report Body Detail - P & A'd WELLS REQUIRING
SURFACE RESTORATION INSPECTIONS**

No.	Data Field Name	Description
1	WELL.ST_DIST	State District
2	WELL.OPNO	Operator Number
3	COMPANY.CONAME	Operator Name
4	COUNTY.NAME	County
5	FIELDS.NAME	Field
6	WELL.API_WELLNO	API Well Number
7	WELL.WELL_NM	Well Name
8	WELL.WH_SEC	Section
9	WELL.WH_TWPN	Township Number
10	WELL.WH_TWPD	Township Direction
11	WELL.WH_RNGN	Range Number
12	WELL.WH_RNGD	Range Direction
13	WELL.WH_PM	Principal Meridian
14	WELL.WH_QTR	Quarter-Quarter
15	WELL.WELL_TYP	Well Type
16	WELL.DT_PA	Date Well P & A'd
17	INSPECTION.DT_REQR	Date Surface Restoration Inspection Required
18	INSPECTION.DT_NOTIFY	Date Operator Notified of Inspection

**Report Body Detail - P & A'd WELLS REQUIRING
SURFACE RESTORATION INSPECTIONS**

No.	Data Field Name	Description
19	INSPECTION.DT_SCHED	Date Surface Restoration Inspection Scheduled
Report Footer: Subtotals by District and Grand Total of Wells Requiring Surface Restoration Inspections.		

RBDMS Report Specifications INSPECTION STATISTICS

Summary:

This program will tabulate and print a report of inspection statistics for inspections performed during the time period selected by the user.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

Monthly or Quarterly per State needs.

Database Tables Processed:

INSPECTION

User Selection Options:

The user will specify the Beginning and Ending Dates for the time period covered by the report.

User Sort Options:

The user will select whether the report will be sorted and subtotaled by Inspector or by Type of Inspection.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail - INSPECTION STATISTICS

No.	Data Field Name	Description
1	INSPECTION.INSP_NAME	Inspector Name
2	INSPECTION.TYP_INSP	Inspection Type Code
	CODE.TYP_INSPDS	Inspection Type Description
Subtotal the following columns by INSPECTION.TYP_INSP and INSPECTION.INSP_NAME		
	COUNT INSPECTIONS WITH: INSPECTION.DT_PERFM .GE. Beginning Date AND INSPECTION.DT_PERFM .LE. Ending Date	Number of Inspections Performed

Report Body Detail - INSPECTION STATISTICS		
No.	Data Field Name	Description
	SUM INSPECTION.DURATION FOR INSPECTIONS WITH: INSPECTION.DT_PERFM .GE. Beginning Date AND INSPECTION.DT_PERFM .LE. Ending Date	Total Duration of Inspections Performed in Hours
	Total Duration DIVIDED BY Number of Inspections Performed	Average Duration Per Inspection
	COUNT INSPECTIONS WITH: INSPECTION.VIOL = "Y"	Number of Failed Inspections
	COUNT INSPECTIONS WITH: INSPECTION.SNC = "Y"	Number of Instances of Significant Non-Compliance
Report Footer: State Totals for each pertinent column listed in the report.		

RBDMS Report Specifications
LIST OF FAILED INSPECTIONS REQUIRING REMEDIAL ACTION

Summary:

This report will list wells that have failed inspections and have not corrected the problems by the Date Remedy Required.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

INSPECTION, INSPFAIL, INSPFLDESC, WELL, COMPANY, COUNTY, FIELDS, FORMATION, POOL

User Selection Options:

Active Wells, Inactive Wells, or Both.

User Sort Options:

None. The report will be sorted Alphabetically by Operator Name, County Name, and Field Name.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	COMPANY.CONAME	Operator Name
2	COUNTY.NAME	County Name
3	FIELDS.NAME	Field Name
4	WELL.API_WELLNO	API Well Number
5	WELL.WELL_TYP	Well Type
6	WELL.WL_STATUS	Well Status "TA" only
7	WELL.DT_STATUS	Status Date
8	WELL.WL_COMPL	Well Completion
9	WELL.WL_PERMIT	Well Permit Number

No.	Data Field Name	Description
10	WELL.WELL_NM	Well Name; consists of the Lease/Unit Name plus the Well Number.
11	WELL.WH_SEC	Section - Wellhead
12	WELL.WH_TWPN	Township Number - Wellhead
13	WELL.WH_TWPD	Township Direction - Wellhead
14	WELL.WH_RNGN	Range Number - Wellhead
15	WELL.WH_RNGD	Range Direction - Wellhead
16	WELL.WH_PM	Principal Meridian - Wellhead
17	WELL.WH_QTR	Quarter Section - Wellhead
18	WELL.WH_FTNS	Feet from North or South Section Line - Wellhead
19	WELL.WH_NS	North or South Line - Wellhead
20	WELL.WH_FTEW	Feet from East or West Section Line - Wellhead
21	WELL.WH_EW	East or West Line - Wellhead
22	WELL.WH_LAT	Latitude - Wellhead
23	WELL.WH_LONG	Longitude - Wellhead
24	WELL.SLANT	Well Configuration
25	FORMATN.NAME	Objective Formation Name
26	POOL.POOL_NM	Pool Name
27	WELL.DT_COMP	Date Well Completed
28	INSPECTION.TYP_INSP	Type of Inspection
29	INSPECTION.DT_PERFM	Date Performed
30	INSPECTION.DURATION	Duration of Inspection in hours.
31	INSPECTION.DT_REMDREQ	Date Remedy Required
32	INSPFAIL.FAIL	Fail Code

No.	Data Field Name	Description
33	INSPFLDESC.DESC	Fail Code Description
34	INSPECTION.COMMENT	Comments which will include what problems need to be remedied.
Report Footer1: Total number of Wells per Operator.		
Report Footer2: Total number of Wells listed in report.		

RBDMS Report Specifications
LIST OF ACTIVE RIGS BY LAST BOP INSPECTION DATE

Summary:

This report will list all Active Rigs by the Last BOP Inspection Date.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

INSPECTION, RIGS, COMPANY

User Selection Options:

None.

User Sort Options:

None. The report will be sorted by the Last BOP Inspection Date in descending order, Driller Name, and Rig Number.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	INSPECTION.DT_PERFM	Date BOP Inspection Performed
2	COMPANY.CONAME	Driller Company Name
3	RIGS.RIGNO	Rig Number
4	RIGS.DESRIPTN	Description of Rig and any other additional comments.

Report Footer:

Total Number of Rigs listed in report.

RBDMS Report Specifications INSPECTIONS PERFORMED BY WELL

Summary:

This report will list the history of all inspections performed for a specified well.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

INSPECTION, INSPFAIL, INSPCODES, WELL, COMPANY, FIELDS, COUNTY

User Selection Options:

The user will specify the API Number of the Well for which the list of inspections are requested.

User Sort Options:

None. The report will list inspections in the order of the dates the inspections were performed.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
The following well identification information will occur once at the beginning of the report.		
1	WELL.API_WELLNO	API Well Number
2	COMPANY.CONAME	Operator Name
2	WELL.WELL_NM	Well Name
3	COUNTY.NAME	County
4	FIELDS.NAME	Field
5	WELL.WH_SEC	Wellhead Section
6	WELL.WH_TWPN	Wellhead Township Number
7	WELL.WH_TWPD	Wellhead Township Direction

No.	Data Field Name	Description
8	WELL.WH_RNGN	Wellhead Range Number
9	WELL.WH_RNGD	Wellhead Range Direction
10	WELL.WH_PM	Wellhead Principal Meridian
The following data will repeat for each inspection performed.		
12	INSPECTION.DT_PERFM	Date Inspection Performed
13	INSPECTION.TYP_INSP	Type of Inspection
14	INSPECTION.INSP_NAME	Inspector
15	INSPECTION.VIOL	Violation or Non-Compliance Indicator_
16	INSPECTION.SNC	SNC Identifier
17	INSPECTION.DT_REMDYRQ	Date Remedy Required
18	INSPECTION.DT_REMEDY	Date Problems Remedied
19	INSPECTION.FAIL	Fail Code. This information will repeat for each inspection item that did not pass.
20	INSPCODE.FAIL_DESC	Fail Description. This field will repeat for each inspection item that did not pass.
21	INSPECTION.COMMENT	Inspection Comments.
Report Footer: Total Number of Inspections listed in the report.		

RBDMS Report Specifications INSPECTIONS PERFORMED BY RIG

Summary:

This report will list the history of all inspections performed for a specified rig.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

INSPECTION, INSPFAIL, INSPCODES, RIGS, COMPANY

User Selection Options:

The user will specify the Rig Number of the rig for which the list of inspections are requested.

User Sort Options:

None. The report will list inspections in the order of the dates the inspections were performed.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
The following rig identification information will occur once at the beginning of the report.		
1	COMPANY.CONAME	Operator Name
2	RIGS.RIGNO	Rig Number
The following data will repeat for each inspection performed.		
3	INSPECTION.DT_PERFM	Date Inspection Performed
4	INSPECTION.TYP_INSP	Type of Inspection
5	INSPECTION.INSP_NAME	Inspector
6	INSPECTION.VIOL	Violation or Non-Compliance Indicator_
7	INSPECTION.SNC	SNC Identifier

No.	Data Field Name	Description
8	INSPECTION.DT_REMDYRQ	Date Remedy Required
9	INSPECTION.DT_REMEDY	Date Problems Remedied
10	INSPECTION.FAIL	Fail Code. This information will repeat for each inspection item that did not pass.
11	INSPCODE.FAIL_DESC	Fail Description. This field will repeat for each inspection item that did not pass.
12	INSPECTION.COMMENT	Inspection Comments.
Report Footer: Total Number of Inspections listed in the report.		

**Specifications
for
Reports Related to
Complaints, Spills, and Incidents**

RBDMS Report Specifications COMPLAINTS, SPILLS & INCIDENTS BY LOCATION

Summary:

This report will list information stored on Complaints, Spills, and other Incidents by Location.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

INCIDENTS, WELL, COMPANY

User Selection Options:

The user may select all incidents; incidents in a specified section; or incidents in a specified township.

User Sort Options:

None. The report will list inspections sorted by Principal Meridian, Range, Township, Section and Date.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	INCIDENTS.INCDNTNO	Incident Number
2	COUNTY.NAME	County Name
3	FIELDS.NAME	Field Name
4	INCIDENTS.API_WELLNO	API Well Number
5	WELL.WELL_NM	Well Name
6	INCIDENTS.SEC	Section
7	INCIDENTS.TWPN	Township Number
8	INCIDENTS.TWPD	Township Direction
9	INCIDENTS.RNGN	Range Number
10	INCIDENTS.RNGD	Range Direction

No.	Data Field Name	Description
11	INCIDENTS.PM	Principal Meridian
12	INCIDENTS.QTR	Location of incident within section.
13	INCIDENTS.CONO	Company Number of Company accountable for incident.
14	COMPANY.CONAME	Name of Company accountable for incident.
15	INCIDENTS.DT	Date of Incident
16	INCIDENTS.TYP_INCDNT	Type of Incident
17	INCIDENTS.VOL_SPILLD	Volume Spilled in Barrels
18	INCIDENTS.UIC	Indicates whether or not incident was UIC related.
19	INCIDENTS.EMERGENCY	Indicates whether or not the incident was an emergency.
20	INCIDENTS.DT_NOTIFD	Date State was notified.
21	INCIDENTS.TM_NOTIFD	Time State was notified.
22	INCIDENTS.DT_RSPOND	Date of State response.
23	INCIDENTS.TM_RSPOND	Time of State response.
24	INCIDENTS.ACTION	Action Taken
25	INCIDENTS.DT_RSLVD	Date Resolved
26	INCIDENTS.COMMENT	Comments pertaining to the incident.
Report Footer: Total Number of Incidents listed in the report.		

**Specifications
for
Reports Pertaining to
Company Names/Addresses,
Publications by Company,
Publication Subscribers**

RBDMS Report Specifications COMPANY NAME & ADDRESS LIST

Summary:

The Company Name and Address List will prepare a hardcopy report of all companies in the COMPANY database satisfying the report selection criteria specified by the user.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

COMPANY

User Selection Options:

By Company Number order:

Single Company, Range of Companies, or All Companies;

Alphabetically by Company Name:

Single Company, Range of Companies, or All Companies;

Only Active Companies or Both Active and Inactive Companies.

User Sort Options:

Company Number Order or Alphabetically by Company Name

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	COMPANY.CONO	Company Number
2	COMPANY.STATUS	Status
3	COMPANY.DOE_OPNO	DOE Operator Number
4	COMPANY.CONAME	Company Name
5	COMPANY.FIRST_NAME	First Name of an Individual
6	COMPANY.CONTACT	Contact

No.	Data Field Name	Description
7	COMPANY.ADDR1	Address Line 1
8	COMPANY.ADDR2	Address Line 2
9	COMPANY.CITY	City
10	COMPANY.STATE	State
11	COMPANY.ZIP1	Zip 1 (First 5 Digits of Zip Code)
12	COMPANY.ZIP2	Zip 2 (Last 4 Digits of Zip Code)
13	COMPANY.COUNTRY	Country
14	COMPANY.PHONE	Phone Number
15	COMPANY.PH_EXT	Phone Extension
16	COMPANY.FAX	FAX Number
17	COMPANY.OPER	"Y" = Operator
18	COMPANY.INJ_OPER	"Y" = Injection Operator
19	COMPANY.DRILLER	"Y" = Driller
20	COMPANY.BOND_CO	"Y" = Bonding Company
21	COMPANY.OIL_TRANS	"Y" = Oil Transporter
22	COMPANY.GAS_GATHR	"Y" = Gas Gatherer
23	COMPANY.WATR_HAUL	"Y" = Water Hauler
24	COMPANY.CSNG_PULLR	"Y" = Casing Puller
25	COMPANY.MISC1	"Y" = Misc. Category No. 1
26	COMPANY.MISC2	"Y" = Misc. Category No. 2
27	COMPANY.MISC3	"Y" = Misc. Category No. 3
28	COMPANY.MISC4	"Y" = Misc. Category No. 4
29	COMPANY.MISC5	"Y" = Misc. Category No. 5
30	COMPANY.MISC6	"Y" = Misc. Category No. 6
31	COMPANY.OGRPT_RQD	Is Organization Report Required "Y" = Yes, "N" = No

No.	Data Field Name	Description
32	COMPANY.OCRPT_DT	Date Organization Report was last Received
33	COMPANY.FINRPT_DT	Date Financial Report was last Received
34	COMPANY.SECST_DT	Date Qualified with Secretary of State
35	COMPANY.PROBLEM	"Y" = Problem Company
36	COMMENT	Comments
Report Footer: Total Number of Companies listed in the report.		

RBDMS Report Specifications
LIST OF SUBSCRIBERS BY PUBLICATION

Summary:

This report will list paid up Subscribers by Publication.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

PUBLICATIONS, COMPANY

User Selection Options:

All Publications or Single Publications selected by the user;

Paid subscription for the date entered by the user.

User Sort Options:

None report will be sorted by Publication Type and Alphabetically by Company Name.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	PUBLICATN.TYP	Publication Type
2	COMPANY.CONAME	Company Name
3	COMPANY.FIRST_NAME	First Name of an Individual
4	COMPANY.CONTACT	Contact
5	COMPANY.ADDR1	Address Line 1
6	COMPANY.ADDR2	Address Line 2
7	COMPANY.CITY	City
8	COMPANY.STATE	State
9	COMPANY.ZIP1	Zip 1 (First 5 Digits of Zip Code)

No.	Data Field Name	Description
10	COMPANY.ZIP2	Zip 2 (Last 4 Digits of Zip Code)
11	COMPANY.COUNTRY	Country
12	COMPANY.PHONE	Phone Number
13	COMPANY.PH_EXT	Phone Extension
14	PUBLICATN.DT_START	Publication Start Date
15	PUBLICATN.DT_END	Publication End Date
16	PUBLICATN.PD_AMT	Amount Paid
17	PUBLICATN.DT_PAID	Date Paid
Report Footer1: Total Subscribers per Publication.		
Report Footer2: Total Subscriptions listed in the report.		

RBDMS Report Specifications

LIST OF PUBLICATIONS BY COMPANY

Summary:

This report will list Publications by Company.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

PUBLICATIONS, COMPANY

User Selection Options:

All publications; only publications that are paid for the date entered by the user; Only publications that have expired by the date entered by the user.

Single selected Company, or All Companies;

User Sort Options:

None report will be sorted Alphabetically by Company Name.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	COMPANY.CONO	Company Number
2	COMPANY.CONAME	Company Name
3	COMPANY.FIRST_NAME	First Name of an Individual
4	COMPANY.CONTACT	Contact
5	COMPANY.ADDR1	Address Line 1
6	COMPANY.ADDR2	Address Line 2
7	COMPANY.CITY	City
8	COMPANY.STATE	State
9	COMPANY.ZIP1	Zip 1 (First 5 Digits of Zip Code)

No.	Data Field Name	Description
10	COMPANY.ZIP2	Zip 2 (Last 4 Digits of Zip Code)
11	COMPANY.COUNTRY	Country
12	COMPANY.PHONE	Phone Number
13	COMPANY.LH_EXT	Phone Extension
The following information is stored in the PUBLICATIONS table and will repeat for each publication listed for a company.		
14	PUBLICATN.TYP	Publication Type
15	PUBLICATN.DT_START	Publication Start Date
16	PUBLICATN.DT_END	Publication End Date
17	PUBLICATN.PD_AMT	Amount Paid
18	PUBLICATN.DT_PAID	Date Paid
Report Footer: Total Publications listed in the report.

AIM

Association for Information and Image Management

1100 Wayne Avenue, Suite 1100

Silver Spring, Maryland 20910

301/587-8202

Centimeter

Inches

MANUFACTURED TO AIM STANDARDS
BY APPLIED IMAGE, INC.

4 of 4

RBDMS Report Specifications EXPIRING SUBSCRIPTION NOTICES

Summary:

This report will bill Subscribers for Publications expiring between the dates specified by the user. A single Notice will be generated for every Subscriber listing all expiring Publications separately.

Media and Format:

8.5" x 11.0" Multipart Letterhead; Portrait

Report Frequency:

As Needed

Database Tables Processed:

PUBLICATIONS, COMPANY

User Selection Options:

Publication End Date between the dates entered by the user.

User Sort Options:

None. The report will be in Company Number order and alphabetically by Publication Type.

Report Header:

None.

Report Body Detail

No.	Data Field Name	Description
1	NOTICE DATE	System Date at time run.
The following is the Subscribers mailing address which will be printed at the top of the Notice to fit window envelopes.		
2	COMPANY.CONAME	Company Name
3	COMPANY.FIRST_NAME	First Name of an Individual
4	COMPANY.CONTACT	Contact
5	COMPANY.ADDR1	Address Line 1
6	COMPANY.ADDR2	Address Line 2
7	COMPANY.CITY	City
8	COMPANY.STATE	State

No.	Data Field Name	Description
9	COMPANY.ZIP1	Zip 1 (First 5 Digits of Zip Code)
10	COMPANY.ZIP2	Zip 2 (Last 4 Digits of Zip Code)
11	COMPANY.COUNTRY	Country
12	STATEMENT	Statement of the purpose of the notice which may include the due date and any other instructions necessary. The statement will be written by each state.
The following information will repeat for each expiring Publication.		
13	PUBLICATN.TYP	Publication Type
14	PUBLICATN.DT_END	Publication End Date; Expiring Date
15	PUBLICATN.PD_AMT	Amount Paid; Amount being Billed
Report Footer1: Total Amount Due.		

**RBDMS Report Specifications
MAILING LABELS**

Summary:

This report will print Company Name and Address Mailing Labels.

Media and Format:

Mailing Labels

Report Frequency:

As Needed

Database Tables Processed:

COMPANY

User Selection Options:

All Company Types, Single Company Type, or Many Company Types selected by the user.

The Company Types include Operator, Injection Operator, Driller, Bonding Company, Oil Transporter, Gas Gatherer, Water Hauler, Casing Puller, and Miscellaneous Codes 1 through 6.

Only Active Companies.

User Sort Options:

None. The labels are sorted by zip code.

Report Header:

None.

Report Body Detail

No.	Data Field Name	Description
1	COMPANY.CONO	Company Number
2	COMPANY.CONAME	Company Name
3	COMPANY.FIRST_NAME	First Name of an Individual
4	COMPANY.CONTACT	Contact
5	COMPANY.ADDR1	Address Line 1
6	COMPANY.ADDR2	Address Line 2
7	COMPANY.CITY	City

No.	Data Field Name	Description
8	COMPANY.STATE	State
9	COMPANY.ZIP1	Zip 1 (First 5 Digits of Zip Code)
10	COMPANY.ZIP2	Zip 2 (Last 4 Digits of Zip Code)
11	COMPANY.COUNTRY	Country
Report Footer1: Total Labels per Zip Code.		
Report Footer2: Total Labels printed.		

**RBDMS Report Specifications
LIST OF RIGS**

Summary:

This report will list each rig operating in the state.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

RIGS, COMPANY

User Selection Options:

By Driller Company Number order:

Single Driller, Range of Drillers, or All Drillers;

Only Active Rigs or Both Active and Inactive Rigs.

User Sort Options:

Driller Number Order or Alphabetically by Driller Company Name.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	RIGS.DRILLNO	Driller Company Number
2	COMPANY.CONAME	Company Name
The following information will repeat for each Rig for the Driller.		
3	RIGS.RIGNO	Rig Number
4	RIGS.STATUS	Status
5	RIGS.DESRIPTN	Description
6	RIGS.DT_MOD	Date Last Modified

Report Footer1:

Total Number of Rigs listed for each Driller.

Report Footer2:

Total Drillers listed in the report.

RBDMS Report Specifications BOND AND WELLS UNDER BOND

Summary:

This program will list all information stored in the system about a specific bond including all wells covered by the bond.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As required.

Database Tables Processed:

BONDS, WELLS, COMPANY, FIELDS, COUNTY

User Selection Options:

The user must enter State Assigned Number of the desired bond.

User Sort Options:

None. Wells will be sorted by County, Field, and API Number.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail - BOND AND WELLS UNDER BOND

No.	Data Field Name	Description
1	BONDS.BONDNO	State Assigned Bond Number
2	BONDS.OPERNO	Operator Number
3	COMPANY.CONAME	Operator Name
4	BONDS.STATUS	Bond Status
5	BONDS.PURPOSE	Purpose of Bond
6	BONDS.TYP_INST	Type of Instrument
7	BONDS.GUARANTOR	Guarantor Number
8	COMPANY.CONAME	Guarantor Name
9	BONDS.GUAR_BNDNO	Guarantor Bond Number
10	BONDS.AMOUNT	Coverage - Dollar Amount
11	BONDS.MAX_WELLS	Coverage - Max. Number of Wells

Report Body Detail - BOND AND WELLS UNDER BOND		
No.	Data Field Name	Description
12	BONDS.DT_EFFECT	Date Bond Effective
13	BONDS.DT_CANCEL	Date of Notice of Cancellation
14	BONDS.DT_EXPIRE	Date Bond Expires
15	BONDS.DT_LSTRVWD	Date Last Reviewed
16	BONDS.DT_RELEASED	Date Released
17	BONDS.COMMENT	Comments, Restrictions
The following information will repeat for each well covered by the bond.		
	WELL.OPNO	Operator Number
	COMPANY.CONAME	Operator Name
	WELL.DRNO	Driller Number
	COMPANY.CONAME	Driller Name
	COUNTY.NAME	County Name
	FIELDS.NAME	Field Name
	WELL.API_WELLNO	API Well Number
	WELL.WELL_NM	Well Name
	WELL.WELL.TYP	Type of Well
	WELL.WL_STATUS	Well Status
	WELL.DT_STATUS	Status Date
	WELL.DT_APPROV	Date Well Construction Permit Approved
	WELL.DT_SPUD	Spud Date
	WELL.DT_COMP	Date Well Completed
Report Footer: Total Number of Wells covered by the Bond.		

RBDMS Report Specifications BONDS

Summary:

This program will list all bonds or all bonds for a specified company. A separate program will be used to list all wells covered by a specific bond.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As required.

Database Tables Processed:

BONDS, COMPANY

User Selection Options:

The user will select a report of all bonds, bonds for a specific operator, or bonds for a specific guarantor. If a specific operator or guarantor is desired, the user must enter the company number of the desired company.

User Sort Options:

The user will select whether the report will be sorted by Operator, Guarantor, or State assigned Bond Number.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail - BONDS

No.	Data Field Name	Description
1	BONDS.OPERNO	Operator Number
2	COMPANY.CONAME	Operator Name
3	BONDS.BONDNO	State Assigned Bond Number
4	BONDS.STATUS	Bond Status
5	BONDS.PURPOSE	Purpose of Bond
6	BONDS.TYP_INST	Type of Instrument
7	BONDS.GUARANTOR	Guarantor Number
8	COMPANY.CONAME	Guarantor Name
9	BONDS.GUAR_BNDNO	Guarantor Bond Number

Report Body Detail - BONDS		
No.	Data Field Name	Description
10	BONDS.AMOUNT	Coverage - Dollar Amount
11	BONDS.MAX_WELLS	Coverage - Max. Number of Wells
12	BONDS.DT_EFFECT	Date Bond Effective
13	BONDS.DT_CANCEL	Date of Notice of Cancellation
14	BONDS.DT_EXPIRE	Date Bond Expires
15	BONDS.DT_LSTRVWD	Date Last Reviewed
16	BONDS.DT_RELEASED	Date Released
17	BONDS.COMMENT	Comments, Restrictions
Report Footer: Total Number of Bonds listed in the report.		

**Specifications
for
Reference File Reports**

RBDMS Report Specifications LIST OF POOLS

Summary:

The Pool List will print a hardcopy report of all Pools or reservoirs that have been entered into the system. For each Pool, the system will list all Geologic Formations contained within each pool.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

POOL, POOLFMTN, FORMATN, FIELDS

User Selection Options:

By Pool Number:

Single Pool, Range of Pools, or All Pools;

By State Field Number:

All Pools for the specified State Field Number.

User Sort Options:

None. The report will be sorted by Pool Number.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	POOL.POOLNO	Pool Number
2	POOL.POOL_NM	Pool Name
3	POOL.ST_FLDNO	State Field Number
4	FIELDS.NAME	Field Name
5	POOLFMTN.FMTN_CD	Geologic Formation Code, will repeat for each occurrence in the POOLFMTN table.

No.	Data Field Name	Description
6	FORMATN.NAME	Formation Name, will repeat for each Formation Code.
7	POOL.YR_DISC	Year Discovered
8	POOL.OG_DSGNTN	Oil/Gas Designation
9	POOL.OIL	Oil Indicator
10	POOL.GAS_A	Associated Gas Indicator
11	POOL.GAS_N	Non-Associated Gas Indicator
12	POOL.UNITIZED	Unitized Indicator
13	POOL.PRES_MAINT	Pressure Maintenance Indicator
14	POOL.RCVRY_MTHD	Recovery Method
15	POOL.RCV_MTHSUB	Recovery Method Sub-Category
16	POOL.PRI_DRIVE	Primary Drive Mechanism
17	POOL.AREA	Area of pool in acres
18	POOL.POROS	Effective Porosity
19	POOL.PERM	Intrinsic Permeability
20	POOL.NETPAY	Net Pay in Feet
21	POOL.INIT_OFVF	Initial Oil Formation Volume Factor
22	POOL.CURR_OFVF	Current Oil Formation Volume Factor
23	POOL.INIT_GFVF	Initial Gas Formation Volume Factor
24	POOL.CURR_GFVF	Current Gas Formation Volume Factor
25	POOL.OIL_GRAV	Oil Gravity
26	POOL.GAS_GRAV	Gas Gravity
27	POOL.INIT_GSBTU	Initial Gas BTU. Gas BTU per Cubic Foot.

No.	Data Field Name	Description
28	POOL.CURR_GSBTU	Current Gas BTU
29	POOL.INIT_GOR	Initial Gas-Oil Ratio
30	POOL.CURR_GOR	Current Gas-Oil Ratio
31	POOL.INIT_WTRST	Initial Water Saturation
32	POOL.CURR_WTRST	Current Water Saturation
33	POOL.INIT_GASCF	Initial Gas Compressibility Factor (Z)
34	POOL.CURR_GASCF	Current Gas Compressibility Factor (Z)
35	POOL.INIT_RESPT	Initial Reservoir Pressure
36	POOL.CURR_RESPT	Current Reservoir Pressure
37	POOL.RES_TEMP	Reservoir Temperature (Fahrenheit)
38	POOL.TDS	TDS of Water. Expressed in milligrams per liter.
39	POOL.H2S_PPM	Hydrogen Sulfide concentration expressed in parts per million.
40	POOL.FLD_RULES	Special Field Rules
41	POOL.COMMENT	Comments
42	POOL.DT_MOD	Date Record Last Modified
Report Footer: Total Number of Pools/Reservoirs Listed in the report.		

RBDMS Report Specifications GEOLOGIC FORMATIONS LIST

Summary:

The Geologic Formations List will print a hardcopy report of all Formations that have been entered into the system.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

FORMATION

User Selection Options:

None. The report will list all Formations.

User Sort Options:

The user may select Alphabetically by AAPG Formation Code, Industry Formation Code, State Formation Code, or Formation Name.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	FORMATN.AAPG_CD	AAPG Formation Code. Consists of Geologic System + Geologic Series + Formation Abbreviation + Zone Code
2	FORMATN.INDFRM_CD	Industry Formation Code
3	FORMATN.ST_FMTN_CD	State Formation Code
4	FORMATN.NAME	Formation Name
5	FORMATN.LITHOID	Lithology

Report Footer:

Total Number of Formations Listed in the report.

RBDMS Report Specifications OIL & GAS FIELDS LIST

Summary:

The Oil and Gas Fields List will print a hardcopy report of all Oil and Gas Fields that have been entered into the system. For each Field, the system will list all Counties included within the field boundary.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

FIELDS, FIELD CNTY, COUNTY

User Selection Options:

None. The report will list all Fields.

User Sort Options:

The user may select State Field Number order or alphabetically by Field Name.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	FIELDS.STFLD_NO	State Field Number
2	FIELDS.US_FLDNO	U.S. DOE Field Number
3	FIELDS.NAME	Field Name
4	FIELDS.SEC	Discovery Well Section
5	FIELDS.TWPN	Discovery Well Township Number
6	FIELDS.TWPD	Discovery Well Township Direction
7	FIELDS.RNGN	Discovery Well Range Number
8	FIELDS.RNGD	Discovery Well Range Direction
9	FIELDS.PM	Discovery Well Principal Meridian
10	FIELDS.MO_DISCO	Month of Discovery

No.	Data Field Name	Description
11	FIELDS.DAY_DISC	Day of Discovery
12	FIELDS.YR_DISC	Year of Discovery
13	FIELDS.YR_ABD	Year Abandoned
14	FIELDS.OIL	Oil Indicator
15	FIELDS.GAS_A	Associated Gas Indicator
16	FIELDS.GAS_N	Non_Associated Gas Indicator
17	FIELDS.FLD_RULES	Special Field Rules Indicator
18	HAZARD	Hazardous Conditions Indicator
19	COUNTY.NAME	The County Name will repeat if the field is located in more than one county. The API County Numbers of all counties within which the field is located are stored in the FIELDCNTY table. The County Names are stored in the COUNTY table.
20	FIELDS.COMMENTS	Hazardous Conditions, Special Field Rules, and other Comments.
Report Footer: Total Number of Fields listed in the report.		

**RBDMS Report Specifications
COUNTIES LIST**

Summary:

The Counties List will print a hardcopy report of all Counties in the state for which the system was developed.

Media and Format:

8.5" x 11.0" Portrait

Report Frequency:

As Needed

Database Tables Processed:

COUNTY

User Selection Options:

None. The report will list all Counties.

User Sort Options:

None. The sort order for counties listed by API County Number and for counties listed alphabetically by County Name are the same.

Report Header:

Report Name, Report Date & Time, User ID, Page Number

Report Body Detail

No.	Data Field Name	Description
1	COUNTY.STATE_NO	State API Number
2	COUNTY.CNTY_APINO	API County Number
3	COUNTY.FIPS	FIPS County Number
4	COUNTY.NAME	County Name

Report Footer:

Total Number of Counties listed in the report.

Section 7

References Cited

The references cited in this section are listed in chronological order.

University of Missouri-Rolla, April 1993. An Area of Review Variance Methodology. Prepared for the American Petroleum Institute.

CH2M HILL and Digital Design Group, March 4, 1993. Needs Assessment Report for the RBDMS Project. Prepared for the Montana Board of Oil & Gas Conservation and the Underground Injection Practices Research Foundation.

CH2M HILL and Digital Design Group, August 1992. Summary of the Detailed Site Visit to the Mississippi State Oil and Gas Board, Part of the Inventory and Needs Assessment for the Risk Based Data Management System Project. Prepared for the Underground Injection Practices Research Foundation and the Mississippi State Oil & Gas Board.

Digital Design Group and CH2M HILL, August 1992. Needs Assessment and Summary of Nebraska Site Visit. Prepared for the Nebraska Oil & Gas Conservation Commission and the Underground Injection Practices Research Foundation.

Digital Design Group and CH2M HILL, July 1992. Needs Assessment and Summary of Alaska Site Visit. Prepared for the Alaska Oil & Gas Conservation Commission and the Underground Injection Practices Research Foundation.

CH2M HILL and Digital Design Group, July 1992. State Assistance with Risk Based Data Management, Phase I Inventory and Needs Assessment of 25 State Class II Underground Injection Control Programs. Prepared for the Underground Injection Practices Research Foundation of the GWPC.

CH2M HILL and Digital Design Group, June 1992. Technical Memorandum: Texas Site Visit Summary - Risk Based Data Management Project. Prepared for the Texas Railroad Commission and the Underground Injection Practices Research Foundation.

Bluemle, J.P., 1992. The Face of North Dakota - Revised Edition. Educational Series 21, North Dakota Geological Survey.

Underground Injection Practices Research Foundation, 1992. The Alaska Oil and Gas Conservation Commission: A Peer Review.

Underground Injection Practices Council Research Foundation, 1992. The Mississippi State Oil and Gas Board Underground Injection Control Program: A Peer Review.

The Cadmus Group, December 1991. Mechanical Integrity Test Failure Analysis. Prepared for the United States Environmental Protection Agency, Office of Groundwater Protection, Underground Injection Control Branch. Contract No. 68-CO-0020, Work Assignment 0-0-15.

New York State Department of Environmental Conservation, Division of Mineral Resources, November 1991. Environmental Conservation Law, Article 23, New York State Oil, Gas, and Solution Mining Law, As Amended, 1989.

State of Wyoming, September 1991. Rule and Regulations of the Wyoming Oil & Gas Conservation Commission, Including Rules of Practice and Procedure.

Indiana Department of Natural Resources, Division of Oil and Gas, 1991. Indiana Oil & Gas Rules, Title 310, Indiana Administrative Code, Article 7, Rule 1 through 1.5.

Osborne, P.S., August 1991. Program Overview, Underground Injection Control Region III, Second Edition.

Department of Natural Resources and Conservation of the State of Montana, Oil and Gas Conservation Division, August 1991. Annual Review for the Year 1990 Relating to Oil and Gas, Volume 34.

Mississippi State Oil and Gas Board, June 1991. Statutes, Rules and Procedures, Statewide Rules and Regulations.

Railroad Commission of Texas, June 1991. Underground Injection Control Reference Manual. Published by the Oil and Gas Division.

Michie, T.W., March 1991. Pilot Test of the Kansas Corporation Commission Injection/Production Data Management System. Prepared for the Underground Injection Practices Council Research Foundation.

Underground Injection Practices Council, 1990. The Kansas Corporation Commission Conservation Division, Environment Section, Underground Injection Control Program: A Peer Review.

Interstate Oil Compact Commission, December 1990. EPA/IOCC Study of State Regulation of Oil and Gas Exploration and Production Waste.

State of Montana Department of Natural Resources and Conservation, Board of Oil and Gas Conservation, January 1954 with revisions from July 1984 and April 1990. General Rules and Regulations Relating to Oil and Gas.

Underground Injection Practices Council Research Foundation, 1989. The Ohio Department of Natural Resources Division of Oil and Gas Underground Injection Control Program: A Peer Review.

Underground Injection Practices Council Research Foundation, 1989. The California Division of Oil and Gas Underground Injection Control Program: A Peer Review.

Underground Injection Practices Council Research Foundation, 1989. The Louisiana Department of Natural Resources Office of Conservation Injection and Mining Division Underground Injection Control Program: A Peer Review.

Underground Injection Practices Council Research Foundation, 1989. The Texas Railroad Commission Oil and Gas Division Underground Injection Control Program: A Peer Review.

Underground Injection Practices Council Research Foundation, 1989. The Oklahoma Corporation Commission Oil and Gas Division Underground Injection Control Program: A Peer Review.

Michie, T.W., September 1989. Evaluation of Injection Well Risk Management Potential in the Williston Basin. Prepared for the Underground Injection Practices Council Research Foundation.

Michie, T.W., February 1988. Oil & Gas Industry Water Injection Well Corrosion. Prepared for the American Petroleum Institute.

Underground Injection Practices Council, January 1988. A Summary of State Class II UIC Regulations.

Jones, L.W., 1988. Corrosion and Water Technology for Petroleum Producers. Prepared for the Oil & Gas Consultants International, Inc.

North Dakota Industrial Commission, November 1987. Statutes and Rules for the Conservation of Oil and Gas.

SMC Martin, Inc., August 1987. Technical Assistance Document: Corrosion, Its Detection and Control in Injection Wells. Prepared for the United States Environmental Protection Agency, Office of Drinking Water, State Programs Division, Underground Injection Control Branch.

Underground Injection Practices Council, May 1987. International Symposium on Subsurface Injection of Oilfield Brines - Proceedings. Sponsored by the Underground Injection Practices Council and the United States Environmental Protection Agency.

Bourgoyne, A.T., Jr. et al, 1986. Applied Drilling Engineering, SPE Textbook Series, Society of Petroleum Engineers, Richardson, Texas.

Petroleum Engineering Handbook, Bradely, H.B., 1987. Society of Petroleum Engineers, Richardson, Texas.

40 Code of Federal Regulations, Revised July 1, 1989.

Alaska Oil and Gas Conservation Commission, April 2, 1986. Regulations - Alaska Administrative Code, Title 20 - Chapter 25.

Gandl, L.A., 1982. Open File Report 81-550 "Characterization of Aquifers Designated as Potential Drinking-Water Sources in Mississippi". United States Geological Survey. Prepared in cooperation with the Mississippi Department of Natural Resources, Bureau of Pollution Control.

State of West Virginia. West Virginia Oil and Gas Laws and Administrative Regulations for the Division of Oil and Gas, Shallow Gas Well Review Board, and the Oil and Gas Conservation Commission.

Railroad Commission of Texas, (No Date). A Guide to Filing Oil and Gas Reports on Magnetic Tape.

Geraghty & Miller, October 1982. Injection Well Construction Practices and Technology. Prepared for the United States Environmental Protection Agency, Office of Drinking Water.

Appendix A

Long-Range RBDMS Implementation Plan

PREPARED FOR: UIPRF Board of Directors

PREPARED BY: Dan Arthur/CH2M HILL

DATE: March 26, 1993

SUBJECT: Long-Range RBDMS Implementation Plan

PROJECT: TPA637.55

Introduction

During the February 8, 1993 Board meeting of the UIPRF in Denver, Colorado, and as requested by the UIPRF Board, CH2M HILL and the Digital Design Group presented a multi-project proposal pertaining to the needs of states and the oil and gas industry as identified during the first phase of the RBDMS project. To properly evaluate the proposal, which includes ongoing implementation phases for the RBDMS project, the UIPRF Board requested that a long-range implementation plan be developed to further justify funding for individual projects presented in the multi-project proposal (CH2M HILL, February 1993).

This draft, long-range implementation plan for the RBDMS project has subsequently been prepared to meet the needs of the UIPRF Board and the United States Department of Energy (DOE) in an effort to secure funding for the project's continued implementation based on the needs of states and industry. The intent of the plan is to show the relationship between the various projects that will be required for full implementation of the RBDMS project (i.e., including all currently interested states). The plan also presents a preliminary and general description of the long-term requirements of the RBDMS project that will ultimately include full-scale implementation of RBDMSs in as many as 25 states.

It should be noted that this plan is only a preliminary draft. Considering that the plan requires several years to complete, there will be changes and modifications required throughout the implementation effort. Therefore, the plan should be treated as a open document that will likely require several revisions and should be re-visited as necessary. A re-evaluation of the plan on an annual basis should meet the Department of Energy's (DOE's) needs, but a more aggressive evaluation may be required depending on the amount of activity and funding mechanisms that become available (including state originated and non-DOE related funding).

In addition to the long-range plan, a DOE observer requested that the UIPRF ask that interested states re-affirm their desire to participate in the implementation process. States should examine whether or not they feel the system will meet their needs;

whether or not they will use the system, and what benefits they may be able to identify for both their individual state and industry. These confirmation letters, combined with the long-range plan, will justify DOE's continued funding of the RBDMS project on a long-term basis.

The letters we received from states are attached for consideration by the UIPRF Board and the DOE. These letters not only re-affirm the interest of the various states, but also clarify the need and potential benefits regarding continuation of the RBDMS project to both states and industry alike. Several states have noted that a RBDMS would provide a means of saving older or idle wells from being needlessly plugged and abandoned and otherwise result in the ultimate loss of substantial recoverable oil and gas reserves within the United States. Once fully implemented, state RBDMSs should provide a wealth of data and information concerning environmental risk related statistics on a variety of wells. State RBDMS also should provide a means to make logical decisions regarding wells that should either be plugged or saved for future utilization within the industry. The UIPRF's RBDMS is comprehensive enough to fully meet state applicable data management needs for the Class II UIC program and oil and gas programs. We will transmit additional letters received from states to the UIPRF Board and DOE as received.

The preparation of aquifer sensitivity and vulnerability studies, and the development of new environmental risk assessment protocols are also included in the long-range plan. These efforts will prove crucial to the ultimate ability and success of an RBDMS in many states. For instance, in many of the states where regulatory agencies acknowledged a high degree of interest in participating in the RBDMS project, data and information needed to fully implement environmental risk assessments on a relative and direct basis are not readily available. Although all of the states identified in the RBDMS inventory and needs assessment phase of the project had sufficient information to utilize many functions of a RBDMS, additional data and information would be advantageous for a more thorough assessment of risk. This information would directly affect the ability to develop new environmental risk assessment protocols for Class II UIC or oil and gas regulatory programs. The effort to perform aquifer sensitivity and vulnerability studies in selected states has been proposed by the UIPRF and CH2M HILL. The effort to develop new protocols is being undertaken through a combined effort by ICF Resources with assistance provided by CH2M HILL.

Substantial benefits will result from full implementation of the RBDMS project. The concept of implementing formal environmental risk management programs with the aid of a RBDMS has been, and continues to be, a high priority for virtually all state agencies surveyed during the inventory and needs assessment phase of the project (CH2M HILL, July 1992). In addition, the idea of focusing limited personnel and financial resources on those areas posing the greatest environmental risk has become a major initiative throughout the petroleum industry. This new industry-wide focus is, in part, the result of similar, historical treatment of high and low risk wells. In many cases, wells posing little risk to the environment have been forced to be closed or have to meet what many would define as "excessive" requirements to remain open. By implementing an environmental risk management approach to state regulatory

programs, states will have a more definitive means of making decisions regarding the ultimate fate of a particular well based upon its potential risk to the environment (or potential to cause contamination to a USDW from the operation or existence of Class II injection or oil and gas wells).

The RBDMS project is being implemented under management by the UIPRF; with design and technical services are being provided by CH2M HILL and the Digital Design Group. The potential for successful execution of this project can be measured by the fact that the UIPRF is an organization predominantly composed of state regulatory agency members who are well attuned to the specific and detailed needs of the states which plan to participate in the RBDMS project. In addition, the UIPRF has chosen these two highly qualified firms to design, develop, and implement RBDMSs in participating states. The combination of these firms provides the UIPRF and states with substantial experience regarding state Class II UIC and oil and gas programs; various risk assessment methodologies; various petroleum, environmental, geological, geochemical, hydrogeological-related issues specific to each of the states; and development of large comprehensive data management systems for state agencies and industry.

Long-Range Plan

Specific tasks described in the following plan are summarized in Table 1 (attached):

1. **INVENTORY AND NEEDS ASSESSMENT:** An inventory and needs assessment was conducted to assess state needs pertaining to electronic data management; environmental risk assessment and management objectives; benefits resulting from a RBDMS; and various information and data required for the design and development of a RBDMS in individual states. The inventory and needs assessment was completed in July 1992; it confirmed that 24 out of the 25 oil and gas producing states surveyed were highly interested in participating in the RBDMS project. Other details are included in the Inventory and Needs Assessment report (CH2M HILL, July 1992).
2. **SELECTION AND JUSTIFICATION EFFORT:** Following the inventory and needs assessment, a state selection and justification process was undertaken. The process included the selection and justification of the first group of states selected for RBDMS implementation (i.e., Alaska, Mississippi, Montana, and Nebraska); the decision to prepare a (CIP) for Texas; and the decision to provide funding to the state of North Dakota for the purchase of computer hardware. This process was completed in December 1992, after which the RBDMS design effort was initiated in the first group of states selected for implementation.
3. **RBDMS DESIGN EFFORT IN GROUP I STATES:** The RBDMS design effort for Group I states was initiated in December, 1992 and scheduled to continue through August 1993, with a proposed completion date September 1,

1993 for all efforts including technology transfer, etc. The actual final design document and multi-state implementation plan should be completed by mid-July 1993 barring any unforeseen problems. Once the final design and implementation plan have been completed, the development phase will be ready for initiation.

4. **NORTH DAKOTA HARDWARE PURCHASE:** Following North Dakota's request for hardware and a site visit conducted during the inventory and needs assessment, the UIPRF Board decided to provide funding to the state for the purchase of computer hardware for the states electronic data management system. The hardware will enable the state to prepare and view wellbore schematics on their computer screens. Hardware purchasing should be completed in April 1993.
5. **IMPLEMENTATION PLAN DEVELOPMENT IN TEXAS:** During the inventory and needs assessment effort, a detailed site visit was conducted at the Railroad Commission of Texas (CH2M HILL, June 1992). The resulting needs assessment report identified 26 needs related to the Railroad Commission's implementation of a formal environmental risk management plan and an RBDMS. The objectives of developing a formal implementation plan for Texas will include the following:
 - Assignment of individual priorities to specific needs in an effort to focus the implementation effort to high-priority and immediate short-term needs. This prioritization process is necessary due to the extreme number and type of needs identified in Texas. Full implementation of a RBDMS in Texas may take several years and will be directly dependant on funding from outside sources and the personnel and financial resources of the Railroad Commission itself.
 - Identification of specific tasks that will be required to perform implementation in Texas. Enough detailed information will need to be obtained during the follow-up site visit to allow for defining the level of effort and cost of meeting specific needs identified during the inventory and needs assessment. However, due to the extreme number of needs identified and time limitations, the project team will focus on defining high priority and immediate or short-term needs first. Other needs will be defined as time permits, recognizing that the state's needs may change over time and that spending significant amounts of time on low priority needs would not best accomplish the goals and objectives of the project. This approach should not result in any delays in RBDMS implementation. Needs not addressed during the second visit to the state may be better addressed during later visits.
6. **RISK ASSESSMENT PROTOCOL DEVELOPMENT ASSISTANCE:** As directed by the UIPRF and DOE, CH2M HILL will provide assistance to ICF Resources, Inc. in the development of new environmental risk assessment

protocols for evaluation of Class II injection wells and oil and gas production wells on a relative basis. Initial assistance and consultation provided by CH2M HILL to ICFR will include the following:

- CH2M HILL will review and provide comments and advice regarding a listing of data elements provided by ICFR and planned or proposed for potential use in risk assessment protocol methodologies for states.
 - CH2M HILL will review and provide comments and consultation regarding the risk assessment protocol developed by ICFR.
 - CH2M HILL will provide ICFR with the results of the Inventory and Needs Assessment survey in electronic form and provide additional information and discussion pertaining to specific information that may relate to the risk assessment protocol development effort.
 - Additional assistance or consultation may be identified as the project continues to develop.
7. **RBDMS DEVELOPMENT EFFORT IN GROUP I STATES:** Once the design effort has been completed, the development phase will be initiated, providing funding is available. A detailed description of the development phase was provided in Project I of the multi-project proposal submitted to the UIPRF Board in February 1993.
8. **RBDMS CAPABILITIES EXPANSION IN GROUP I STATES:** Given the specific statement of work included in the UIPRF's grant contract with the DOE, only those functions directly related to the state's Class II UIC program were to be addressed. However, many states specified that additional RBDMS functions would be required to completely meet states' needs. Therefore, a project to enhance the initially proposed capabilities of the RBDMS was proposed. A full description of this project and the specific enhancements proposed is included in the multi-project proposal (CH2M HILL, February 1993). The design effort of this project could be completed along with the RBDMS development phase for Group I states; such action should be considered.
9. **AQUIFER SENSITIVITY AND VULNERABILITY STUDY IN MONTANA:** The State of Montana contains fairly substantial oil and gas reserves and substantial groundwater resources that may be susceptible to contamination via Class II injection wells. This study has been proposed to provide the state, industry, and other interested organizations with detailed information in text and map form to evaluate the potential risk of various areas of the state and the vulnerability of certain aquifers to become contaminated. This study would support state agency operations and actions prior to RBDMS becoming fully implemented. It could be used in conjunction with a RBDMS, and could be incorporated into the state's (GIS) system once operational. The benefits of this

study would be substantial to both the industry and regulatory sectors. Additional details pertaining to this project are included in the multi-project proposal (CH2M HILL, February 1993).

10. **RBDMS IMPLEMENTATION IN GROUP II STATES:** RBDMS implementation into Group II states, as well as specifically identified states, are discussed in detail in the multi-project proposal submitted to the UIPRF Board (CH2M HILL, February 1993). Implementation of RBDMS in Group II states will meet the continuing goals of the UIPRF by meeting the needs and expressed interests of states for a RBDMS as identified during the Inventory and Needs Assessment (CH2M HILL, July 1992).
11. **IMPLEMENTATION PLAN DEVELOPMENT IN LOUISIANA:** Because of the Complexity and size of the existing mainframe electronic data management system in Louisiana, development of an implementation plan is proposed prior to initiating the actual implementation effort. This is consistent with the approach chosen for Texas. Additional details pertaining to this plan are provided in the multi-project proposal (CH2M HILL, February 1993).
12. **IMPLEMENTATION PLAN DEVELOPMENT IN OKLAHOMA:** Because of the complexity and size of the existing mainframe electronic data management system in Oklahoma, development of an implementation plan is proposed prior to initiating the actual implementation effort. This is consistent with the approach chosen for Texas. Additional details pertaining to this plan are provided in the multi-project proposal (CH2M HILL, February 1993).
13. **RBDMS IMPLEMENTATION IN TEXAS:** Once the implementation plan for Texas has been compiled and approved by the UIPRF Board and funding has been secured, RBDMS implementation should be initiated. Specific details pertaining to RBDMS implementation will not be available until the implementation plan has been completed. The site visit was conducted from March 15, 1993 through March 17, 1993, in Austin, Texas. Representatives of the Railroad Commission of Texas (RRC), the Bureau of Economic Geology (BEG), and the Texas Water Development Board (TWDB) were interviewed during the site visit. A complete summation of the results of the visit will be included in the RBDMS implementation plan for Texas and submitted to the UIPRF separately.
14. **AQUIFER SENSITIVITY AND VULNERABILITY STUDY FOR TEXAS:** The specific statement of work (SOW) for completion of this project was not included in the multi-project proposal. Given the size and complexity of the project, it was determined that the project team would need to discuss implementation of the project and availability of information with representatives of the Railroad Commission (RRC), the Bureau of Economic Geology (BEG), the Texas Water Commission (TWC), the Texas Water Development Board (TWDB), and the American Petroleum Institutes (API's)

Underground Injection Control Issues Group (UICIG), prior to proposing a SOW and associated costs for implementing the project.

Meetings were held with representative of the BEG and TWDB regarding this project during the recent planned visit to the RRC office (March 14-17, 1993) for developing the RRC's RBDMS implementation plan. The information obtained during these meetings will be submitted to the UIPRF Board under a separate cover following the completion of the implementation plan for Texas.

15. **RBDMS IMPLEMENTATION IN LOUISIANA:** RBDMS Implementation in Louisiana will be treated like the implementation effort in Texas. Specific details regarding RBDMS implementation in Louisiana are not available at this time.
16. **RBDMS IMPLEMENTATION IN OKLAHOMA:** RBDMS Implementation in Oklahoma will be treated like the implementation effort in Texas. Specific details regarding RBDMS implementation in Oklahoma are not available at this time.
17. **IMPLEMENTATION PLAN DEVELOPMENT IN CALIFORNIA:** Because of states' specified readiness and ability to participate in the RBDMS project, California has been placed on a similar implementation schedule to states that will be targeted for Group III implementation. Development of an implementation plan will be handled similar to those prepared in Texas, Louisiana, and Oklahoma.
18. **RBDMS IMPLEMENTATION IN GROUP III STATES:** RBDMS implementation in Group III states will provide a continuation of the effort to implement RBDMSs in those states interested in participating and willing to provide personnel and/or financial resources toward the project's completion.
19. **RBDMS IMPLEMENTATION IN CALIFORNIA:** RBDMS implementation in California will be treated like the implementation effort in Texas, Oklahoma, and Louisiana. Specific details regarding RBDMS implementation in California are not available at this time.
20. **RBDMS IMPLEMENTATION IN GROUP IV STATES:** RBDMS implementation in Group IV states will provide a continuation of the effort to implement RBDMSs in those states interested in participating in the project and willing to provide personnel and/or financial resources towards the project's completion.
21. **(AOR) TRAINING SEMINARS:** Specific details regarding the AOR training are provided in the multi-project proposal (CH2M HILL, February 1993).

22. **UIC COMPLIANCE SEMINARS:** Specific details regarding the UIC compliance seminars are provided in the multi-project proposal (CH2M HILL, February 1993).
23. **(MIT) TRAINING SEMINARS:** Specific details regarding the MIT training seminars are provided in the multi-project proposal (CH2M HILL, February 1993).
24. **AQUIFER SENSITIVITY AND VULNERABILITY STUDY IN MISSISSIPPI:** During the RBDMS inventory and needs assessment phase of the project, a need was identified within the state of Mississippi regarding aquifer sensitivity and vulnerability to contamination via Class II injection and potentially oil and gas production wells (both active and inactive). To date, a study has been completed on the "Characterization of Aquifers Designated as Potential Drinking-Water Sources in Mississippi" by the USGS which has basic information on the various aquifers of concern and their location (i.e., both laterally and vertically). However, there remains a significant need to identify those areas where upward migration of fluids from an injection zone or reservoir are possible; areas where the vulnerability of USDW contamination is high for a variety of reasons; and areas of the state where aquifers highly sensitive to contamination may exist. Information from this type of study could be used to greatly enhance the ability of the state and industry to assess the environmental risk of wells throughout the state and would provide a means of substantiating conclusions to allow older or idle wells in low risk areas to remain open for future potential use in recovering hydrocarbons.
25. **OTHER PROJECTS (OR TASKS):** No other specific project have been delineated at this time. However, a generalized listing of projects identified during the RBDMS project are being submitted to the DOE for potential future consideration.

Assumptions

A number of assumptions were needed in order to prepare a long-range implementation plan, which included a generalized implementation schedule. The assumptions used in preparation of the plan were as follows:

1. The overall goals and objectives of these effort are to enhance the national production of oil and gas (current and future) while providing an appropriate level of protection to the environment. These goals and objectives will be met by states implementing a formalized environmental risk management program for the regulation of oil and gas production and injection via Class II injection wells. One critical instrument required for implementation of a formalized environmental risk management program is a comprehensive RBDMS.

2. In order to place any confidence in the schedule for the long-range plan, the assumption must be made that funding will be available for each task (or project) approximately 30 days prior to the start date shown in Table 1 for each task. This provision will allow administrative and contractual obligations to be addressed prior to commencing any implementation efforts.
3. Given our current understanding of funding availability, we have assumed that no new grant funding will be available from the DOE until October 1993. Therefore, we have not shown any new implementation efforts beginning prior to that date. However, it is our understanding, through discussions with DOE representatives, that some additional funding may be available prior to October 1993.
4. It is not within the overall scope of this plan to define actual funding sources. It is presumed that funding sources will include, at a minimum, the DOE and, to the extent possible, states participating in the RBDMS project. In addition, this plan does not specify those states that may be able to commit partial funding or significant personnel resources toward implementation of the project.
5. The tasks shown in the long-range plan include those that both directly and indirectly relate to the implementation of RBDMSs in state oil and gas and Class II UIC programs. Included in the plan are those task involving database design and development; development of new risk assessment protocols; aquifer sensitivity and vulnerability studies in states having insufficient or partially insufficient data/information to implement a formal risk management program; technology transfer; and other associated tasks which will facilitate the implementation of a RBDMS.
6. This plan does not include all of the state specific needs identified during the inventory and needs assessment. We have assumed that each state's specific and detailed needs will be addressed (but not necessarily funded) during the implementation process for that state.
7. The long-range plan is intended to be used as a guidance document for planning the RBDMS project and not as any type of contractual or otherwise obligating agreement on the part of CH2M HILL. Therefore, we have avoided including any cost information or specific details regarding the work effort involved in implementing any of the tasks presented. Specific work effort and cost information could be provided in a separate document upon the UIPRF's request. However, the multi-project proposal submitted to the UIPRF Board (CH2M HILL, February 1993) included a detailed description of the work involved with implementing a number of the projects listed in Table 1 and the associated costs for implementation of these tasks.

Schedule

A preliminary long-range implementation schedule was developed (Table 1). This schedule is based primarily upon CH2M HILL's understanding of the needs identified during the inventory and needs assessment and our understanding that the UIPRF intends to provide a fully functional RBDMS to states interested in participating in the project.

Table 1 RBDMS Long-Term Implementation Schedule					
No	Description	Start	Finish	Total Time	Status
1	Inventory and Needs Assessment (25 states)	Jan 1992	Jul 1992	7 Mo	AA
2	State Selection and Justification Process	Aug 1992	Dec 1992	5 Mo	AA
3	RBDMS Phase II Design Implementation Effort for Group I States (AK, MS, MT, & NE)	Dec 1992	Aug 1993	8 Mo	BB
4	Hardware Acquisition for North Dakota		Apr 1993	NA	BB
5	Implementation Plan Development In Texas	Mar 1993	Apr 1993	2 Mo	BB
6	Development of New Environmental Risk Protocol: Relative Basis (ICF and CH2M HILL)	Unknown	June 1993	NA	BB
7	RBDMS Phase II Development Effort for Group I States (Project I)	Oct 1993	Mar 1994	6 Mo	CC
8	RBDMS Expansion Effort in Group I States (Project VII)	Nov 1993	June 1994	8 Mo	CC
9	Aquifer Sensitivity and Vulnerability Study in Montana (Project IV)	Oct 1993	Dec 1994	15 Mo	CC

Table 1
RBDMS Long-Term Implementation Schedule

No	Description	Start	Finish	Total Time	Status
10	RBDMS Implementation in Group II States: AR, IN, KY, NY, UT, & WV (Project III)	Feb 1994	Jan 1995	12 Mo	CC
11	Implementation Plan Development in Louisiana (Project VI)	Oct 1993	Dec 1993	3 Mo	CC
12	Implementation Plan Development in Oklahoma (Project VI)	Nov 1993	Jan 1994	3 Mo	CC
13	RBDMS Implementation In Texas (Project II)	Oct 1993	Funding Dependant		CC
14	Aquifer Sensitivity and Vulnerability Study in Texas (Project III)	Oct 1993	Sep 1994	12 Mo	CC
15	RBDMS Implementation in Louisiana (Proposal to follow CIP Development)	Funding Dependant			CC
16	RBDMS Implementation in Oklahoma (Proposal to follow CIP Development)	Funding Dependant			CC
17	Implementation Plan Development in California	Funding Dependant			CC
18	RBDMS Implementation in Group III States (States Not Selected)	Feb 1995	Jan 1996	12 Mo	CC
19	RBDMS Implementation in California (Proposal to follow CIP Development)	Funding Dependant			CC
20	RBDMS Implementation in Group IV States (State Not Selected)	Feb 1996	Jan 1997	12 Mo	CC
21	AOR Training Seminars (Project V)	Oct 1993	Sep 1994	12 Mo	CC

Table 1
RBDMS Long-Term Implementation Schedule

No	Description	Start	Finish	Total Time	Status
22	Class II UIC Compliance Seminars (Project V)	Oct 1993	Sep 1994	12 Mo	CC
23	MIT Training Seminars (Project V)	Oct 1993	Sep 1994	12 Mo	CC
24	Aquifer Sensitivity and vulnerability Study in Mississippi	Oct 1993	Sep 1994	12 Mo	CC
25	RBDMS Related tasks, studies, or research not currently identified	Funding Dependant			CC

NOTES: Implementation dates and tasks presented above are a preliminary estimate only, based on our current understanding of the implementation effort and states' needs. They are subject to substantial change based on data and information obtained throughout the remainder of the project, states' needs (which are subject to change), funding availability, and possibly other unanticipated events that were not or could not be feasibly considered at this time.

DEFINITIONS: AA = Completed project
BB = Ongoing project
CC = Project proposed for funding consideration

Appendix B

RBDMS Inventory and Needs Assessment Survey Results Regarding State Data Elements Information and Needs

9.3 UIC AND NEXUS BASED DATA ELEMENTS

Updated 07-May-82

MODULE NO 6 DATA ELEMENTS MODULE

	ALABAMA			ALABAMA			ARKANSAS			CALIFORNIA			COLORADO			ILLINOIS			MISSISSIPPI		
	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P
Location - Well Location ID#																					
Depth 13.000 m/TDS																					
Interfering Thickness																					
Injection Zone in Estimated Aquifer?																					
EPA Region																					
County																					
Facility Identifier																					
API Number																					
Section, Township, Range																					
Well Located in Wellhead Protection Area?																					
Number of Public Water Supply Wells in AQR																					
Owner Contact Name																					
Operator Contact Name																					
Type of Construction, Conventional/Non Conventional																					
Area Under Field																					
Surface Coating Diameter																					
Surface Coating Grade																					
Surface Coating Type																					
Intermediate Coating Diameter																					
Intermediate Coating Grade																					
Intermediate Coating Type																					
Long String Coating/Under Diameter																					
Long String Coating/Under Grade																					
Long String Coating/Under Type																					
Well Diameter																					
Well Depth																					
Injection Zone Chemistry?																					
Monitoring Well Chemistry?																					
Pressure Type?																					
Volume Type?																					
Corrosion Protection																					
Construction Type																					
Injection Zone Permeability																					
Injection Zone Elasticity																					
Injection Zone Fracture Pressure																					
Carbide Zone Permeability																					
Carbide Zone Elasticity																					
Carbide Zone Fracture Pressure																					
Other Corrosion Zone Limiting																					
Other Corrosion Zone Limiting																					
Other Corrosion Zone Limiting																					
6.3.3																					
PERMITTING/REGULATORY																					
Type Well Permit, Individual or Area?																					
Type Well Permit, Conventional?																					
Number of Wells Under Area Permit																					
Application Date																					
Date Permit Expires																					
Date Permit Expires																					
Date Permit Expires																					
Date Permit Expires																					
Date Permit Expires																					
Type of Permit Modification																					
Maximum Allowable Injection Pressure																					
Maximum Allowable Flow Rate																					
Frequency of Recording Injection Data																					
Total AQR Wells, Abandoned																					
Total AQR Wells, Other																					
Number of Injection AQR Wells - Abandoned																					
Number of Injection AQR Wells - Other																					
Number AQR Wells Under Construction - Abandoned																					
Number AQR Wells Under Construction - Other																					
Number Wells Pending Injection Zone in AQR - Abandoned																					
Number Wells Pending Injection Zone in AQR - Other																					
Relics of AQR																					
Date of Corrective Action																					
Type of Corrective Action																					
Date Corrective Action Complete																					

MODULE NO. 6 DATA ELEMENTS MODULE

	ALABAMA			ALASKA			ARIZONA			CALIFORNIA			COLORADO			ILLINOIS			INDIANA		
	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P
Frequency of MIT Tests	P/E			P	P/E	H				P/E					L				P		L
Financial Responsibility, Type of	P			P	P/E	H				P/E			P/E						P		L
Financial Responsibility, Coverage	P			P	P/E	H				P/E			P/E						P		L
Financial Responsibility, Blanket?	P			P	P/E	H				P/E			P/E						P		L
No. of Wells Under Blanket Bond	P			P	P/E	H				P/E				E					P	E	L
Financial Responsibility Expiration Date				P	P/E	H				P/E									P		L
Financial, Date Last Reviewed				P	P/E	H													E		
Guarantor Name	P			P	P/E	H				P/E				P							L
Guarantor Address	P			P	P/E	H				P/E				P							
Guarantor City	P			P	P/E	H				P/E				P							
Guarantor State	P			P	P/E	H				P/E				P							
Guarantor Zip Code	P			P	P/E	H				P/E				P							
Guarantor Phone				P	P/E	H				P/E				P					P		
6.3.3 INSPECTION AND OPERATION																					
Date of Inspection	P			P	P/E	H				P/E				P/E					P/E		L
Type of Inspection	P			P/E	P/E	H				P/E				P/E					P/E		L
Complaint Resolution	P			P	P/E	H				P/E				P/E					P		L
Emergency Resolution	P			P	P/E	H				P/E				P/E					P		L
Violation Discovered? Y/N	P			P	P/E	H				P/E				P/E					P/E		L
Type of Violation?	P			P	P/E	H				P									P/E		H
Operator Notified of Violation in Field?	P			P	P/E	H				P									P		H
Action Taken	P			P	P/E	H				P									P/E		H
Both Parts MIT Completed? Y/N	P			P/E	P/E	H				P/E									P/E		H
MIT Passed? Y/N	P/E			P/E	P/E	H				P/E									P	E	L
Date of Last MIT	P/E			P/E	P/E	H				P/E			P/E						P/E		H
Last MIT Passed?	P/E			P	P/E	H				P/E				P	E				P/E		H
Date of Leak Test	P/E			P	P/E	H				P/E				P/E					P		L
Leak Test Pressure	P/E			P	P/E	H				P/E				P/E					P		L
Leak Test Duration	P/E			P	P/E	H													P		L
Did Operator Conduct Pre-test	P			P	P/E	H										L			P		L
Date of Fluid Migration Test	P/E			P	P/E	H				P/E				P/E					P/E		L
Type of Fluid Migration Test	P/E			P	P/E	H								P/E					P/E		L
Annulus Pressure Monitoring	P/E			P	P/E	H															
Maximum Annulus Pressure				P	P/E	H				P/E											
Minimum Annulus Pressure				P	P/E	H				P											
Last Annulus Pressure Reported?	P			P	P/E	H													P/E		H
Date of Remedial Action	P			P	P/E	H				P									P/E		H
Type of Remedial Action	P			P	P/E	H				P									P/E		H
Operating Status	P/E			P/E	P/E	H				P/E				P/E					P/E		H
Date of Status Effective	P/E			P/E	P/E	H				P/E				P/E					P/E		H
Date Plugged and Abandoned	P/E			P/E	P/E	H				P/E				P/E					P/E		H
Maximum Injection Pressure	P/E			P	P/E	H				P/E				P/E					P/E		H
Flow Rate	P/E			P	P/E	H				P/E				P/E					P/E		H
Annual Volume of Injected Fluid	P/E			E	E	H				P/E				P/E					P		L
Injected Volume Units, Gallons/BSL	P/E			P/E	P/E	H				P/E				P/E					P/E		L
Fluid Type Code				P/E	P/E	L				P/E				P/E							
6.3.4 ENFORCEMENT/COMPLIANCE TRACKING																					
Significant Non-compliance	P			P	P/E	H				P/E				P	E				P/E		L
Method of Determining SMC	P			P	P/E	H				P				P					P	E	H
Date Last Compliance Review	P			P	P/E	H				P/E						L			P/E		L
Compliance Review Result	P			P	P/E	H				P/E									P/E		H
Date Violation Occurred or Validated	P			P	P/E	H				P/E				P/E					P/E		H
Type of Violation	P			P	P/E	H				P				P/E					P/E		H
Date Owner/Operator Notified	P			P	P/E	H				P				P/E					P/E		H
Type of Notification	P			P	P/E	H				P									P/E		L
Date Enforcement Action Taken	P			P	P/E	H				P				P/E					P/E		H
Type of Enforcement Action Taken	P			P	P/E	H				P				P/E					P/E		L
Date Returned to Compliance	P			P	P/E	H				P/E				P/E					P/E		H
Date Penalty Assessed	P			P	P/E	H				P				P					P/E		L
Penalty Assessed (\$)	P			P	P/E	H				P				P					P/E		L
Date Penalty Collected	P			P	P/E	H				P				P					P/E		L
Penalty Collected (\$)	P			P	P/E	H				P				P					P/E		L
Date of Failure	P/E			P	P/E	H				P/E									P/E		H
Type of Failure	P/E			P/E	P/E	H				P									P	E	H

MODULE NO. 6 DATA ELEMENTS MODULE

	ALABAMA			ALASKA			ARKANSAS			CALIFORNIA			COLORADO			ILLINOIS			INDIANA		
	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P
Cause of Failure	P			P	P.E	H				P						P			P	E	H
Depth of Failure (feet)	P			P	P.E	H				P									P.E	P.E	H
Date of Repair	P			P	P.E	H				P.E						P.E			P	E	L
Type of Repair	P.E			P	P.E	L				P						P			P		L
Failure Identification Method	P			P	P.E	H				P						P			P.E		L
Failure Comments	P			P	P.E	L				P						P.E					L
6.3.5 MECHANICAL INTEGRITY FAILURES																					
Date of Inspection	P			P.E	P.E	H				P.E			P.E			P.E			P.E		H
Type of Inspection	P			P.E	P.E	H				P.E			P.E			P.E			P.E		H
Complaint Resolution	P			P	P.E	L				P			E			P			P		H
Emergency Resolution	P			P	P.E	L				P			E			P			P		L
Violation Discovered? Y/N	P			P.E	P.E	H				P.E			P.E			P.E			P.E		L
Type of Violation?	P			P	P.E	H				P			P.E			P.E			P.E		H
Operator Notified of Violation in Field?	P			P	P.E	H				P									P.E		H
Action Taken	P			P	P.E	H				P						P.E			P.E		H
Both Parts MIT Completed? Y/N	P			P.E	P.E	H				P.E						P.E			P.E		H
MIT Failed? Y/N	P.E			P.E	P.E	H				P.E									P.E	P.E	H
Date of Last MIT	P.E			P.E	P.E	H				P.E						P.E			P.E		H
Last MIT Passed?	P.E			P.E	P.E	H				P.E						P.E			P.E		H
Date of Leak Test	P.E			P	P.E	L				P.E						P			P		L
Leak Test Pressure	P.E			P	P.E	L										P			P		L
Leak Test Duration	P			P	P.E	L													E		L
Did Operator Conduct Pre-test	P			P	P.E	L				P.E						P.E			P.E		L
Date of Fluid Migration Test	P.E			P	P.E	L										P.E			P.E		L
Type of Fluid Migration Test	P.E			P	P.E	L				P.E											
Annular Pressure Monitoring	P.E			P	P.E	H				P.E											
Maximum Annular Pressure				P	P.E	H				P.E											
Minimum Annular Pressure				P	P.E	H				P.E											
Last Annular Pressure Reported?	P.E			P	P.E	H				P.E						P.E			P.E		H
Date of Remedial Action	P			P	P.E	H				P.E						P.E			P.E		H
Type of Remedial Action	P			P	P.E	H				P						P.E			P.E		H
Operating Status	P.E			P.E	P.E	H				P.E						P.E			P.E		L
Date Status Effective				P.E	P.E	H				P.E						P.E			P.E		L
Date Plugged and Abandoned	P.E			P.E	P.E	H				P.E						P.E			P.E		H
Maximum Injection Pressure				P	P.E	H				P.E						P.E			P.E		H
Flow Rate	P.E			P	P.E	H				P.E						P			P		L
Annual Volume of Injected Fluid	E			P.E	P.E	H				P.E						P.E			P.E		L
Injected Volume Units, Gallons/Barrel	P.E			P.E	P.E	H				P.E											
Fluid Type Code				P.E	P.E	H				P.E											
6.4 PRODUCTION MANAGEMENT AND WELL TRACKING DATA ELEMENTS																					
6.4.1 Oil & Gas Well Permit										P.E											
API Number	P.E			P.E	P.E	H				P			P.E			P.E			P.E		L
Permit Number	P.E			P.E	P.E	H				P.E			P.E			P.E			P.E		H
Operator Number	P.E			P.E	P.E	H							P.E								
Drilling Contractor Number				P.E	P.E	L							P.E								
Mineral Owner				P.E	P.E	L							P.E								
Federal Lease Number				P.E	P.E	L							P.E								
State's Lease Number	P.E			P.E	P.E	L				P.E			P.E						P.E		H
Type of Well	P.E			P.E	P.E	H				P.E			P.E								
Gas Type (Wet/Dry/CO2/Coal Bed)	P			P	P.E	L				P.E			P.E								
Oil/Condensate	E			P.E	P.E	L				P.E									P.E		L
Category (Wildcat/Development)	P.E			P.E	P.E	H				P									P.E		H
Quarter Quarter	P.E					H				P			E						P.E		H
Section	P.E			P.E	P.E	H				P.E			E						P.E		H
Township Direction	P.E			P.E	P.E	H				P.E			E						P.E		H
Township Numeric	P.E			P.E	P.E	H				P.E			E						P.E		H
Range Direction	P.E			P.E	P.E	H				P.E			E						P.E		H
Range Numeric	P.E			P.E	P.E	H				P.E			E						P.E		H
Principal Meridian				P.E	P.E	H				P									P.E		H
Measured From E/W Section Line	P.E			P.E	P.E	H				P	E					P.E			P.E		H
Distance From E/W Section Line	P.E			P.E	P.E	H				P	E					P.E			P.E		H
Measured From N/S Section Line	P.E			P.E	P.E	H				P	E					P.E			P.E		H
Distance From N/S Section Line	P.E			P.E	P.E	H				P	E					P.E			P.E		H
Latitude				P.E	P.E	L					E								P.E		H

MODULE NO. 6 DATA ELEMENTS MODULE

	ALABAMA			ALASKA			ARKANSAS			CALIFORNIA			COLORADO			ILLINOIS			INDIANA		
	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P
Longitude				P,E	P,E	L					E			E					P,E		H
Deviation	P					L					E								E		L
Bottom Hole Location	P			P,E	P,E	H				P				E					P,E		H
Well Status	P,E			P,E	P,E	H				P,E				E					P,E		H
Status Date				P,E	P,E	H				P				E							
Basin	E					L								E							
Field Number	E			P,E	P,E	H				P,E				E							
Objective Formation Code	E			P	P	L				P,E				E					P,E		
Lessee Name	P,E			P,E	P,E	H				P,E				E							
Lessee Number				P,E	P,E	H				P,E				E					P,E		
Operator Well Number				P,E	P,E	H				P,E				E					P		L
Spacing Order Cause No.	P,E			P	P,E	H								E							
Spacing Order Order No.	P,E			P	P,E	L								E					P		H
Number of Acres Drilling Unit	P			P	P,E	L								E					P		L
Designation of Stand Up/Lay Down Unit	P					L								E					P		L
NGPA Category	P					L								E					P		L
NGPA	P					L								E					P		L
Inspection Status	P			P,E	P,E	H				P,E				E					P,E		L
Date Permit Approved	P,E			P,E	P,E	H				P				E					P		L
Permit Expiration Date	P,E			P,E	P,E	H				P		E		E					P		L
Date Spudded	P,E			P,E	P,E	H				P		E		E					P		L
Date Completed	P,E			P,E	P,E	H				P		E		E					P,E		H
Date Permission to Transport Products	P													E							
Date First Production Oil	P,E			P	P,E	H				P,E				E							
Date First Sales Gas	P			P	P,E	H				P									P,E		H
Date PSA	P,E			P,E	P,E	H				P									P,E		H
PSA Inspection Date	P			P	P,E	H				P									P,E		H
PSA Inspection	P			P	P,E	H				P									P,E		H
PSA Bond Status	P			P	P,E	H				P									P,E		L
PSA Bonding Party	P			P	P,E	H				P									P,E		L
Surface Bond Status	P			P	P,E	H				P									N/A	N/A	
Surface Bonding Party	P			P	P,E	H				P									N/A	N/A	
Water Disposition Facility Number	P					H							P,E						P,E		
Missing Information Letter	P,E			P	P,E	H															
Missing Information Letter Date	P,E			P	P,E	H															
Bradenhead Code				P	P,E	L															
Bradenhead Date				P	P,E	L															
Bradenhead Pressure				P	P,E	L															
Comments	P,E			P	P,E	H															
User Initials	P			P	P,E	L				P											
Date Stamp	P			P	P,E	L				P									P		H
6.4.2 COMPLETION REPORT																					
API Number				P,E	P,E	H				P		E		P,E					P,E		L
Last Date - Confidential	P,E			P,E	P,E	H				P		E		P,E					P,E		H
Date Spudded	P,E			P,E	P,E	H				P		E		P,E							
Date - TD - Reached	P			P	P	H				P				P,E					P,E		H
Well Status	P,E			P,E	P,E	H				P				P,E					P,E		H
Date Completed	P			P,E	P,E	H				P				P,E					P,E		H
Elevation - Ground - Level	P,E			P,E	P,E	H				P				P,E							
Elevation - Kelly - Bushing	P,E			P,E	P,E	H				P				P,E							
True - Vertical - Depth	P			P,E	P,E	H				P				P,E					P,E		H
Plug - Back - TD	P,E			P	P	H				P				P,E							
Plug - Back - TVD	P			P	P	H				P				P,E					P		H
Measured Depth	P			P,E	P,E	H				P				P,E					P		H
Directional - Survey	P			P	P,E	H				P				P,E					P		H
Logs Run	P,E			P	P	H				P				P,E					P,E		L
Logs - Received - Date	P			P	P	H				P				P,E					P		L
Cored	P,E			P	P,E	H				P				P,E					P,E		L
Drill - Stem - Test	P			P	P,E	H				P				P,E					P,E		H
Casing Size 1	P,E			P	P,E	H				P				P,E					P,E		H
Casing Depth 1	P,E			P	P,E	H				P				P,E					P,E		H
Hole Size 1	P,E			P	P,E	H				P				P,E					P,E		H
Casing Size 2	P,E			P	P,E	H				P				P,E					P,E		H
Casing Depth 2	P,E			P	P,E	H				P				P,E					P,E		H
Hole Size 2	P,E			P	P,E	H				P				P,E					P,E		H
Casing Size 3	P,E			P	P,E	H				P				P,E					P,E		H

[illegible]

MODULE NO 6 DATA ELEMENTS MODULE

	ALABAMA			ALASKA			ARKANSAS			CALIFORNIA			COLORADO			ILLINOIS			INDIANA		
	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P
Injection Well Operator Y/N	P,E			P,E	P,E	H				P,E				P,E					P,E		H
PI Operator Y/N	P			P	P,E	L								P,E					P,E		H
Drilling-Contractor Y/N	P,E			P	P,E	L								P,E					P,E		
General Mailing List Y/N	P,E					L								P,E					P,E		
Comments	P			P	P,E	L								P,E					P	N/A	H
Date Stamp				P	P,E	H								P,E							
6.4.4 PRODUCTION ACCOUNTING																					
Lessee Number				P,E	P,E	H				P,E				P,E							
Production Year	P,E			P,E	P,E	H				P,E				P,E							
Production Month	P,E			P,E	P,E	H				P,E				P,E							
Lessee-Production-Status-Code	P,E			P	P,E	H				P,E				P,E							
Operator	P,E			P,E	P,E	H				P,E				P,E							
Oil Transporter	P			P	P,E	L								P,E							
Gas Gatherer Number				P	P,E	L								P,E							
Producing Oil Wells	P,E			P,E	P,E	H				P,E				P,E							
Producing Gas Wells	P,E			P,E	P,E	H				P,E				P,E							
Shut-in-Oil-Wells	P			P,E	P,E	H				P,E				P,E							
Shut-in-Gas-Wells	P			P,E	P,E	H				P,E				P,E							
Oil Well Days Producing	P			P,E	P,E	H				P,E				P,E							
Gas Well Days Producing	P			P,E	P,E	H				P,E				P,E							
Gas Well Days Producing	P									P,E				P,E							
Beginning Inventory Oil	P													P,E							
Oil Gravity	P			P	P,E	H				P,E				P,E							
Oil Produced	P,E			P,E	P,E	H				P,E				P,E							
Oil Sold	P					L								P,E							
Oil/Condensate Adjustment				P,E	P,E	H								P,E							
Oil/Condensate Adjustment Type				P	P,E	H								P,E							
Ending Inventory Oil	P					H								P,E							
Oil Production Report Status	P,E													P,E							
Gas BTU	P									P,E				P,E							
Gas Produced	P,E			P,E	P,E	H				P,E				P,E							
Gas Flared	P			P,E	P,E	H				P,E				P,E							
Gas Used on Lease	P			P,E	P,E	H				P,E				P,E							
Gas Sold	P			P,E	P,E	H								P,E							
Gas Plant Shrinkage	P			P,E	P,E	H								P,E							
Gas Production Report Status	P,E													P,E							
Water Produced	P,E			P,E	P,E	H				P,E				P,E							
Water Disposition Facility	P					L				P,E				P,E							
Production Comment Code						L								P,E							
User ID						L								P,E							
Date Stamp	P			P	P,E	H								P,E							
6.4.5 CONSERVATION TAX																					
Report-Year										P,E				P,E							
Report Period										P,E				P,E							
Well-Number														P,E							
Payor-Number														P,E							
Product-Type										P,E				P,E							
Product-Sub-Code														P,E							
Gas-Pressure-Basis														P,E							
Volume-Sold														P,E							
Dollar-Amount-Sold														P,E							
Federal-Exemption														P,E							
State-Exemption														P,E							
Indian-Exemption														P,E							
Other-Exemption														P,E							
Adjustments														P,E							
Tax-Rate										P,E				P,E							
Dollar-Amount-Mill-Levy-Received														P,E							
Receipt-Number														P,E							
Date-Received														P,E							
Report-Status														P,E							
User-ID														P,E							
Date-Stamp														P,E							

MODULE NO 6 DATA ELEMENTS MODULE

		KANSAS			KENTUCKY			LOUISIANA			MISSISSIPPI			MISSOURI			MONTANA			NEBRASKA			S
		S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	
6.3	UIC AND RISK BASED DATA ELEMENTS																						
6.3.1	Inventory																						
	Date Form Update	P	E	L				PE					H	P		L				PE			
	State	PE	E	H				PE					H	P		L	PE			PE			P
	County	PE	E	H				PE					H	P		L	PE			PE			P
	Class of Well	PE	E	H				PE					H	P		L	PE			PE			P
	Type of Injection Well	PE	E	L				PE					H				P	E	H	PE			P
	Field Name	P	E	H				PE					H				PE			PE			
	River Basin Name	PE	E	H									L					E	L				
	Fracture Number												L										
	Permit Number	PE	E	H				PE					H	PE			PE			PE		H	P
	Rule Authorized?	N/A						PE					L				P	E	H				
	Federal Land?	P	E	L									H				PE			P		L	P
	Type of Ownership	P	E	L									L	P		L	PE	E	L			L	P
	Indian Land?							P					H				P	E	H				
	Commercial Facility Well?	P	E	H				PE					H	P		L	P	E	H	P		H	
	Entity that Location Refers to	PE	E	H									L	P		L	PE			E		L	P
	Method by which Location Determined			L									L	P		L	PE			P			
	Accuracy of Location		E	H				P					H	P				E	H				
	Latitude		E	H				PE					H					E	L		E	H	P
	Longitude		E	H				PE					H					E	L		E	H	P
	Legal Contact Code	PE	E	H									L			L		E	L				
	Owner Name												L	P		L	PE						P
	Owner Organization												L	P		L		E	L				P
	Owner Address												L	P		L		E	L				P
	Owner City												L	P		L		E	L				P
	Owner State												L	P		L		E	L				P
	Owner Zip												L	P		L		E	L				P
	Owner Phone												L	P		L		E	L				P
	Operator Name	PE	E	H				PE					H	P		L	PE			PE		H	P
	Operator Organization	PE	E	H				PE					H	P		L	PE	PE	H	PE		H	P
	Operator Address	PE	E	H				PE					H	P		L	PE			PE		H	P
	Operator City	PE	E	H				PE					H	P		L	PE			PE		H	P
	Operator State	PE	E	H				PE					H	P		L	PE			PE		H	P
	Operator Zip	PE	E	H				PE					H	P		L	PE			PE		H	P
	Operator Phone	PE	E	H				PE					H	P		L	PE			PE		H	P
	Date Well Drilled	PE	E	H				PE					H	PE		L	PE			PE		H	P
	Date First Injection	PE	E	H									H	PE		L	P	E	H		PE	H	P
	Surface Elevation	PE	E	H				P	E	H			H	PE		L	PE			P			P
	Total Depth	P	E	H				PE					H	PE		L	PE			PE			P
	Plug Back Total	P	E	H				PE					H	PE		L	PE			PE			P
	Packer?	P	E	H				PE					H	PE		L	P	E	H				P
	Packer Depth	P	E	H				PE					H	PE		L	PE	E	H	PE			P
	Surface Casing Depth	PE	E	H				PE					H	PE		L	PE	E	H	PE			P
	Surface Casing Cemented?	PE	E	H				PE					H	PE		L	P	E	H	PE			P
	Long String Casing/Inner Depth	P	E	H				PE					H	PE		L	PE			PE			P
	Long String Casing/Inner Cemented?	P	E	H				PE					H	PE		L	P	E	H	PE			P
	Tubing Depth	P	E	H				PE					H	PE		L	PE			PE			P
	Injection Zone Top	PE	E	H				PE					H	PE		L	P	E	H				P
	Injection Zone Bottom	P	E	H				PE					H	PE		L	P	E	H				P
	Confining Zone Top	P	E	L				P					H	PE		L		PE	H				P
	Confining Zone Bottom	P	E	L				P					H	PE		L		PE	H				P
	Injection Zone Lithology	P	E	L				P					H	PE		L		PE	H	P	E	H	P
	Injection Zone Geol Name	P	E	L				P					H	PE		L	PE			PE			P
	Confining Zone Lithology	P	E	L				P					H	PE		L		PE	H	P		H	P
	Confining Zone Geol Name	P	E	L				P					H	PE		L		PE	H	P			P
	USOW Geologic Names (each separate formation)	P	E	H				P					H	PE		L		PE	H	P	E	H	P
	USOW Lithology (each separate formation)	P	E	L				P					H	PE		L		PE	H	P	P	H	P
	Deepest Freshwater (potable) Zone Name	P	E	H				P					L	PE		L		PE	H	P	PE	H	P
	Freshwater Zone TDS	P	E	L				P					L	PE		L		PE	H	P	PE	H	P
	Freshwater Zone Top	P	E	H				P					L	PE		L		PE	H	P	PE	H	P
	Freshwater Zone Bottom	P	E	H				P					L	PE		L		PE	H	P	PE	H	P
	Lower-Most USOW Name	P	E	H				P					H	PE		L		PE	H	P	PE	H	P
	Lower-Most USOW Top	P	E	H				P					H	PE		L		PE	H	P	PE	H	P
	Lower-Most USOW Bottom	P	E	H				PE					H	PE		L		PE	H	P	PE	H	P
	Lower-Most USOW Thickness	P	E	H				P					H	PE		L		PE	H				

MODULE NO 6 DATA ELEMENTS MODULE

	KANSAS			KENTUCKY			LOUISIANA			MISSISSIPPI			MISSOURI			MONTANA			NEBRASKA			
	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S
Lower-Most USOW TOB	P	E	H				P					H	P		L	PE	H	P	E	H	P	
Depth to 3,000 mg/TOS	P	E	L				P					H	P		L	PE	H	P	E	H	P	
Intervening Thickness	P	E	L				P					H	P		L	PE	H	P	E	H	P	
Injection Zone is Exempted Aquifer?	P	E	L				P	E	H			L	P		L	PE	H	P	E	H	P	
EPA Region	P	E	L				PE					L			L	PE	H				P	
District	P	E	H				PE					L			L	PE	H	PE			P	
Facility Identifier	P	E	H				PE					H			L	PE		PE			P	
API Number	P	E	H				PE					H	PE		L	PE		PE			P	
Section, Township, Range	PE	E	H				PE					H	PE		L	PE		PE			P	
Well Located in Wellhead Protection Area?	P	E	H				P					L			L	PE	H				P	
Number of Public Water Supply Wells in AOR	PE	E	H				P					L			L	PE	H				P	
Owner Contact Name	PE	E	H				PE					L			L	PE	H	P	E	H	P	
Operator Contact Name	PE	E	L				P					H			L	P	E	H	P	E	P	
Type of Construction, Conventional/Non Conventional	P		L				P					H			L	P	E	H	P	E	P	
Annulus Fluid	P		H				P	P	L			H			L	P	E	H			P	
Surface Casing Diameter	P		H				PE					H			L	PE		PE			P	
Surface Casing Grade	P		L				PE					H			L	PE					P	
Surface Casing Type	P		H				PE					H			L	PE					P	
Intermediate Casing Diameter	P		H				PE					H			L	PE					P	
Intermediate Casing Grade	P		L				PE					H			L	PE					P	
Intermediate Casing Type	P		L				PE					H			L	PE			PE		P	
Long String Casing/Inner Diameter	P		H				PE					H			L	PE					P	
Long String Casing Inner Grade	P		L				PE					H			L	PE					P	
Long String Casing Type	P		L				PE					H			L	PE					P	
Tubing Diameter	P		H				PE					H			L	P	E	H	PE		P	
Tubing Grade	P		H				P					H			L	P	E	H			P	
Injection Zone Chemistry*																P	PE	H				
Monitoring Well Chemistry*																P	E	H				
Packer Type*																	PE	H				
Tubing Type*																	PE	H				
Cathodic Protection	P	E	L					P	L			E	H				PE	H			P	
Completion Type	P	E	H				P		L			E	H				PE	H			P	
Injection Zone Permeability	P	E	L				P	E	L			E	H				PE	H	P			
Injection Zone Effective Porosity	P	E	L				P	E	L			E	H				PE	H	P			
Injection Zone Fracture Pressure	P	E	L				PE					E	H				PE	H	P			
Confining Zone Permeability	P	E	L					P				E	H				PE	H	P			
Confining Zone Effective Porosity	P	E	L					P				E	H				PE	H	P			
Confining Zone Fracture Pressure	P	E	L				PE					E	H				PE	H	P			
Other Confining Zone Lithology	P	E	L				P					E	L				PE	H				
Other Confining Zone Geologic Name	P	E	L																			
6.3.2 PERMIT TRACKING																						
Type Well Permit, Individual or Area?							P					E	H	P		L	PE	H	P	E	H	P
Type Well Permitted, Conventional/Non?	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Number of Wells Under Area Permit	P	E	H				P					E	H	PE		L	PE	H	P	E	H	P
Application Date	PE	E	H				PE					E	H	PE		L	PE	H	P	E	H	P
Date Permit Issued	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Date Permit Effective	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Date Permit Denied	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Date Permit Withdrawn	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Date Permit Modified	PE	E	H				P					E	H	P		L	PE	H	P	E	H	P
Type of Permit Modification	PE	E	H				P					E	H	P		L	PE	H	P	E	H	P
Maximum Allowable Injection Pressure	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Maximum Allowable Flow Rate	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Frequency of Recording Injection Data	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Total AOR Wells, Abandoned	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Total AOR Wells, Other	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Number Defective AOR Wells—Abandoned	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Number of Defective AOR Wells—Other	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Number AOR Wells Needing Corrective Action—Abandoned	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Number AOR Wells Needing Corrective Action—Other	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Number Wells Penetrating Injection Zone in AOR—Abandoned	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Number Wells Penetrating Injection Zone in AOR—Other	PE	E	H				PE					E	H	P		L	PE	H	P	E	H	P
Radius of AOR	P	E	H				PE					E	H	P		L	PE	H	PE		H	P
Date of Corrective Action	P	E	H				PE					E	H	P		L	PE	H	PE		H	P
Type of Corrective Action	PE	E	H				PE					E	H	P		L	PE	H	PE		H	P
Date Corrective Action Complete	P	E	H				PE					E	H	P		L	PE	H	PE		H	P

MODULE NO 6 DATA ELEMENTS MODULE

	KANSAS			KENTUCKY			LOUISIANA			MISSISSIPPI			MISSOURI			MONTANA			NEBRASKA		
	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P
Frequency of MIT Tests	P	E	H				P	E	H				P	E	H				P	E	H
Financial Responsibility, Type of			L				P	E	H				P	E	H				P	E	H
Financial Responsibility, Coverage			L				P	E	H				P	E	H				P	E	H
Financial Responsibility, Blanket?			L				P	E	H				P	E	H				P	E	H
No. of Wells Under Blanket Bond			L				P	E	H				P	E	H				P	E	H
Financial Responsibility Expiration Date			L				P	E	H				P	E	H				P	E	H
Financial, Date Last Reviewed			L				P	E	H				P	E	H				P	E	H
Guarantor Name			L				P	E	H				P	E	H				P	E	H
Guarantor Address			L				P	E	H				P	E	H				P	E	H
Guarantor City			L				P	E	H				P	E	H				P	E	H
Guarantor State			L				P	E	H				P	E	H				P	E	H
Guarantor Zip Code			L				P	E	H				P	E	H				P	E	H
Guarantor Phone			L				P	E	H				P	E	H				P	E	H
6.3.3 INSPECTION AND OPERATION																					
Date of Inspection	P	E	H				P	E	H				P	E	H				P	E	H
Type of Inspection	P	E	H				P	E	H				P	E	H				P	E	H
Complaint Resolution	P	E	H				P	E	H				P	E	H				P	E	H
Emergency Resolution	P	E	H				P	E	H				P	E	H				P	E	H
Violation Discovered? Y/N	P	E	H				P	E	H				P	E	H				P	E	H
Type of Violation?	P	E	H				P	E	H				P	E	H				P	E	H
Operator Notified of Violation in Field?							P	E	H				P	E	H				P	E	H
Action Taken							P	E	H				P	E	H				P	E	H
Both Parts MIT Completed? Y/N	P	E	H				P	E	H				P	E	H				P	E	H
MIT Passed? Y/N	P	E	H				P	E	H				P	E	H				P	E	H
Date of Last MIT	P	E	H				P	E	H				P	E	H				P	E	H
Last MIT Passed?	P	E	H				P	E	H				P	E	H				P	E	H
Date of Leak Test	P	E	H				P	E	H				P	E	H				P	E	H
Leak Test Pressure	P	E	H				P	E	H				P	E	H				P	E	H
Leak Test Duration	P	E	H				P	E	H				P	E	H				P	E	H
Did Operator Conduct Pre-test	P	E	H				P	E	H				P	E	H				P	E	H
Date of Fluid Migration Test	P	E	H				P	E	H				P	E	H				P	E	H
Type of Fluid Migration Test	P	E	H				P	E	H				P	E	H				P	E	H
Annular Pressure Monitoring	P	E	H				P	E	H				P	E	H				P	E	H
Maximum Annular Pressure	P	E	H				P	E	H				P	E	H				P	E	H
Minimum Annular Pressure	P	E	H				P	E	H				P	E	H				P	E	H
Last Annular Pressure Reported?	P	E	H				P	E	H				P	E	H				P	E	H
Date of Remedial Action	P	E	H				P	E	H				P	E	H				P	E	H
Type of Remedial Action	P	E	H				P	E	H				P	E	H				P	E	H
Operating Status	P	E	H				P	E	H				P	E	H				P	E	H
Date of Status Effective	P	E	H				P	E	H				P	E	H				P	E	H
Date Plugged and Abandoned	P	E	H				P	E	H				P	E	H				P	E	H
Maximum Injection Pressure	P	E	H				P	E	H				P	E	H				P	E	H
Flow Rate	P	E	H				P	E	H				P	E	H				P	E	H
Annual Volume of Injected Fluid	P	E	H				P	E	H				P	E	H				P	E	H
Injected Volume Units, Gallons/BSL	P	E	H				P	E	H				P	E	H				P	E	H
Fluid Type Code	P	E	H				P	E	H				P	E	H				P	E	H
6.3.4 ENFORCEMENT/COMPLIANCE TRACKING																					
Significant Non-compliance	P	E	H				P	E	H				P	E	H				P	E	H
Method of Determining SNC	P	E	H				P	E	H				P	E	H				P	E	H
Date Last Compliance Review	P	E	H				P	E	H				P	E	H				P	E	H
Compliance Review Period	P	E	H				P	E	H				P	E	H				P	E	H
Date Violation Occurred or Verified	P	E	H				P	E	H				P	E	H				P	E	H
Type of Violation	P	E	H				P	E	H				P	E	H				P	E	H
Date Owner/Operator Notified	P	E	H				P	E	H				P	E	H				P	E	H
Type of Notification	P	E	H				P	E	H				P	E	H				P	E	H
Date Enforcement Action Taken	P	E	H				P	E	H				P	E	H				P	E	H
Type of Enforcement Action Taken	P	E	H				P	E	H				P	E	H				P	E	H
Date Returned to Compliance	P	E	H				P	E	H				P	E	H				P	E	H
Date Penalty Assessed	P	E	H				P	E	H				P	E	H				P	E	H
Penalty Assessed (\$)	P	E	H				P	E	H				P	E	H				P	E	H
Date Penalty Collected	P	E	H				P	E	H				P	E	H				P	E	H
Penalty Collected (\$)	P	E	H				P	E	H				P	E	H				P	E	H
Date of Failure	P	E	H				P	E	H				P	E	H				P	E	H
Type of Failure	P	E	H				P	E	H				P	E	H				P	E	H

MODULE NO 6 DATA ELEMENTS MODULE

	KANSAS			KENTUCKY			LOUISIANA			MISSISSIPPI			MISSOURI			MONTANA			NEBRASKA			
	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	
Cause of Failure	P	E	H							E	H	P				P	E	H	P			P
Depth of Failure (feet)	P	E	H						P	L						P	E	H	P			P
Date of Repair	P	E	H				P	E								P	E	H	P			P
Type of Repair	P	E	H				P									P	E	H	P			P
Failure Identification Method	P	E	H				P									P	E	H	P			P
Failure Comments	P	E	H				P									P	E	H	P			P
6.3.5 MECHANICAL INTEGRITY FAILURES																						
Date of Inspection	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Type of Inspection	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Complaint Resolution	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Emergency Resolution			L				P	E			E	H	P	E	H		P	E	H	P		P
Violation Discovered? Y/N	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Type of Violation?	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Operator Notified of Violation in Field?							P				E	H	P	E	H		P	E	H	P		P
Action Taken							P	E			E	H	P	E	H		P	E	H	P		P
Both Parts MIT Completed? Y/N	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
MIT Retest? Y/N	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Date of Last MIT	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Last MIT Passed?	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Date of Leak Test	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Leak Test Pressure	P	E	H				P				E	H	P	E	H		P	E	H	P		P
Leak Test Duration	P	E	H				P				E	H	P	E	H		P	E	H	P		P
Did Operator Conduct Pre-test									P	L												
Date of Fluid Migration Test	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Type of Fluid Migration Test	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Annulus Pressure Monitoring	P	E	H				P				E	H	P	E	H		P	E	H	P		P
Maximum Annulus Pressure	P	E	H				P				E	H	P	E	H		P	E	H	P		P
Minimum Annulus Pressure	P	E	H				P				E	H	P	E	H		P	E	H	P		P
Last Annulus Pressure Reported?	P	E	H				P				E	H	P	E	H		P	E	H	P		P
Date of Remedial Action	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Type of Remedial Action	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Operating Status	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Date Status Effective	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Date Plugged and Abandoned	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Maximum Injection Pressure	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Flow Rate	P	E	H				P				E	H	P	E	H		P	E	H	P		P
Annual Volume of Injected Fluid	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Injected Volume Units, Gallons/BBQ	P	E	H				P	E			E	H	P	E	H		P	E	H	P		P
Fluid Type Code	P	E	H				P				E	H	P	E	H		P	E	H	P		P
6.4 PRODUCTION MANAGEMENT AND WELL TRACKING DATA ELEMENTS																						
6.4.1 Oil & Gas Well Permit																						
API Number	P	E	H				P	E			E	H	P			P	E			P		P
Permit Number	P	E	H	P	E	H	P	E			E	H	P			P	E			P		P
Operator Number	P	E	H	P	E	H	P	E			E	H	P			P	E			P		P
Drilling Contractor Number			L				P	E	P	E	H					P	E	H	P			P
Mineral Owner							P	E	P	E	H					P	E	H	P			P
Federal Lease Number																P	E	H	P			P
State Lease Number																P	E	H	P			P
Type of Well	P	E	H	P	E	H	P	E			E	H	P			P	E	H	P			P
Gas Type (Wet/Dry/Coal/Coal Bed)	P	E	L				P	E			E	H				P	E	H	P			P
Oil/Condensate							P	E			E	H				P	E	H	P			P
Category (Wildcat/Development)	P	E	H				P	E			E	H				P	E	H	P			P
Quarter Quarter	P	E	H				P	E			E	H				P	E	H	P			P
Section	P	E	H	P	E	H	P	E			E	H				P	E	H	P			P
Township Direction	P	E	H	P	E	H	P	E			E	H	P	E		P	E			P		P
Township Numeric	P	E	H	P	E	H	P	E			E	H	P	E		P	E			P		P
Range Direction	P	E	H				P	E			E	H	P	E		P	E			P		P
Range Numeric	P	E	H				P	E			E	H	P	E		P	E			P		P
Principal Meridian							P		E	H						P	E	L	P			P
Measured From E/W Section Line	P	E	H				P				E	H				P	E			P		P
Distance From E/W Section Line	P	E	H	P	E	H	P				E	H				P	E			P		P
Measured From N/S Section Line	P	E	H	P	E	H	P				E	H				P	E			P		P
Distance From N/S Section Line	P	E	H				P				E	H				P	E			P		P
Latitude		E	H				P	E			E	H				P	E	L				P

MODULE NO 6 DATA ELEMENTS MODULE

	KANSAS			KENTUCKY			LOUISIANA			MISSISSIPPI			MISSOURI			MONTANA			NEBRASKA			S
	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	
Longitude		E	H				PE				E	H					PE	L				P
Deviation		E	H				P				E	H			P		PE	L				P
Bottom Hole Location		E	H	PE	PE	H	PE				E	H			PE							P
Well Status	PE	E	H	PE	PE	H	PE				E	H			PE							P
Status Date	PE	E	H	E	E	L	PE				E	H			PE							P
Basin											E	H				E	H					
Field Number							PE				E	H			PE							E
Objective Formation Code	PE	E	H				P				E	H			PE							P
Lease Name	PE	E	H	PE	PE	H	PE				E	H	PE		PE							P
Lease Number	PE	E	H				PE				E	H	PE		P	E	L					P
Operator Well Number	PE	E	H	PE	PE	H	PE				E	H			PE							P
Spending Order Cause No.							P				E	H			P							P
Spending Order Order No.	PE	PE	H								E	H			P							P
Number of Acres Drilling Unit	P	P					PE				E	H			P							P
Designation of Stand Up/Lay Down Unit	P	P									E	H			P							P
NOGA Category	PE	E	H								E	H			PE							P
NOGA	PE	E	H								E	H										P
Inspection Status											E	H										P
Date Permit Approved	PE	E	H	PE	PE	L	PE				E	H	PE		PE							P
Permit Expiration Date	P	P					PE				E	H	PE		PE							P
Date Spudded	PE	E	H				PE				E	H	PE		PE							P
Date Completed	P	P					PE				E	H	PE		P	E	L					P
Date Permission to Transport Products							PE				E	H			PE	E	L					P
Date First Production Oil	P	P					PE				E	H			PE							P
Date First Sales Gas	P	P					PE				E	H			PE							P
Date P&A	PE	PE	H				PE				E	H			PE							P
P&A Inspection Date				PE	PE	H	PE				E	H			PE							P
P&A Inspection	PE	PE	H	PE	PE	H	PE				E	H	P		PE							PE
P&A Bond Status				E	E	H		PE	H		E	H	P		PE							PE
P&A Bonding Party				PE	PE	H		PE	H		E	H	P		PE							PE
Surface Bond Status								PE	H		E	H	P									P
Surface Bonding Party		PE						PE	H		E	H										P
Water Disposition Facility Number	P	P									E	H										P
Missing Information Letter	PE	PE	H				PE				E	H			PE							P
Missing Information Letter Date	P	P					PE				E	H										P
Shedhead Code											E	H										
Shedhead Date											E	H										
Shedhead Pressure											E	H										P
Comments											E	H			E							
User Initials											E	H			E							
Date Stamp	P	PE	H								E	H										
6.4.2 COMPLETION REPORT																						
API Number	PE	E	H				PE				E	H			PE				P	E	H	P
Last Date - Confidential	PE	E	H				P				E	H	P		PE	E	L		P	E	H	P
Date Spudded	PE	E	H	P	P	L	PE				E	H	P		PE	E	L		P	E	H	P
Date - TD - Roadhead	P			P	P	L	P				E	H	P		P				P	E	H	P
Well Status	PE	E	H	PE	PE	H	PE				E	H	P		PE				P	E	H	P
Date Completed	P	E	H	P	P	L	PE				E	H	P		PE				P	E	H	P
Elevation - Ground - Level	PE	E	H	PE	PE	H	P	E	H		E	H	P		PE				P	E	H	P
Elevation - Kelly - Bushing	PE	E	H				P	E	H		E	H	P		PE				P	E	H	P
True - Vertical - Depth				PE	PE	H	PE				E	H	P		PE				P	E	H	P
Plug - Back - TD	PE	E	H	PE	PE	H	PE				E	H	P		P	E	L		P	E	H	P
Plug - Back - TVD											E	H	P		PE	E	L		P	E	H	P
Measured Depth	PE	E	H	P	PE	H	P				E	H	P		PE				P	E	H	P
Directional - Survey		E		P	PE	H	P				E	H	P		PE				P	E	H	P
Log Run	PE	E	H	PE	PE	H	P				E	H	P		PE				P	E	H	P
Log - Received - Date	PE	PE	H	PE	PE	L	P				E	H	P		PE				P	E	H	P
Cased	P			P	PE	L	P				E	H	P		PE				P	E	H	P
Drill - Stem - Test	P			P	PE	H	PE				E	H	P		PE				P	E	H	P
Casing Size 1	P			P	PE	H	PE				E	H	P		PE				P	E	H	P
Casing Depth 1	P			P	PE	H	PE				E	H	P		PE				P	E	H	P
Hole Size 1	P			P	PE	H	PE				E	H	P		PE				P	E	H	P
Casing Size 2	P			P	PE	H	PE				E	H	P		PE				P	E	H	P
Casing Depth 2	P			P	PE	H	PE				E	H	P		PE				P	E	H	P
Hole Size 2	P	E		P	PE	L	PE				E	H	P		PE				P	E	H	P
Casing Size 3	P	E		P	PE	L	PE				E	H	P		PE				P	E	H	P

[illegible]

MODULE NO. 6 DATA ELEMENTS MODULE

	KANSAS			KENTUCKY			LOUISIANA			MISSISSIPPI			MISSOURI			MONTANA			NEBRASKA		
	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P
Injection Well Operator V/N	PE	E					PE				E	H	P	PE					E		P
PI Operator V/N	PE	E					PE				E	H	P	P		E	H		E		P
Drilling - Contractor V/N	PE	E									E	H	P			E	L		E		
General Mailing List V/N	PE	E					PE				E	H	P	PE					E		P
Comments											E	H	P	P							
Date Stamp	P	E					P														
6.4.4 PRODUCTION ACCOUNTING																					
Lease Number	P	E					PE				E	H	P	E					E		P
Production Year	P	E					PE				E	H	P	PE					E		P
Production Month	P	E					PE				E	H	P	PE					E		P
Lease - Production - Status - Code	P	E					PE				E	H	P	PE					E		P
Operator	P	E					PE				E	H	P	PE					E		P
Oil Transporter	P	E					PE				E	H	P	PE					E		P
Gas Operator Number							PE				E	H		PE					E		P
Producing Oil Wells	PE	E					PE				E	H		PE					E		P
Producing Gas Wells	PE	E					PE				E	H		PE					E		P
Shut-in - Oil - Wells	PE	E					PE				E	H		PE					E		P
Shut-in - Gas - Wells	PE	E					PE				E	H		PE					E		P
Oil Well Days Producing											E	H		P		E	L		E		P
Gas Well Days Producing											E	H		PE					E		P
Gas Well Days Producing											E	H		PE					E		P
Beginning Inventory Oil							PE				E	H		PE					E		P
Oil Gaily	P	E					PE				E	H		PE					E		P
Oil Produced	E						PE				E	H		PE					E		P
Oil Sold	E						PE				E	H		PE					E		P
Oil/Condensate Adjustment											E	H							E		P
Oil/Condensate Adjustment Type							PE				E	H		PE					E		P
Ending Inventory Oil							PE				E	H		PE					E		P
Oil Production Report Status	PE	E					PE				E	H		PE					E		P
Gas BTU	PE	E					PE				E	H		PE					E		P
Gas Produced	PE	E					PE				E	H		PE					E		P
Gas Flared	PE	E					PE				E	H		PE					E		P
Gas Used on Lease							PE				E	H		PE					E		P
Gas Sold	PE	E					PE				E	H		PE					E		P
Gas Plant Holdings							PE				E	H		PE					E		P
Gas Production Report Status							PE				E	H		PE					E		P
Water Produced	P	E									E	H		PE					E		P
Water Disposition Facility	PE	E									E	H		E					E		P
Production Comment Code											E	H		E					E		P
User ID											E	H		E					E		P
Date Stamp											E	H		PE					E		P
6.4.5 CONSERVATION TAX																					
Report - Year	PE	E	H								E	H							P		P
Report Period	PE	E	L								E	H							P		P
Well - Number											E	H							P		P
Payor - Number											E	H							P		P
Product - Type	PE	E	L								E	H							P		P
Product - Sub - Code											E	H							P		P
Gas - Pressure - Base	PE	E									E	H							P		P
Volume - Sold	PE	E	H								E	H							P		P
Dollar - Amount - Sold											E	H							P		P
Federal - Exemption	P	E	L								E	H							P		P
State - Exemption											E	H							P		P
Indian - Exemption											E	H							P		P
Other - Exemption											E	H							P		P
Adjustments											E	H							P		P
Tax - Rate	PE	PE									E	H							P		P
Dollar - Amount - Mfg - Levy - Received	PE	PE									E	H							P		P
Receipt - Number	PE	PE									E	H							P		P
Date - Received	PE	PE									E	H							P		P
Report - Status	P	E	L								E	H							P		P
User - ID	PE	E	L								E	H							P		P
Date - Stamp	PE	E	L								E	H							P		P

6.5	USC AND RISK BASED DATA ELEMENTS	Inventory	6.5.1
NEW MEXICO	Site Form Labels	E	L
	State	E	M
	County	E	M
	Class of Well	E	M
	Type of Injection Well	E	M
	Fluid Name	E	M
	River Basin Name	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
NEW MEXICO	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
NORTH DAKOTA	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
NEW YORK	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
OHIO	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
SOUTH DAKOTA	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
OREGON	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
UTAH	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
VERMONT	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
VIRGINIA	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
WASHINGTON	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
WISCONSIN	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
WYOMING	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M
	Field Number	E	M

MODULE NO 6 DATA ELEMENTS MODULE

	NEVADA			NEW MEXICO			NORTH DAKOTA			NEW YORK			OHIO			OKLAHOMA			SOUTH DAKOTA			TEXAS	
	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	
Lower-Most USOW TDS	P	H			L	P		L														PE	
Depth to 3,000 mg/TDS	P					P		L															
Intervening Thickness	E	H				P		L														P	
Injection Zone is Exempted Aquifer?	E	L	P	E	H	P		L														P	
EPA Region	P	L			L	P		L						P	E	H						PE	
District	P	L	P	E	H	P		L														PE	
Facility Identifier	E	L				PE								P								PE	
API Number	E	L	P	E	H	PE		H						PE								PE	
Section, Township, Range	E	H	P	E	H	PE		H						PE								P	
Well Located in Wellhead Protection Area?	E	H				P		L							E	H							
Number of Public Water Supply Wells in AOR	E	H	P	E	H	P		L							E	H							
Owner Contact Name	P		P	E	H																	PE	
Operator Contact Name	P		P	E	H	PE		H						PE								P	
Type of Construction, Conventional/Non Conventional	P					PE		H						P	E	H						P	
Annulus Fluid	P		P	E	H	P		L						P	E	H						PE	
Surface Casing Diameter	E	H	PE	E	L	PE		H						PE								P	
Surface Casing Grade	P	H			L	P		L						P								P	
Surface Casing Type	P	H			L	P		L						P								PE	
Intermediate Casing Diameter	E	H	PE	E	H	P		L						P	E	H						P	
Intermediate Casing Grade	P	H			L	P		L						P								P	
Intermediate Casing Type	P	H			L	P		L						P								P	
Long String Casing/Inner Diameter	E	H	PE	E	H	PE		HL						P	E	H						PE	
Long String Casing Inner Grade	P	H			L	P		L						P								P	
Long String Casing Type	P	H			L	P		L						P	E	H						P	
Tubing Diameter	E	H	PE	E	H	P		L						P	E	H						PE	
Tubing Grade	P	L			L	P		L						P								P	
Injection Zone Chemistry*	E	H						H															
Monitoring Well Chemistry*	E	H						H															
Packer Type*																							
Tubing Type*																						P	
Cathodic Protection	P	L			L	P		L														P	
Completion Type	E	H	P	E	L	PE		H						P	E	H						P	
Injection Zone Permeability	P		P	E	L	P		L														P	
Injection Zone Effective Porosity	P		P	E	L	P		L							E	H						P	
Injection Zone Fracture Pressure	E	H			L	P		L						P	E	H						P	
Confining Zone Permeability	P	H	P	E	L			L															
Confining Zone Effective Porosity	P	H	P	E	L			L															
Confining Zone Fracture Pressure	E		P	E	L			L															
Other Confining Zone Lithology	P		P	E	L			L															
Other Confining Zone Geologic Names	E		P	E	L			L															
6.3.2 PERMIT TRACKING																							
Type Well Permit, Individual or Area?	E	H	P	E	H	PE		H						P	E	H						P	
Type Well Permitted, Conventional/Non?	E	H	P	E	L	PE		H						P	E	L						P	
Number of Wells Under Area Permit	E	H	P	E	H	PE		H														P	
Application Date	E	H	P	E	L	P		L						PE								PE	
Date Permit Issued	E	H	P	E	H	PE		H						PE								PE	
Date Permit Effective	E	H				PE		H						P								P	
Date Permit Denied		L			L	P		L						P	E	H						P	
Date Permit Withdrawn		L			L	P		L						P	E	H						P	
Date Permit Modified	E	H	P		H	P		L						P	E	H						PE	
Type of Permit Modification	E	L	P			P		L						P	E	H						P	
Minimum Allowable Injection Pressure	E	H	PE		H	P		L						PE								PE	
Minimum Allowable Flow Rate	E	H				P		L						P	E	H						PE	
Frequency of Recording Injection Data	E	H	P		L	PE		H						P								PE	
Total AOR Wells, Abandoned		L	P	E	H	PE		H						P	E	H						P	
Total AOR Wells, Other		L	P	E	H	PE		H						P	E	H						P	
Number Defective AOR Wells--Abandoned			P	E	H	P		L						P	E	H						P	
Number of Defective AOR Wells--Other	P		P	E	H	P		L						P	E	H						PE	
Number AOR Wells Needing Corrective Action--Abandoned	P		P	E	H	P		L						P	E	H						PE	
Number AOR Wells Needing Corrective Action--Other	P		P	E	H	P		L						P	E	H						PE	
Number Wells Penetrating Injection Zone in AOR--Abandoned	P		P	E	H	PE		H						P	E	H						P	
Number Wells Penetrating Injection Zone in AOR--Other	P		P	E	H	PE		H						P	E	H						P	
Refill of AOR	E	L				P								P	E	H						P	
Date of Corrective Action	P		PE		H	PE		H						P	E	H						P	
Type of Corrective Action	P		PE		H	PE		H						P	E	H						P	
Date Corrective Action Complete	P		PE		H	PE		L						P	E	H						P	

MODULE NO 6 DATA ELEMENTS MODULE

	NEVADA				NEW MEXICO				NORTH DAKOTA				NEW YORK				OHIO				OKLAHOMA				SOUTH DAKOTA				TEXAS			
	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D				
Frequency of MIT Tests	E	H	P,E		H	P		H				P	E	H														P,E				
Financial Responsibility, Type of	E	L	P		L	P,E		H				P,E																P,E				
Financial Responsibility, Coverage	P		P		L	P,E		H				P,E																P,E				
Financial Responsibility, Blanket?	P		P		L	P,E		H				P,E																P,E				
No. of Wells Under Blanket Bond	P		P		L	P,E		H				P,E																P,E				
Financial Responsibility Expiration Date	E	H			L	P,E		H				P,E																P,E				
Financial, Date Last Reviewed	P				L	P,E		H				P,E																P,E				
Guarantor Name	P		P,E		L	P,E		H				P,E																P,E				
Guarantor Address	P		P,E		L	P,E		H				P,E																P,E				
Guarantor City	P		P,E		L	P,E		H				P,E																P,E				
Guarantor State	P		P,E		L	P,E		H				P,E																P,E				
Guarantor Zip Code	P		P,E		L	P,E		H				P,E																P,E				
Guarantor Phone	P		P,E		L	P,E		H				P,E																P,E				
6.3.3	INSPECTION AND OPERATION																															
Date of Inspection	E	H	P,E		H	P		L				P,E																P	E			
Type of Inspection	E	H	P,E		H	P		L				P	E	H														P	E			
Complaint Resolution	E	L	P,E		H	P		L				P	E	H														P	E			
Emergency Resolution	E	L	P,E		H	P		L				P	E	H														P	E			
Violation Discovered? Y/N	E	H	E		H	P		L				P,E																P,E	E			
Type of Violation?	E	H	P,E		H	P		L				P,E																P	E			
Operator Notified of Violation in Field?	P	L	P,E		H	P		L				P	E	H														P	E			
Action Taken	E	H	P,E		H	P		L				P	E	H														P	E			
Both Parts MIT Completed? Y/N	E	L	P,E		H	P,E		H				P	E	H														P	E			
MIT Passed? Y/N	E	L	P,E		H	P,E		H				P	E	H														P	E			
Date of Last MIT	E	H	P,E		H	P,E		H				P,E																P	E			
Last MIT Passed?	E	H	P,E		H	P,E		H				P	E	H														P	E			
Date of Leak Test	E	H	P,E		H	P,E		H				P	E	H														P	E			
Leak Test Pressure	E	H	P,E		H	P,E		H				P	E	H														P	E			
Leak Test Duration	E	H			L	P,E		H				P	E	H														P	E			
Did Operator Conduct Pre-test	P				L	P		H				P	E	H														P	E			
Date of Fluid Migration Test	E	L			L	P		H				P	E	H														P	E			
Type of Fluid Migration Test	E	L			L	P		H				P	E	H														P	E			
Annulus Pressure Monitoring	E	H	P,E		H	P,E		H				P	E	H														P	E			
Maximum Annulus Pressure	P				P,E		H					P	E	H														P	E			
Minimum Annulus Pressure	P				P,E		H					P	E	H														P	E			
Last Annulus Pressure Reported?	P		P,E		L	P,E		H				P	E	H														P	E			
Date of Remedial Action	P		P,E		H	P,E		H				P	E	H														P	E			
Type of Remedial Action	P		P,E		H	P,E		H				P	E	H														P	E			
Operating Status	E	L	P,E		H	P,E		H				P	E	H														P	E			
Date of Status Effective	E	L	P,E		H	P,E		H				P	E	H														P	E			
Date Plugged and Abandoned	E	H	P,E		H	P,E		H				P	E	H														P	E			
Maximum Injection Pressure	E	H	P,E		H	P,E		H				P	E	H														P	E			
Flow Rate	E	H	P,E		L	P,E		H				P	E	H														P	E			
Annual Volume of Injected Fluid	E	L			P,E		H					P	E															P	E			
Injected Volume Units, Gallons/BSL	E	L	P,E		H	P,E		H				P	E															P	E			
Fluid Type Code		L	P,E		H			L																				P	E			
6.3.4	ENFORCEMENT/COMPLIANCE TRACKING																															
Significant Non-compliance	E	H	P,E		H	P		L				P	E	H														P	E			
Method of Determining SNC	P		P		L	P		L				P	E	H														P	E			
Date Last Compliance Review	E	H			L	P		L				P	E	H														P	E			
Compliance Review Result	E	H	P,E		L	P		L				P	E	H														P	E			
Date Violation Occurred or Verified	E	H	P,E		H	P		L				P,E																P	E			
Type of Violation	E	H	P,E		H	P		L				P	E															P	E			
Date Owner/Operator Notified	E	H	P,E		H	P		L				P	E	H														P	E			
Type of Notification	E	L	P,E		H	P		L				P	E	H														P	E			
Date Enforcement Action Taken	E	H	P,E		H	P		L				P	E	H														P	E			
Type of Enforcement Action Taken	E	L	P,E		H	P		L				P	E	H														P	E			
Date Returned to Compliance	E	H	P,E		H	P		L				P	E															P	E			
Date Penalty Assessed	E	H	P		L	P		L				P	E	H														P	E			
Penalty Assessed (\$)	E	L	P		E	L	P	L				P	E	H														P	E			
Date Penalty Collected	E	H	P		E	L	P	L				P	E	H														P	E			
Penalty Collected (\$)	E	L	P		E	L	P	L				P	E	H														P	E			
Date of Failure	E	H	P,E		H	P,E		H				P	E	H														P	E			
Type of Failure	E	H	P,E		H	P,E		L				P	E	H														P	E			

MODULE NO 6 DATA ELEMENTS MODULE

		NEVADA		NEW MEXICO		NORTH DAKOTA		NEW YORK		OHIO		OKLAHOMA		SOUTH DAKOTA		TEXAS	
		D	P	S	D	P	S	D	P	S	D	S	D	S	D	S	D
	Cause of Failure	E	H	P,E		H	P,E		H			P	E	H			E
	Depth of Failure (feet)	E	H			H	P		L			P	E	H			E
	Date of Repair	E	H	P,E		H	P,E		H						P		E
	Type of Repair	E	H				P,E		H			P	E	H		P,E	
	Failure Identification Method	E	L				P		L			P	E	H			E
	Failure Comments	E	H				P,E		L			P	E	H			E
6.3.5	MECHANICAL INTEGRITY FAILURES																
	Date of Inspection	E	H	P,E		H	P,E		H			P,E				P	
	Type of Inspection	E	H	P,E		H	P		L			P	E	H		P	
	Complaint Resolution	E	L	P,E		H	P		L			P	E	H		P	
	Emergency Resolution	E	L	P,E		H	P		L			P	E	H		P	
	Violation Discovered? Y/N	E	H	P,E			P,E		H			P	E	H		P,E	
	Type of Violation?	E	H	P,E			P,E		H			P,E		H		P	
	Operator Notified of Violation in Field?	E	L	P,E			P		L			P	E	H		P	
	Action Taken	E	H	P,E			P		L			P	E	H		P,E	
	Both Parts MIT Completed? Y/N	E	H	P	E	H	P,E		H			P	E	H			
	MIT Retest? Y/N	E	L	P,E		H	P,E		L			P,E				P,E	
	Date of Last MIT	E	L	P,E		H	P,E		H			P,E				P,E	
	Last MIT Passed?	E	L	P,E		H	P,E		H			P,E				P,E	
	Date of Leak Test	E	L	P,E		H	P,E		H			P,E					
	Leak Test Pressure	E	L	P,E		H	P,E	E	H			P	E	H			
	Leak Test Duration	E	L	P,E		H	P,E	E	H			P	E	H			
	Did Operator Conduct Pre-test	P				L	P		L			P	E	H			
	Date of Fluid Migration Test	E	L	P,E		L	P		L			P	E	H			
	Type of Fluid Migration Test	E	L	P,E		L	P					P	E	H			
	Annular Pressure Monitoring	E	L	P,E		H	P,E		H			P	E	H		P,E	
	Maximum Annulus Pressure	E	L				P,E		H			P	E	L		P,E	
	Minimum Annulus Pressure	E	L				P,E		H			P	E	L		P,E	
	Last Annulus Pressure Reported?	E	L	P,E		H	P,E		H			P	E	H		P,E	
	Date of Remedial Action	E	H	P,E		H	P,E		H			P	E	H			
	Type of Remedial Action	E	H	P,E		H	P,E		H			P	E	H			
	Operating Status	E	H	P,E		H	P,E		H			P	E	H		P,E	
	Date Status Effective	E	H	P,E		H	P,E		H			P	E	H		P,E	
	Date Plugged and Abandoned	E	H	P,E		H	P,E		H			P	E			P,E	
	Maximum Injection Pressure	E	H	P,E		H	P,E		H			P	E			P,E	
	Flow Rate	E	H				P,E		H			P	E	H		P,E	
	Annual Volume of Injected Fluid	E	H	P,E		H	P,E		H			P	E			P,E	
	Injected Volume Units, Gallons/BBL	E	H	P,E		H	P,E		H			P	E			P,E	
	Fluid Type Code	P		P,E		H			L							P,E	
6.4	PRODUCTION MANAGEMENT AND WELL TRACKING DATA ELEMENTS																
6.4.1	Oil & Gas Well Permit	E	H	P	E	H	P,E		H			P,E				P,E	E
	API Number	E	H	P		L	P,E		H	P,E		P,E				P,E	E
	Permit Number	E	H	E			P,E		H	P,E		P,E				P,E	E
	Operator Number	E	H			L	P,E		H	P,E		P,E				P	
	Drilling Contractor Number	E	H			L				P,E		P,E					
	Mineral Owner	E	H	P		L				P,E		P,E					
	Federal Lease Number	E	H	P		L		E		P,E		P,E				P,E	
	State Lease Number	E	H	P,E		H		E		P,E		P,E				P,E	
	Type of Well	E	H				P,E		H	P,E		P,E				P,E	
	Gas Type (Wet/Dry/CO2/Coal Bed)					L	P,E		H	P,E		P,E				P	
	Oil/Condensate			P		L			H	P,E		P,E				P,E	
	Category (Wildcat/Development)	P,E	H	P		L	P,E		H	P,E		P,E				P,E	
	Quarter Quarter	P,E	H	P,E		H	P,E		H			P,E				P,E	
	Section	P,E	H	P,E		H	P,E		H			P,E				P,E	
	Township Direction	P,E	H	P,E		H	P,E		H			P,E				P,E	
	Township Numeric	P,E	H	P,E		H			H			P,E					
	Range Direction	P,E	H	P,E		H	P,E		H			P,E					
	Range Numeric	P,E	H	P,E		H	P,E		H			P,E					
	Principal Meridian	P,E	H	P,E		H	P		H			P,E				P,E	
	Measured From B/W Section Line	P,E	H	P	E	H	P,E		H			P,E				P,E	
	Distance From E/W Section Line	P,E	H	P	E	H	P,E		H			P,E				P,E	
	Measured From N/S Section Line	P,E	H	P	E	H	P,E		H			P,E				P,E	
	Distance From N/S Section Line	P,E	H	P	E	H	P,E		H			P,E				P,E	
	Latitude				E	H			L	P,E						P,E	P,E

MODULE NO. 6 DATA ELEMENTS MODULE

		NEVADA			NEW MEXICO			NORTH DAKOTA			NEW YORK			OHIO			OKLAHOMA			SOUTH DAKOTA			TEXAS	
		D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	
	Longitude				E	H			L	P												P	P	
	Deviation	P	E	H		L			L	P			P									P		
	Bottom Hole Location	P	E	H		L	P		H	P			P									P		
	Well Status	P	E	H		H	P		H	P			P									P		
	Status Date			P		H	P		H	P			P									P		
	Basin								L	P												P		
	Field Number			P		H				P												P		
	Objective Formation Code			P		H				P												P	E	
	Lessee Name	P	E	H		H	P		H	P			P									P		
	Lessee Number	P	E	H		H	P		H	P			P									P		
	Operator Well Number	P	E	H		H	P		H	P			P									P		
	Spacing Order Cause No.					L	P		H	P												P		
	Spacing Order Order No.					L	P		H	P												P		
	Number of Acres Drilling Unit			P			P		L	P					P							P		
	Designation of Stand Up/Lay Down Unit			P		L	P		H	P												P		
	NGPA Category			P		L	P		L	P					P							P		
	NGPA			P		L	P		L	P					P	E	H					P		
	Inspection Status	P	E	H			P		L	P												P		
	Date Permit Approved	P	E	H		L	P		H	P			P									P		
	Permit Expiration Date	P	E	H		L	P		H	P			P									P		
	Date Spudded	P	E	H		L	P		H	P			P									P		
	Date Completed	P	E	H		L	P		H	P			P									P		
	Date Permission to Transport Products			P			P		H													P		
	Date First Production Oil	P	E	H		H	P		H						P							P		
	Date First Sales Gas			P		H	P		H						P							P		
	Date P&A	P	E	H		H	P		H	P			P									P		
	P&A Inspection Date	P	E	H		L	P		H	P			P									P		
	P&A Inspection	P	E	H		L	P		H	P			P									P		
	P&A Bond Status	P	E	H		L	P		L	P			P									P		
	P&A Bonding Party	P	E	H		L	P		H	P			P									P		
	Surface Bond Status	P	E	H			P		L				P											
	Surface Bonding Party	P	E	H			P		L				P											
	Water Disposition Facility Number						P		L	P												P		
	Missing Information Letter	P	E	H		L	P		L	P												P		
	Missing Information Letter Date	P	E	H		L	P		L	P												P		
	Broderhead Code			P		L																		
	Broderhead Date			P		L																		
	Broderhead Pressure			P		L																P		
	Comments	P	E	H		L				P			P									P		
	User Initials					L									P	E	L					P		
	Date Stamp					L				P														
6.4.2	COMPLETION REPORT																							
	API Number	P	E	H		H	P		H	P			P									P		
	Last Date- Confidential	P	E	H			P		H	P			P									P		
	Date Spudded	P	E	H		L	P		H	P			P									P		
	Date- TD- Reached			P		L	P			P												P		
	Well Status	P	E	H		H	P		H	P			P									P		
	Date Completed	P	E	H		L	P		H	P			P									P		
	Deviation- Ground- Level	P	E	H		L	P		H	P			P									P		
	Deviation- Kelly- Bushing	P	E	H		L	P		H	P			P									P		
	True- Vertical- Depth	P	E	H		L	P		H	P			P									P		
	Plug- Back- TD	P	E	H		L	P		H	P			P									P		
	Plug- Back- TVD	P	E	H		L	P		H	P			P									P		
	Measured Depth	P	E	H		L	P		H	P			P									P		
	Directional- Survey	P	E	H		L	P		P	H			P									P		
	Logs Run	P	E	H		L	P		H	P			P									P		
	Logs Received- Date	P	E	H			P		L	P					P	E	H					P		
	Corrod	P	E	H		L	P		H	P					P	E	H					P		
	Drill- Steam- Test	P	E	H		L	P		H	P					P	E	H					P		
	Casing Size 1	P	E	H		L	P		H	P					P	E						P		
	Casing Depth 1	P	E	H		L	P		L	P					P	E	H					P		
	Hole Size 1	P	E	H		L	P		L	P					P	E						P		
	Casing Size 2	P	E	H		L	P		L	P					P	E						P		
	Casing Depth 2	P	E	H		L	P		L	P					P	E						P		
	Hole Size 2	P	E	H		L	P		L	P					P	E	H					P		
	Casing Size 3	P	E	H		L	P		L	P					P	E						P		

MODULE NO. 8 DATA ELEMENTS MODULE

	NEVADA				NEW MEXICO				NORTH DAKOTA				NEW YORK				OHIO				OKLAHOMA				SOUTH DAKOTA				TEXAS			
	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	
Casing Depth 3	P	E							P				P				P															
Notch Size 3	P	E							P				P				P															
Casing Size 4	P	E							P				P				P															
Notch Size 4	P	E							P				P				P															
Uner - Size	P	E							P				P				P															
Uner - Top	P	E							P				P				P															
Uner - Bottom	P	E							P				P				P															
Tubing Size 1	P	E							P				P				P															
Tubing 1 Measured Depth	P	E							P				P				P															
Packer 1 Measured Depth	P	E							P				P				P															
Tubing Size 2	P	E							P				P				P															
Tubing 2 Measured Depth	P	E							P				P				P															
Packer 2 Measured Depth	P	E							P				P				P															
Tapered Tubing	P	E							P				P				P															
Producing Formation 1	P	E							P				P				P															
Producing Formation 1 Top	P	E							P				P				P															
Producing Formation 1 Bottom	P	E							P				P				P															
Producing Formation 2	P	E							P				P				P															
Producing Formation 2 Top	P	E							P				P				P															
Producing Formation 2 Bottom	P	E							P				P				P															
Producing Formation 3	P	E							P				P				P															
Producing Formation 3 Top	P	E							P				P				P															
Producing Formation 3 Bottom	P	E							P				P				P															
Producing Formation 4	P	E							P				P				P															
Producing Formation 4 Top	P	E							P				P				P															
Producing Formation 4 Bottom	P	E							P				P				P															
Well-Test-Date	P	E							P				P				P															
Hours-Tested	P	E							P				P				P															
Grate-Size	P	E							P				P				P															
Flow-Tubing-Pressure	P	E							P				P				P															
Casing-Pressure	P	E							P				P				P															
Oil-24-Hour-Rate	P	E							P				P				P															
Gas-24-Hour-Rate									P				P				P															
BSSW									P				P				P															
Gas-Disposition Method									P				P				P															
Formation Tops (Feet)	P	E							P				P				P															
Number of Stacks	P	E							P				P				P															
Top of Cement	P	E							P				P				P															
Source of Cement	P	E							P				P				P															
Stage Test Depth	P	E							P				P				P															
Open Hole	P	E							P				P				P															
Comments	P	E							P				P				P															
User ID									P				P				P															
Date Stamp									P				P				P															
6.4.3																																
COMPANY NAMES AND ADDRESSES																																
Company-Number	P	E							P				P				P															
Status	P	E							P				P				P															
Company-Name	P	E							P				P				P															
Contact-Name	P	E							P				P				P															
Address-First-Line	P	E							P				P				P															
Address-Second-Line	P	E							P				P				P															
City	P	E							P				P				P															
State	P	E							P				P				P															
Zip Code	P	E							P				P				P															
Telephone	P	E							P				P				P															
Fax Number	P	E							P				P				P															
Blanket-Surface-Bond	P	E							P				P				P															
Blanket-Plugging-Bond	P	E							P				P				P															
Add Data for General Mailing									P				P				P															
Operator Y/N	P	E							P				P				P															
Monthly Production Reporter Y/N	P	E							P				P				P															
Producer Y/N	P	E							P				P				P															
Transporter Y/N									P				P				P															
Gatherer Y/N									P				P				P															
Conservation-Levy-Payer Y/N									P				P				P															

MODULE NO 6 DATA ELEMENTS MODULE

	NEVADA					NEW MEXICO					NORTH DAKOTA					NEW YORK					OHIO					OKLAHOMA					SOUTH DAKOTA					TEXAS				
	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D	P	S	D									
Injection Well Operator Y/N	P,E	H	P						P,E		H	P,E			P,E			P,E												P,E										
PR Operator Y/N			P															P,E												P,E										
Drilling - Contractor Y/N						P			P		L	P,E			P,E			P,E												P,E										
General Mailing List Y/N			P,E			P			P		L	P,E			P,E			P,E												P,E										
Comments	P,E	H										P,E			P,E			P,E												P,E										
Date Stamp						P			P		L	P,E			P,E			P,E												P,E										
6.4.4	PRODUCTION ACCOUNTING																																							
Lease Number	P,E	H	P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Production Year	P,E	H	P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Production Month	P,E	H	P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Lease-Production-Status-Code			P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Operator			E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Oil Transporter			E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Gas Gatherer Number			E									P,E																			P,E									
Producing Oil Wells	P,E	H	P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Producing Gas Wells	P,E	H	P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Shut-in - Oil - Wells	P,E	H	P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Shut-in - Gas - Wells			P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Oil Well Days Producing	P,E	H	P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Gas Well Days Producing			P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Gas Well Days Producing			P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Beginning Inventory Oil	P,E	H	P,E			P,E			P,E		H																			P,E										
Oil Quantity	P,E	H	P,E			P,E			P,E		H																			P,E										
Oil Produced	P,E	H	P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Oil Sold	P,E	H	P,E			P,E			P,E		H	P,E			P,E															P,E										
Oil/Condensate Adjustment			P,E								L																			P,E										
Oil/Condensate Adjustment Type			P,E								L																			P,E										
Ending Inventory Oil	P,E	H	P,E			P,E			P,E		H																			P,E										
Oil Production Report Status	P,E	H	P,E			P			P		L	P,E			P,E			P,E												P,E										
Gas BTU			P,E			P			P		L																			P,E										
Gas Produced	P,E	H	P,E			P,E			P,E		H				P,E			P,E												P,E										
Gas Flared			P,E			P,E			P,E		H	P																		P,E										
Gas Used on Lease			P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Gas Sold			P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Gas Plant Shrinkage			P,E			P,E			P,E		H																			P,E										
Gas Production Report Status			P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Water Produced	P,E	H	P,E			P,E			P,E		H	P,E			P,E			P,E												P,E										
Water Disposition Facility						P,E			P,E		H	P			P,E			P,E												P,E										
Production Comment Code	P,E	H										P,E			P,E			P,E												P,E										
User ID									P			P,E			P		E	L												P,E										
Date Stamp												P,E																			P,E									
6.4.5	CONSERVATION TAX																																							
Report - Year	P,E	H													P		E	H																						
Report Period	P,E	H													P		E	H																						
Well - Number	P,E	H													P		E	H																						
Payor - Number															P		E	H																						
Product - Type															P		E	H																						
Product - Sub - Code															P		E	H																						
Gas - Pressure - Base															P		E	H																						
Volume - Sold	P,E	H													P		E	H																						
Dollar - Amount - Sold															P		E	H																						
Federal - Exemption															P		E	H																						
State - Exemption															P		E	H																						
Indian - Exemption															P,E		E	H																						
Other - Exemption															P		E	H																						
Adjustments	P,E	H													P		E	H																						
Tax - Rate	P,E	H													P		E	H																						
Dollar - Amount - Mill - Levy - Received	P,E	H													P		E	H																						
Receipt - Number	P,E	H													P		E	H																						
Date - Received	P,E	H													P		E	H																						
Report - Status	P,E	H													P		E	H																						
User - ID															P		E	H																						
Date - Stamp															P																									

MODULE NO 6 DATA ELEMENTS MODULE

6.3	LUC AND RISK BASED DATA ELEMENTS	UTAH				WEST VIRGINIA				WYOMING			
		P	S	D	P	S	D	P		S	D	P	
6.3.1	Inventory												
	Date Form Update		P,E		L	P	P	L		P		L	
	State		P,E			P,E				P		L	
	County		P,E			P,E				P,E		H	
	Class of Well		P			P,E				P,E			
	Type of Injection Well		P,E			P,E				P,E		H	
	Field Name		P,E			P,E				P,E		H	
	River Basin Name				L	P,E				P		L	
	Finds Number				L					P		L	
	Permit Number		P,E			P,E				P,E		H	
	Rule Authorized?		P			P,E						L	
	Federal Land?	L	P,E							P,E		H	
	Type of Ownership		P,E							P,E		H	
	Indian Land?	L	P,E							P,E		H	
	Commercial Facility Well?				L								
	Entity that Location Refers to		P			P						L	
	Method by which Location Determined		P			P						L	
	Accuracy of Location					P						L	
	Latitude	H				P,E				P,E		L	
	Longitude	H				P,E				P,E		L	
	Legal Contact Code	L	E			P,E				P,E		H	
	Owner Name	L	P,E			P,E				P,E		H	
	Owner Organization	L	P,E			P,E						L	
	Owner Address	L	P,E			P,E						L	
	Owner City	L	P,E			P,E						L	
	Owner State	L	P,E			P,E						L	
	Owner Zip	L	P,E			P,E						L	
	Owner Phone		P,E			P,E				P,E		H	
	Operator Name		P,E			P,E				P,E		H	
	Operator Organization		P,E			P,E				P,E		H	
	Operator Address		P,E			P,E				P		L	
	Operator City		P,E			P,E				P		L	
	Operator State		P,E			P,E				P		L	
	Operator Zip		P,E			P,E				P		L	
	Operator Phone		P,E			P,E				P		L	
	Date Well Drilled		P,E			P,E				P,E		H	
	Date First Injection		P,E			P,E				P,E		H	
	Surface Elevation		P	P,E	L	P,E				P,E		H	
	Total Depth	H	P,E			P				P,E		H	
	Plug Back Total	H	P,E			P				P,E		H	
	Packer?	H	P,E			P,E				P,E		H	
	Packer Depth	H	P,E			P,E				P,E		H	
	Surface Casing Depth	H	P,E			P,E				P,E		H	
	Surface Casing Cemented?	H				P,E				P,E		H	
	Long String Casing/Uner Depth	H	P,E			P,E				P,E		H	
	Long String Casing/Uner Cemented?	H				P,E				P,E		H	
	Tubing Depth	H	P,E			P,E				P,E		H	
	Injection Zone Top	H	P,E			P	E	H		P,E		H	
	Injection Zone Bottom	L	P,E			P	E	H		P		L	
	Confining Zone Top	L				P	E	L		P		L	
	Confining Zone Bottom	L				P,E				P,E		H	
	Injection Zone Lithology	L	P,E			P	E	L		P		L	
	Injection Zone Geol Name	L				P	E	L		P		L	
	Confining Zone Lithology	L				P				L		P	
	Confining Zone Geol Name	L								L		P	
	USDW Geologic Names (each separate formation)	L	P	P,E						L		P	
	USDW Lithology (each separate formation)	L	P							L		P	
	Deepest Freshwater (potable) Zone Name	L		P,E		P	E	L		P		H	
	Freshwater Zone TDS	L		P,E		P	E	H		P		H	
	Freshwater Zone Top	L		P,E						P		H	
	Freshwater Zone Bottom	L		P,E						P		H	
	Lower-Moist USDW Name	L		P,E						P		H	
	Lower-Moist USDW Top	L		P,E						P		H	
	Lower-Moist USDW Bottom	L	P	P,E	H		E	H		P		H	
	Lower-Moist USDW Thickness	L			L		E	H		P		H	

MODULE NO 6 DATA ELEMENTS MODULE

	UTAH				WEST VIRGINIA			WYOMING		
	P	S	D	P	S	D	P	S	D	P
Lower-Most LSDW TDS			E	L			L	P		H
Depth to 3,000 mg/TDS			E	L			L	P		L
Intervening Thickness	L		E	L			L	P		L
Injection Zone is Exempted Aquifer?	L	P	P,E	L			L	P,E		H
EPA Region	L			L	P		L	P		L
District				L	P,E		L	P		L
Facility Identifier				L	P,E		L			
API Number	H	P,E			P,E		H	P,E		H
Section, Township, Range		P,E						P,E		H
Well Located in Wellhead Protection Area?	L		P,E	L	P	E	H	P		L
Number of Public Water Supply Wells in AOR	L		E	H	P	E	H	P		L
Owner Contact Name	L			L	P,E			P		L
Operator Contact Name				L	P,E			P		L
Type of Construction, Conventional/Non Conventional		P,E	P,E		P,E			P		L
Annulus Fluid	L	P	P	L	P	E	H	P		L
Surface Casing Diameter		P,E			P,E			P		L
Surface Casing Grade	L	P	P		P	E	L	P		L
Surface Casing Type		P	P		P		L	P		L
Intermediate Casing Diameter		P,E			P,E			P		L
Intermediate Casing Grade		P	P		P	E	L	P		L
Intermediate Casing Type		P	P		P		L	P		L
Long String Casing/liner Diameter		P,E			P,E			P		L
Long String Casing/liner Grade		P	P		P	E	L	P		L
Long String Casing Type		P	P		P		L	P		L
Tubing Diameter		P,E			P,E			P		L
Tubing Grade		P	P		P	E	L	P		L
Injection Zone Chemistry*					P	E	L			
Monitoring Well Chemistry*					P	E	H			
Packer Type*										
Tubing Type*										
Cathodic Protection	L	P	P		P	P	L			
Completion Type	L	P,E	P,E		P			P,E		H
Injection Zone Permeability	L	P	P	L	P	E	H	P		L
Injection Zone Effective Porosity	L	P	P	L			L	P		L
Injection Zone Fracture Pressure	L	P	P,E	L			L	P,E		H
Confining Zone Permeability	L			L		E	H	P		L
Confining Zone Effective Porosity	L			L			L	P		L
Confining Zone Fracture Pressure	L			L			L	P		H
Other Confining Zone Lithology	L			L		E	H	P		L
Other Confining Zone Geologic Name	L			L			L	P		L
							L			
6.3.2 PERMIT TRACKING										
Type Well Permit, Individual or Area?		E			P,E			P,E		L
Type Well Permitted, Converted/Now?		P,E			P,E			P,E		L
Number of Wells Under Area Permit		P,E			P,E			P,E		L
Application Date		P,E			P,E			P,E		L
Date Permit Issued		P,E			P,E			P,E		L
Date Permit Effective		P,E			P,E			P,E		L
Date Permit Denied		P,E			P,E			P		L
Date Permit Withdrawn		P,E			P,E			P		L
Date Permit Modified		P,E			P,E			P,E		H
Type of Permit Modification		P			P,E			P,E		L
Maximum Allowable Injection Pressure		P,E			P,E			P,E		H
Maximum Allowable Flow Rate		P,E			P,E			P,E		L
Frequency of Recording Injection Data		P			P,E			P		L
Total AOR Wells, Abandoned	H,L	P,E			P,E			P,E		L
Total AOR Wells, Other	H,L	P,E			P,E			P,E		L
Number Defective AOR Wells--Abandoned	H,L	P,E			P,E			P,E		L
Number of Defective AOR Wells--Other	H,L	P,E			P,E			P,E		L
Number AOR Wells Needing Corrective Action--Abandoned		P,E			P,E			P,E		L
Number AOR Wells Needing Corrective Action--Other		P,E			P,E			P,E		L
Number Wells Penetrating Injection Zone in AOR--Abandoned	H,L	P,E			P,E			P,E		L
Number Wells Penetrating Injection Zone in AOR--Other	H,L	P,E			P,E			P,E		L
Radius of AOR	L	P			P,E			P		L
Date of Corrective Action	L	P,E			P,E			P,E		H
Type of Corrective Action	L	P,E			P,E			P,E		H
Date Corrective Action Complete	L	P,E			P,E			P		L

MODULE NO 6 DATA ELEMENTS MODULE

	P	UTAH			P	WEST VIRGINIA			P	WYOMING		
		S	D	P		S	D	P		S	D	P
Frequency of MIT Tests		P.E				P.E				P.E		H
Financial Responsibility, Type of		P.E				P.E				P.E		L
Financial Responsibility, Coverage		P.E				P.E				P.E		L
Financial Responsibility, Blanket?		P.E				P.E				P.E		L
No. of Wells Under Blanket Bond		P.E				P.E				P.E		L
Financial Responsibility Expiration Date		P.E				P	P	L				
Financial, Date Last Reviewed		P										
Guarantor Name		P.E				P.E				P.E		H
Guarantor Address		P				P.E				P		L
Guarantor City		P				P.E				P		L
Guarantor State		P				P.E				P		L
Guarantor Zip Code		P				P.E				P		L
Guarantor Phone		P				P.E				P		L
6.3.3 INSPECTION AND OPERATION												
Date of Inspection	H	P.E				P.E				P.E		H
Type of Inspection	H	P.E				P.E				P.E		L
Complaint Resolution	H	P.E				P.E				P		L
Emergency Resolution	H	P.E				P.E				P		L
Violation Discovered? Y/N	H	P.E				P.E				P		H
Type of Violation?	H	P.E				P.E				P		H
Operator Notified of Violation in Field?	L	P.E				P.E				P		H
Action Taken	H	P.E				P.E				P		H
Both Parts MIT Completed? Y/N	L	P				P.E				P.E		H
MIT Passed? Y/N		P.E				P.E				P.E		H
Date of Last MIT		P.E				P.E				P.E		H
Last MIT Passed?		P.E				P.E				P.E		H
Date of Leak Test		P.E				P.E				P.E		H
Leak Test Pressure		P.E				P.E				P.E		H
Leak Test Duration	L	P.E				P.E				P		L
Did Operator Conduct Pre-test	L				L	P	E	L		P.E		H
Date of Fluid Migration Test	L	P.E				P.E				P.E		H
Type of Fluid Migration Test	L	P.E				P				P.E		H
Annulus Pressure Monitoring		P				P.E				P.E		H
Minimum Annulus Pressure		P				P	E	L		P.E		H
Minimum Annulus Pressure		P				P	E	L		P.E		L
Last Annulus Pressure Reported?		P				P.E				P		H
Date of Remedial Action	L	P.E				P.E				P.E		H
Type of Remedial Action	L	P.E				P.E				P.E		H
Operating Status		P.E				P.E				P.E		H
Date of Status Effective		P.E				P.E				P.E		H
Date Plugged and Abandoned		P.E				P.E				P.E		H
Maximum Injection Pressure		P.E				P.E				P.E		H
Flow Rate		P.E				P.E				P.E		L
Annual Volume of Injected Fluid	H	P.E				P.E				P.E		H
Injected Volume Units, Gallons/BSL		P.E				P.E				P.E		H
Fluid Type Code		P.E				P.E				P.E		H
6.3.4 ENFORCEMENT/COMPLIANCE TRACKING												
Significant Non-compliance		P				P.E				P.E		L
Method of Determining SNC		P						L		P		H
Date Last Compliance Review					L	P.E				P.E		H
Compliance Review Result					L		E	H		P		L
Date Violation Occurred or Verified		P.E				P.E				P		L
Type of Violation		P.E				P.E				P		H
Date Owner/Operator Notified		P.E				P.E				P		L
Type of Notification		P.E				P.E				P		L
Date Enforcement Action Taken		P.E				P.E				P		L
Type of Enforcement Action Taken		P.E				P.E				P		L
Date Returned to Compliance		P.E				P.E				P		L
Date Penalty Assessed					L	P.E				P		L
Penalty Assessed (\$)					L	P.E				P		
Date Penalty Collected					L	P.E				P		
Penalty Collected (\$)					L	P.E				P		
Date of Failure	H	P.E				P	E	H		P		L
Type of Failure	H	P.E				P	E	H		P		L

MODULE NO 6 DATA ELEMENTS MODULE

		UTAH				WEST VIRGINIA				WYOMING			
		P	S	D	P	S	D	P		S	D	P	
	Cause of Failure	H	P,E			P	E	H		P			L
	Depth of Failure (feet)	H	P			P	E	H		P			L
	Date of Repair	H	P,E			P,E	E	H		P,E			L
	Type of Repair		P,E			P	E	H		P,E			L
	Failure Identification Method	H	P			P	E	H					L
	Failure Comments	H	P,E			P	E	H					L
6.3.5	MECHANICAL INTEGRITY FAILURES												
	Date of Inspection		P,E			P,E				P,E			H
	Type of Inspection		P,E			P,E				P,E			L
	Complaint Resolution		P,E			P,E				P			H
	Emergency Resolution		P,E			P,E				P			H
	Violation Discovered? Y/N		P,E			P,E				P			H
	Type of Violation?		P,E			P,E				P			H
	Operator Notified of Violation in Field?		P,E			P,E				P			H
	Action Taken		P,E			P,E				P			H
	Both Parts MIT Completed? Y/N	L	P,E			P,E				P			H
	MIT Passed? Y/N		P,E			P,E				P,E			H
	Date of Last MIT		P,E			P,E				P,E			H
	Last MIT Passed?		P,E			P,E				P,E			H
	Date of Leak Test		P,E			P,E				P,E			H
	Leak Test Pressure		P,E			P,E				P,E			H
	Leak Test Duration		P,E			P,E				P			L
	Did Operator Conduct Pre-test				L	P							L
	Date of Fluid Migration Test		P,E			P,E				P,E			H
	Type of Fluid Migration Test		P,E			P,E				P,E			H
	Annular Pressure Monitoring		P			P,E				P,E			H
	Maximum Annular Pressure		P				E	L		P,E			H
	Minimum Annular Pressure		P				E	L		P,E			H
	Last Annular Pressure Reported?		P				E	H		P,E			H
	Date of Remedial Action	L	P,E			P,E				P,E			H
	Type of Remedial Action	L	P,E			P,E				P,E			H
	Operating Status		P,E			P,E				P,E			H
	Date Status Effective		P,E			P,E				P,E			H
	Date Plugged and Abandoned		P,E			P,E				P,E			H
	Maximum Injection Pressure		P,E			P,E				P			L
	Flow Rate		P,E			P,E				P			L
	Annual Volume of Injected Fluid	L	P,E			P,E				P,E			H
	Injected Volume Units, Gallons/BBL		P,E			P,E				P,E			H
	Fluid Type Code		P,E			P,E				P,E			H
6.4	PRODUCTION MANAGEMENT AND WELL TRACKING DATA ELEMENTS												
6.4.1	Oil & Gas Well Permit												
	API Number	H	P,E			P,E				P,E			H
	Permit Number		P,E			P,E				P,E			H
	Operator Number		P,E			P	P	L		P,E			H
	Drilling Contractor Number	L				P	P	L		P,E			L
	Mineral Owner	L				P	P	L		P,E			H
	Federal Lease Number	L	P,E			P	P	L		P,E			L
	State Lease Number		P,E			P	P	L		P,E			L
	Type of Well		P,E			P	P	L		P,E			H
	Gas Type (Wet/Dry/Coal/Oil Bed)	L	P,E			P,E				P			L
	Oil/Condensate		P,E										L
	Category (Wildcat/Development)		P,E							P,E			H
	Quarter Quarter		P,E							P,E			H
	Section		P,E							P,E			H
	Township Direction		P,E							P,E			H
	Township Numeric		P,E							P,E			H
	Range Direction		P,E							P,E			H
	Range Numeric		P,E							P,E			H
	Principal Meridian		P,E							P,E			L
	Measured From B/W Section Line		P,E			P	P	L		P,E			H
	Distance From E/W Section Line		P,E			P	P	L		P,E			H
	Measured From N/S Section Line		P,E			P	P	L		P,E			H
	Distance From N/S Section Line		P,E			P	P	L		P,E			H
	Latitude	H		E		P,E				P,E			L

MODULE NO 6 DATA ELEMENTS MODULE

	UTAH				WEST VIRGINIA			WYOMING		
	P	S	D	P	S	D	P	S	D	P
Longitude	H				P,E			P,E		L
Deviation		P,E	E					P,E		H
Bottom Hole Location		P,E	P,E		P	P	L	P,E		H
Well Status		P,E			P,E			P,E		H
Status Date		P,E			P,E			P,E		H
Basin	L	P,E						P		L
Field Number		P,E						P,E		H
Objective Formation Code	H	P,E			P,E			P,E		H
Lease Name		P,E			P	E	L	P,E		L
Lease Number		P,E			P	E	L	P,E		L
Operator Well Number		P,E			P,E			P,E		H
Spacing Order Cause No.		P,E			P	P	L	P,E		H
Spacing Order Order No.		P,E			P	P	L	P,E		H
Number of Acres Drilling Unit		P			P	P	L	P,E		H
Designation of Stand Up/Lay Down Unit		P						P,E		H
NGPA Category	L	P			P,E			P		L
NGPA		P			P,E			P		L
Inspection Status		P,E			P,E			P,E		H
Date Permit Approved		P,E			P,E			P,E		H
Permit Expiration Date		P			P,E			P,E		H
Date Spudded		P,E			P,E			P,E		H
Date Completed		P,E			P,E			P,E		H
Date Permission to Transport Products										
Date First Production Oil	L	P,E			P,E			P,E		H
Date First Sales Gas	L	P,E			P,E			P,E		H
Date PSA		P,E			P,E			P,E		H
PSA Inspection Date	L	P,E			P,E			P,E		H
PSA Inspection	L	P,E			P	E	L	P,E		H
PSA Bond Status	L	P,E			P,E			P,E		H
PSA Bonding Party	L	P,E			P,E			P,E		H
Surface Bond Status	L	P								
Surface Bonding Party	L	P								
Water Disposition Facility Number	L					E	H	P,E		L
Missing Information Letter		P			P	P	L	P,E		L
Missing Information Letter Date		P			P	P	L	P,E		L
Sheduled Code	L									L
Sheduled Date	L									L
Sheduled Pressure	L					E	L			L
Constants		P,E						P,E		H
User Initials								P,E		L
Date Stamp								P,E		L
6.4.2										
COMPLETION REPORT										
API Number		P,E			P,E			P,E		H
Last Date - Confidential					P	P	L	P,E		H
Date Spudded		P,E			P,E			P,E		H
Date - TD - Reached		P			P,E			P,E		H
Well Status		P,E			P,E			P,E		H
Date Completed		P,E			P,E			P,E		H
Deviation - Ground - Level		P,E			P,E			P,E		H
Deviation - Kelly - Bushing		P,E			P,E			P,E		H
True - Vertical - Depth		P			P			P,E		H
Plug - Back - TD		P			P,E			P,E		H
Plug - Back - TVD		P			P			P,E		H
Measured Depth		P			P,E			P,E		H
Directional - Survey		P			P	P	L	P,E		H
Logs Run		P,E			P	P	L	P,E		H
Logs - Received - Date		P,E			P	P	L	P,E		H
Cased		P	P,E		P	P	L	P,E		L
Drill - Stem - Test		P	P,E		P	P	L	P,E		L
Casing Size 1		P	P,E		P	E	H	P,E		H
Casing Depth 1		P	P,E		P	E	H	P,E		H
Hole Size 1		P	P,E		P	E	H	P,E		H
Casing Size 2		P	P,E		P	E	H	P,E		H
Casing Depth 2		P	P,E		P	E	H	P,E		H
Hole Size 2		P	P,E		P	E	H	P		L
Casing Size 3		P	P,E		P	E	H	P		L

MODULE NO. 8 DATA ELEMENTS MODULE

	UTAH				WEST VIRGINIA			WYOMING		
	P	S	D	P	S	D	P	S	D	P
Casing Depth 3		P	PE		P	E	H	P		L
Hole Size 3		P	PE		P	E	H	P		L
Casing Size 4		P	PE		P	E	H	P		L
Hole Size 4		P	PE		P	E	H	P		L
Liner-Slope		P	PE		P	E	H	P		L
Liner-Top		P	PE		P	E	H	P		L
Liner-Bottom		P	PE		P	E	H	P		L
Tubing Size 1		P	PE		P	E	H	P		L
Tubing 1 Measured Depth		P	PE		P	E	H	P		L
Packer 1 Measured Depth		P	PE		P	E	H	P		L
Tubing Size 2		P	PE		P	E	H	P		L
Tubing 2 Measured Depth		P	PE		P	E	H	P		L
Packer 2 Measured Depth		P	PE		P	E	H	P		L
Tapered Tubing		PE	PE		P	E	H	PE		H
Producing Formation 1		PE	PE		P	E	H	PE		L
Producing Formation 1 Top		PE	PE		P	E	H	PE		L
Producing Formation 1 Bottom		PE	PE		P	E	H	PE		L
Producing Formation 2		PE	PE		P	E	H	PE		H
Producing Formation 2 Top		PE	PE		P	E	H	PE		L
Producing Formation 2 Bottom		PE	PE		P	E	H	PE		L
Producing Formation 3		PE	PE		P	E	H	P		L
Producing Formation 3 Top		PE	PE		P	E	H	P		L
Producing Formation 3 Bottom		PE	PE		P	E	H	P		L
Producing Formation 4		PE	PE		P	E	H	P		L
Producing Formation 4 Top		PE	PE		P	E	H	P		L
Production-Method		PE			P	E	H	PE		L
Producing Formation 4 Bottom		PE			P	E	H	P		L
Well-Test-Date		P			P	E	L	PE		L
Hours-Tested		P			P	E	L	PE		L
Cracks-Site		P			P	E	L	PE		L
Flow-Tubing-Pressure		P			P	E	L	P		L
Casing-Pressure		P			P	E	L	P		L
Oil-24-Hour-Rate		P			P	E	L	P		L
Gas-24-Hour-Rate		P			P	E	L	P		L
BSMW								P		L
Gas-Disposition Method								PE		L
Formation Tops (Repeating)		P						P		L
Number of Beds		P			P	E	H	P		L
Top of Cement		P			P	E	H	P		L
Source of Cement		P			P	E	H	P		L
Stage Test Depth		P			P	E	H	P		L
Open Hole		P			P	E	H	P		L
Comments		P						PE		L
User ID								PE		L
Date Stamp								PE		L
8.4.5 COMPANY NAMES AND ADDRESSES										
Company-Number		PE			PE			PE		H
Status		PE			PE			P		L
Company-Name		PE			PE			PE		H
Contact-Name		PE			PE			P		L
Address-First-Line		PE			PE			PE		L
Address-Second-Line		PE			PE			PE		L
City		PE			PE			PE		L
State		PE			PE			PE		L
Zip Code		PE			PE			PE		L
Telephone		PE			PE			P		L
Fax Number	L				P			P		L
Blanket-Surface-Band					PE					L
Blanket-Plugging-Band		PE			PE			P		L
Add Data for General Mailing		PE						PE		L
Operator Y/N		PE						P		L
Monthly Production Reporter Y/N		PE						P		L
Producer Y/N		PE			P			P		L
Transporter Y/N		PE						P		L
Gatherer Y/N		P						P		L
Conservation-Lary-Paper Y/N	L							PE		V

MODULE NO 8 DATA ELEMENTS MODULE

		UTAH			WEST VIRGINIA			WYOMING			
		P	S	D	P	S	D	P	S	D	P
	Injection Well Operator Y/N		P,E			P,E			P,E		H
	Pit Operator Y/N		P,E			P			P		H
	Drilling-Contractor Y/N	L	P			P			P		L
	General Mining Unit Y/N								P,E		H
	Comments								P		L
	Date Stamp								P,E		L
844	PRODUCTION ACCOUNTING										
	Lease Number		P,E						P,E		H
	Production Year		P,E			P,E			P,E		H
	Production Month		P,E						P,E		H
	Lease-Production-Status-Code		P,E						P,E		H
	Operator		P,E						P,E		H
	Oil Transporter		P,E								
	Gas Offshore Number		P,E								
	Producing Oil Wells		P,E			P,E			P,E		H
	Producing Gas Wells		P,E			P,E			P,E		H
	Shut-in-Oil-Wells		P,E						P,E		H
	Shut-in-Gas-Wells		P,E						P,E		H
	Oil Well Days Producing	L	P,E			P,E			P,E		H
	Gas Well Days Producing	L	P,E			P,E			P,E		H
	Gas Well Days Producing	L	P,E			P,E			P,E		H
	Beginning Inventory Oil		P,E								
	Oil Gravity		P						P,E		H
	Oil Produced		P,E			P,E			P,E		H
	Oil Sold		P,E						P,E		H
	Oil/Condensate Adjustment		P								
	Oil/Condensate Adjustment Type		P								
	Ending Inventory Oil		P,E								
	Oil Production Report Status		P								
	Gas BTU		P,E			P,E			P,E		L
	Gas Produced		P,E			P,E			P		H
	Gas Flared		P,E			P			P		L
	Gas Used on Lease		P,E			P			P		L
	Gas Sold		P,E						P,E		H
	Gas Plant Shrinkage	L	P						P,E		H
	Gas Production Report Status		P,E						P,E		H
	Water Produced		P,E			P,E			P,E		H
	Water Disposition Facility		P,E			E	E	H		P	L
	Production Comment Code										
	User ID								P		L
	Date Stamp										
848	CONSERVATION TAX										
	Report-Year					P,E			P		L
	Report Period								P,E		H
	Well-Number								P,E		H
	Payor-Number								P,E		H
	Product-Type								P,E		H
	Product-Sub-Code										
	Gas-Pressure-Base										
	Volume-Sold								P		H
	Dollar-Amount-Sold								P	E	L
	Federal-Exemption									E	L
	State-Exemption									E	L
	Indian-Exemption								P	E	L
	Other-Exemption									E	L
	Adjustments								P	E	L
	Tax-Rate					P,E			P	E	L
	Dollar-Amount-MIS-Lazy-Resolved					P,E			P	E	L
	Receipt-Number								P	E	L
	Date-Received					P,E				E	L
	Report-Status								P,E		L
	User-ID								P,E		L
	Date-Stamp								P		L

Appendix C

Listing of the EPA's Guidance on the Mandatory and Suggested Minimum Data Set for State Class II UIC Programs

Table 1

**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Mandatory Data Elements		
Date Form Updated	The Last Date that the form was updated	
State	Any of the 50 States, plus the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, The Trust Territory of the Pacific Islands, and the Commonwealth of Northern Mariana Islands, or an Indian Tribe treated as a State. Expressed In FIPS Code.	
County	County, parish, or similar jurisdiction in which the injection well is located expressed in FIPS code.	
Well Identifier	Any identifier unique to each individual well in the United States.	
Class	Classification of Injection well: Class I, II, III, IV, or V	
Type	Coded description of the type of injection well.	
Field Name	Name, pool, or code of the well-field (general area underlain by one or more underground reservoirs containing a common accumulation of oil and gas, or both, but not including a gas storage reservoir) in which the injection well is located.	The definition confuses a field with a pool, which are not the same.

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
FINDS Number	An EPA identification code for an individual well that is issued by the Office of Information Resources Management's Facility Index Data System.	We are unaware that the EPA's Office of Information Resources Management assigns a unique FINDS number to every individual Class II injection or production well. We are also unaware of the significance of a FINDS number. We also know of no state that maintains FINDS numbers for individual wells? Why is this a mandatory data element?
Permit Number	A unique number commonly used to identify an individual or area permit or a rule-authorized well for its operation under the UIC program.	
Rule Authorized?	Indicate whether the injection well is authorized to operate without a permit?	
Federal Land?	Indicate whether the injection well is located on Federally-owned land?	We are assuming that this means surface land and does not include mineral rights.
Ownership	Coded description of the type of ownership for the well.	We are unclear as to the intent or purpose of this data element.
Indian Land?	Indicate whether the injection well is located on Indian land as defined by 40 CFR Section 144.	
Commercial Facility?	Indicate whether the well is located in a commercial facility?	We are assuming that the intention of this data element is define if the well is operated commercially. For instance, a non-commercial well may exist within the boundaries of a "Commercial Facility".

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Description	Textural description of the entity to which the latitude/longitude coordinates refer (e.g., entrance to facility, wellhead, etc.).	
Method Of Collection	Coded description of the method by which the location of the well was obtained.	Has the EPA developed a standard coding system?
Accuracy	Level of confidence in the location or the amount of error imparted by the method used to determine location.	Does the EPA have a defined standard accuracy definition?
Latitude	Standard	
Longitude	Standard	
Legal Contact	Indicate whether the legal contact is the owner or the operator of the well.	To our knowledge, the operator of the well is always the legal contact for a Class II injection well. However, the operator may or may not be the owner in entirety. Wells may be owned by multiple organizations/individuals.
Name	Names of the owner and operator of the injection well, facility, or activity subject to regulation under the UIC program.	What is the purpose of maintaining the name and other associated information on the owner? This is not typically done by states implementing Class II UIC programs.
Organization	The organizations or companies of the owner and operator	See above
Address	Addresses of the owner and operator	See above
City	Cities of the owner and operator	See above
State	States of the owner and operator	See above

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Zip Code	Zip Code of the owner and operator	See above
Phone	Phone numbers of the owner and operator	See above
Date Well Drilled	Date well construction and drilling completed	Although this may seem easily apparent, it is not. Is it the intention to determine the original completion date or the date the well was converted to a Class II well. Additionally, the name of the data element is confusing. We suggest it be called "DATE WELL COMPLETED". If one was not reading the EPA definition, the name might imply the Spud Date.
Date First Injection Began	Date first injection into well occurred	Multiple dates may need to be maintained depending on how much a well has been converted. Is the intention to track the most recent first injection following the most recent recompletion or in-place permit?
Surface Elevation	Elevation of the ground surface from mean sea level (ft)	
Total Depth	Total drilled depth of the well, measured to the bottom of the well (ft).	Recognize that this may not be the true vertical depth of the hole. A separate data element will need to be maintained for TVD.
Plug Back Total Depth (PBSD)	Current total depth of the well after recompletion or plugging back (ft)	See above
Packer?	Indicate whether a packer(s) is being used on the injection pipe/tubing.	

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Packer Depth	Depth at which the packer is set.	See above
Surface Casing Depth	Depth in feet to the bottom of the well's first string of casing that has been lowered into a borehole to support the sides of the hole, prevent walls from caving, prevent loss of drilling mud or gas into porous ground, or prevent fluid migration.	The first string of casing could be interpreted to be the conductor pipe. The conductor pipe will be tracked as a separate data element. Also, today, the main purpose of surface casings are to protect fresh water supplies.
Surface Casing Cemented?	Indicate whether adequate cement has been placed behind the surface casing from the bottom of the string to the ground surface?	What is intend by the word "adequate"? Most states will require certain thicknesses of cement be used on a quantitative basis only. We know of no Primacy State or EPA DI State that actually qualitatively evaluates the adequacy of cement. We assume that is will be sufficient to track cement quantities on a quantitative basis.
Intermediate Casing Depth	Depth in feet to the bottom of the casing that is permanently installed and run after setting the surface casing and prior to setting the production/long string or liner.	
Intermediate Casing Cemented	Indicate whether adequate cement has been placed behind the intermediate casing string.	See above. In some areas of the country, wells may have multiple intermediate casings.
Long String Casing/Liner Depth	Depth in feet to the bottom of the casing string or liner that is permanently installed through or to the injection zone and that is run into a borehole to support the sides of the hole, prevent the walls from caving, prevent loss of drilling mud or gas into porous ground or prevent fluid migration. Commonly referred to as the "production casing" or "injection casing".	

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Long String Casing/Liner Cemented	Indicate whether adequate cement has been placed behind the long string/production casing?	See above
Tubing Depth	Depth in feet to the bottom of the tubing that is used to convey the injection fluid.	
Injection Zone From	Depth in feet to the top of the permitted injection zone.	There may be multiple injection and confining zones.
Injection Zone To	Depth in feet to the bottom of the permitted injection zone.	See above.
Confining Zone From	Depth in feet to the top of the confining zone.	This data element is not normally maintained by states. Although, geologic information may be kept in paper files. Also, there may be multiple injection and confining zones.
Confining Zone To	Depth in feet to the bottom of the confining zone.	See above
Injection Zone Lithology	Description of rock materials in the injection zone.	The injection zone may comprise of multiple geologic formations. Therefore, it is often difficult to present a lithologic description. Also, specific details on lithology are often not provided leaving state agency to rely on various other reports/documents.
Injection Zone Geologic Name	Formalized geologic name of the injection zone.	Multiple names may be needed.
Confining Zone Lithology	Description of the rock materials in the confining zone.	Assume lowermost confining zone.
Confining Zone Geologic Name	Formalized geologic name of the confining zone.	Not always provided.

Table 1

**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Lowermost USDW Name	Commonly used name of the lowermost USDW	Not generally provided.
Top Depth of Lowermost USDW	Depth in feet to the top of the lowermost USDW, below which injection occurs.	Not generally provided.
Base Depth of Lowermost USDW	Depth in feet to the base of the deepest groundwater with TDS concentrations of 10,000 mg/l or less.	
Lowermost USDW Thickness	Vertical thickness of rock units from the top to the bottom of the lowermost USDW (ft).	Does this mean the thickness of the lowermost hydraulically connected aquifer in which the 10,000 mg/l interface occurs? The lowermost USDW may not be a single confined aquifer, but could be a group of hydraulically connected aquifers, etc. This data element will be difficult to obtain and is not generally available.
Lowermost USDW TDS	Concentration of total dissolved solids of the lowermost USDW (mg/l).	Assume this means the TDS of the lowermost identifiable aquifer having a TDS of less than 10,000 mg/l.
Intervening Thickness	Vertical thickness of rock units between the base of the lowermost USDW and the top of the injection zone (ft).	
Injection Zone is Exempted Aquifer?	Indicate whether the injection zone meets the criteria of the definition of USDW and has it been exempted according to procedures under 40 CFR Sections 144.7(b) and 146.4.	
Permit Tracking		
Type of Well permit	Coded description of the type of permit	Has the EPA developed a coding system?

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Type of Well Permitted	Coded description of the type of well (e.g., converted, newly drilled, etc.)	See above
Number of Wells Under Area Permit	The number of injection wells which are authorized to operate under an area permit.	
Application Date	Date complete application forms were submitted to regulating authority.	
Date Permit Issued	Date authorization, license, permit or equivalent control document for injection or operation of the injection well was issued.	
Date Permit Effective	Date authorization, license, permit, or equivalent control document became effective	
Date Permit Denied	Date authorization, license, permit, or equivalent control document for injection well was denied.	
Date Withdrawn	Date application for injection well withdrawn by applicant.	
Date Permit Modified	Date permit requirements were modified by regulating authority.	
Type of Permit Modification	Coded description of the action taken to modify or change the permit conditions.	
Injection Pressure	Maximum allowable total load or force per unit area acting on the wellhead during injection that is allowed under permit (psi).	Pressure is normally reported in pounds per square inch - gauge (psig).

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Recording Frequency	Coded description of the frequency that recordings of observations of injection pressure, flow rate, and injection volume are made by the operator in the monitoring program.	
Number of Wells in AOR - Abandoned	Within the AOR, the number of abandoned wells.	Most states do not consider wells that do not penetrate the injection zone and do not require operators to report them.
Number of Wells in AOR - Other	Within the AOR, the number of wells, other than those that have been abandoned.	See above
Number of Defective Wells in AOR - Abandoned	Within the AOR, the number of defective, abandoned wells.	See above.
Number of defective Wells in AOR - Other	Within the AOR, the number of defective wells, excluding those that have been abandoned.	See above
Number of Wells in AOR Needing Corrective Action - Abandoned	Within the AOR, the number of wells that require CA be performed before the injection (operating) permit can be issued.	See above
Number of Wells Needing Corrective Action - Other	Within the AOR, the number of wells, other than those that have been abandoned, that require action be performed to be in compliance with applicable regulations.	See above
Number of Wells Penetrating the Injection Zone in AOR - Abandoned	Within the AOR, the number of abandoned wells that are drilled into or through the injection zone.	
Number of Wells Penetrating the Injection Zone in AOR - Other	Within the AOR, the number of wells, other than those that have been abandoned, that are drilled into or through the injection zone.	

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Radius of AOR	Radius of the AOR in miles.	
Date of Corrective Action	Date a corrective action was begun.	Why is it required to track the date CA was initiated?
Type of Corrective Action	Coded description of a corrective action taken.	Has the EPA developed a coding system for this data element?
Date Corrective Action Complete	Date a corrective action(s) (occurring after the completion of the CA contained in a CA plan) was completed.	
Frequency of MIT Tests	Coded description of the frequency with which a demonstration of MI is conducted.	Internal or external integrity? Unless otherwise noted, we plan to assume this means internal integrity.
Financial Responsibility, Type of Demonstration	Coded description of the mechanism or instrument for providing financial assurance acceptable to the Director of the UIC program.	Has the EPA developed a coding system for this data element?
Financial Responsibility, Amount of Coverage	The dollar amount that is guaranteed by the financial instrument to cover the cost of plugging and abandoning the injection well.	
Financial Responsibility, Blanket Coverage?	Indicate whether surety bond provides coverage for more than an individual well (Y or N)?	
Financial Responsibility, Number of Wells under Blanket Coverage	Indicate the total number of wells (injection, producing, etc.) which are covered under the blanket bond.	

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Financial Responsibility, Demonstration Expiration Date	Date owner/operator's financial coverage for P&A of well expires.	
Financial Responsibility, Date Demonstration Last Reviewed	Date when financial demonstration was last reviewed to meet requirements for proper P&A of the well.	
Guarantor Name	Name of the authorized third party that provides a guarantee of the availability of a specified amount of funds for plugging of the well.	
Guarantor Address	Legal address of the guarantor.	
Guarantor City	City of the guarantor.	
Guarantor State	State of the guarantor.	
Guarantor Zip Code	Zip code of the guarantor.	
Guarantor Phone	Telephone number of the guarantor.	
<i>Inspection & Compliance</i>		
Date of Inspection	Date inspection occurred.	
Type of Inspection	Coded description of the type of inspection conducted: Routine/Periodic, Plugging Witnessed, Construction, MIT Witnessed, Pre-operation, Compliance, Complaint response, or other.	Has the EPA developed a coding system for this data element?
Compliant Resolution	Any method or action taken to resolve a complaint.	

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Emergency Resolution	Any method or action taken to resolve the emergency.	
Violation Discovered/Present	Indicate whether violation or potential violation was detected during an inspection?	
Action Taken	Coded description of the type of action taken during or after the inspection upon the detection of a violation or potential violation.	Has the EPA developed a coding system for this data element?
Both Parts of MIT Completed?	Indicate whether both parts of a MIT have been conducted and completed for the well?	If we track if/when the internal and external MIT (i.e., parts 1 and 2) were completed, what is the purpose of tracking if both were completed? This appears to be a duplication.
MIT Retests?	Indicate whether the present test(s) conducted is a second test, a repeat test, or a follow-up test because a previous test indicated under DATE OF LAST MIT failed?	
Date of Last MIT	Date the last MIT (both parts) was conducted?	
Last MIT Passed	Indicate whether the well passed both parts of its last MIT?	
Date of Leak Test	Date the well failed or passed a test to evaluate the presence/absence of significant leaks in the well.	
Type of Leak Test	Coded description of the Type of leak test conducted: Annulus monitoring, Casing/tubing pressure test, Monitoring record review, Ada pressure test, or other test for significant leaks or an alternate integrity test used to prove the significant leak part of the MIT.	Has the EPA developed a coding system for this data element?

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Date of Fluid Migration Test	Date the well failed or passed a test to determine the presence/absence of significant fluid movement through vertical channels adjacent to the injection wellbore.	
Type of Fluid Migration Test	Coded description of the type of fluid migration test conducted: Cement record review, Temperature/Noise log, RTS, or other test for fluid movement or an alternate integrity test used to prove the fluid movement part of mechanical integrity.	Both the Internal and external parts of MI are based upon fluid movement. Has the EPA developed a coding system for this data element?
Date of Remedial Action	Date remedial action on the well was completed.	
Type of Remedial Action	Coded description of the type of remedial action completed: Casing/Cement, Tubing/Packer, P&A, Shut-in, or other remedial action(s) to correct deficiencies such as repair/replacement of screen or liner, resetting of tubing and packer, additional permit conditions, or additional testing.	Has the EPA developed a coding system for this data element?
Operating Status	Coded description of the current operating status of the injection well.	See above.
Date Status Effective	Date the well's current operating status became effective.	
Date Plugged and Abandoned	Date P&A of the well was completed.	
Maximum Injection Pressure	Maximum total load or force per unit area acting on the wellhead during injection for a given reporting period (psi).	Units should be either psig or psia. Simply providing units in psi is improper.

Table 1

**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Annual Volume of Injected Fluid	The total volume of injection fluid that was injected through the well during the reporting year (GALS or BBLS).	Although this information is recorded in some states (e.g., North Dakota), in the vast majority of states, this information is not maintained with great accuracy and is generally a rough estimate. Therefore, using a unit of gallons, which is not a standard oilfield unit, would be inappropriate as best.
Volume Measured In	Indicate whether the ANNUAL VOLUME OF INJECTED FLUID is expressed in gals or bbls.	See above
Fluid Type	Coded description of the general chemical characteristic of the injected fluid.	The specific compounds submitted by operators on injection fluid varies greatly nationwide and even within states. This is an element that is not greatly utilized by states for UIC program implementation. What level of detail is desired (i.e., TDS, Chlorides, pH, other)? Does EPA have a standard coding system for this element.
<i>Enforcement/Compliance Tracking Data Elements</i>		
SNC?	Indicate whether non-compliance identified is significant as determined by UIC program guidance No. 58 (September 9, 1987) and Memorandum titled "UIC Program Definition of Significant Noncompliance," (December 4, 1986)?	
Date of Last Compliance Review	Date of the last compliance technical review of well record to determine whether well was in compliance with regulatory requirements.	Compliance reviews were previously known as file reviews. No other comment.

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Compliance Review Result	Indicate whether the well passed for failed the last compliance review.	
Date Violation Occurred or Verified	Date a violation occurred, if known; otherwise, the date that the existence of a violation was verified through a field inspection or other method of review.	
Type of Violation	Coded description of the violation: Unauthorized injection, MI, Pressure and/or Rate, P&A, Violation of Formal Enforcement Order, Falsification, O&M, other permit violation, Casing and cementing, monitoring and reporting, USDW contamination, financial responsibility, or any other type of violation that does not fit into the previous categories.	Has EPA developed a coding system for this data element?
Date Owner/Operator Notified	Date owner/operator was notified of well violation/noncompliance.	
Type of Notification	Coded description of the notification of noncompliance/violation given to owner/operator.	Has EPA developed a coding system for this data element?
Date of Enforcement Action	Date a final enforcement action was issued.	
Type of Enforcement Action	Coded description of the type of enforcement action taken: Administrative Order, Unilateral Order, Consent Order, Pipeline Severance, Shut-In, Other Administrative Order, Judicial Order, Consent Decree, Criminal Referral, Civil Referral, Other Judicial Order, Notice of Violation, Field Inspection, Show Cause Meeting, Consent Agreement, Commence Bond Forfeiture, Other Informal Action.	See above

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Date Returned to Compliance	Actual Date (as opposed to the scheduled date) that a scheduled event was completed/report was received, date when compliance was achieved.	
Date Penalty Assessed	Date a penalty was assessed to the owner/operator of injection well in violation/noncompliance.	
Penalty Assessed (\$)	Dollar amount assessed in the final enforcement action.	
Date Penalty Collected	Date the penalty was collected by regulating authority from the owner/operator of the injection well in violation/noncompliance.	
Penalty Collected (\$)	Dollar amount collected in the final enforcement action.	
Suggested Data Elements		
<i>Inventory</i>		
EPA Region	EPA Region in which the injection well is located.	
District	An administrative or potential division of land area used for program purposes in the location of an injection well.	
Facility Number	An identification code used to identify injection facility. See definition of facility.	Class II injection wells are generally not associated with a "Facility".
API Well Number	An identification code unique to each well in the US, issued by the API.	RBDMS will use the API well number as the unique well identifier. The API well number is not issued by the API.

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Section	A partition of a township, occupying 1 square mile. There are 36 sections within each township. Sections may be further divided into quarter sections, quarter-quarter sections, quarter-quarter-quarter sections, etc.	The standard location provided for Class II injection and producing wells is section, township, range in most states. RBDMS will use both S,T,R and Latitude/Longitude.
Township	An area of land occupying approximately 36 square miles and numbered north and south of a baseline.	See above
Range	A single series or row of townships, each 6 miles, extending parallel to a numbered east and west from a survey base meridian line.	See above
Well Located in Wellhead Protection Area	Indicate whether the injection well is located in a wellhead protection area?	What is the purpose of this data element.
Number of Public Water Supply Wells within AOR	The number of public water supply wells located within the AOR of the injection well.	Many states do not consider wells that do not penetrate the injection zones in the AOR.
Contact Name	Name of the persons representing the owner and operator and serving as a contact to EPA or state UIC program for the injection well.	

Table 1

**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Type Construction	<p>Coded description of the manner in which the well is built and completed:</p> <p><i>conventional completion:</i> An injection well completed with: 1) surface casing set and cemented through the USDWs; 2) sometimes intermediate casing; 3) long-string casing which extends from the surface to or through the injection interval; 4) long-string casing/borehole annulus which has been cemented either partially or to the surface; and 5) injection tubing and packer set above the injection zone.</p> <p><i>Unconventional Completion:</i> An injection well that is not constructed with the basic characteristics of the conventional completion type. Major types include: 1) slimhole completions; 2) tubingless completions; 3) packerless completions; 4) dual completions; 5) open-hole completions.</p>	<p>The definition provided for conventional and nonconventional wells is inconsistent with the standards used for most states. This data element also appears unnecessary.</p>
Annulus Fluid	<p>Coded description of any number of fluids placed between adjacent well casings to provide hydraulic control and to inhibit corrosion.</p>	<p>This information is not generally tracked by states and not generally reported by operators. What is the purpose of maintaining this data elements and is it significant.</p>
Surface Casing Diameter	<p>Outer diameter of the surface casing (in).</p>	
Surface Casing Grade	<p>Coded description of the grade of the surface casing material, as specified by the API.</p>	<p>Generally, casings are designed to consist of multiple grades of casing. This information is not generally submitted to a regulatory agency, nor is it required.</p>

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Intermediate Casing Diameter	Outer diameter of the intermediate casing (in).	
Intermediate Casing Grade	Coded description of the grade of intermediate casing material.	See above
Long-String Casing/Liner Diameter	Outer diameter of the long-string casing (in).	
Long-String Casing/Liner Grade	Coded description of the grade of the long-string casing material.	See above
Tubing Diameter	Outer diameter of the injection tubing (in).	
Tubing Grade	Coded description of the composition and strength of the tubing material according to API grading schedules.	See above.
Completion Type	Coded description of the type of bottom hole completion method that allows fluids to exit the injection tubing and to enter the disposal formation or injection zone.	Has EPA developed a coding system for this data element?
Injection Zone Permeability	Capacity of injection zone to conduct or transmit fluids (md).	An injection well may include multiple injection and confining zones.
Injection Zone Effective Porosity	Ratio of the volume of pores in the injection zone to the total injection zone volume (%).	See above.
Injection Zone Fracture Pressure	Pressure at which fractures are initiated in the injection zone (PSI).	See above.
Confining Zone Permeability	Capacity of confining zone to conduct or transmit fluids (md).	See above.

Table 1**EPA Minimum Data Set
Mandatory and Suggested**

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Data Element	EPA Description	Comment or Insufficiency
Confining Zone Effective Porosity	The percentage of void space available for fluid movement.	See above.
Confining Zone Fracture Pressure	Pressure at which fractures are initiated in the confining zone (psi) at surface.	See above.
Other Confining Zone Lithology	Description of rock materials in the other confining zones.	See above.
Other Confining Zone Geologic Names	Formalized geologic names of the other confining zones.	
Other Confining Zones Total Thickness	Total thickness of all other confining zones (ft).	
Injection Interval, Top	Depth in feet to the top of the currently completed interval.	
Injection Interval, Bottom	Depth in feet to the bottom of the currently completed interval.	
Injection Interval, Net Feet	Thickness of the injection interval: 1) the top to the bottom of the open hole in an open hole completion; or 2) the top of the uppermost perforation to the bottom of the lowermost perforation in a perforated well completion.	
Depth of 3,000 mg/l TDS	Depth in feet corresponding to groundwater with TDS concentrations of 3,000 mg/l	
Other USDW Names	Names of the USDWs, other than the name of the lowermost USDW listed in the mandatory section.	
Other USDW Depths	Depths to the top of the USDWs, other than the lowermost USDW depth listed in the mandatory section.	

Table 1

**EPA Minimum Data Set
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Data Element	EPA Description	Comment or Insufficiency
Other USDW Thicknesses	Thickness of the USDWs, other than the thickness of the lowermost USDW listed in the mandatory section.	
Other USDW TDS	Concentration of TDS, as determined by use of the method specified in 40 CFR 136, of the USDWs, other than the lowermost USDW TDS listed in the mandatory section.	
Method of Determination TDS	Coded description of the method or procedure used to determine groundwater concentrations of TDS.	Has EPA developed a coding system for this data element?
<i>Permit Tracking</i>		
Application Number	A unique number or identifier for each application for an injection well permit.	
Public Notice Date	Date the public notice concerning the permit issuance for the injection well was published.	
Public Hearing Date	Date the public hearing concerning the permit issuance for the injection well was held, if applicable.	
Permit Term	Length of time for which operation of injection well is authorized, from date of permit issuance (years).	
Technical Review Date	Date the technical review of the permit application was completed by the regulatory agency.	
Expiration Date	Date the authorization to operate the injection well expires.	
Injection Rate	The maximum allowable injection rate during injection that is allowed under the permit.	

Table 1**EPA Minimum Data Set
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Data Element	EPA Description	Comment or Insufficiency
Estimated Plugging Costs	The cost estimated by a drilling or plugging contractor to P&A a well according to UIC program requirements.	
Time Required for Complaint Response	Total length of time EPA or State UIC program took to respond to a complaint.	
Time Required for Emergency Response	Total length of time EPA or State UIC program took to respond to an emergency.	
Date of Last Corrective Action	Date the last physical work to restore the well operation or return the well to compliance with applicable regulations was completed.	
Minimum Injection Rate	Minimum rate at which injection into the well occurred for a give reporting period.	What is the purpose of tracking minimums. Very few Class II wells have continuous flow or pressure recorders leaving this to be an estimate of the operator which generally means that the value of zero (0) is submitted.
Average Injection Rate	Average rate at which injection into the well occurred for a give reporting period.	Recognize that the majority of operators do not implement continuous recorders leaving most average and maximums reported to be estimates from operators.
Maximum Injection Rate	Maximum rate at which injection into the well occurred for a give reporting period.	See above
Minimum Injection Pressure	Minimum pressure acting on the wellhead during injection for a give reporting period.	See minimum injection rate comment, above.
Average Injection Pressure	Average pressure acting on the wellhead during injection for a given reporting period.	See average injection rate comment, above.

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Data Element	EPA Description	Comment or Insufficiency
Minimum Annulus Pressure	Minimum pressure on the well annulus for a given reporting period.	See above
Average Annulus Pressure	Average pressure on the well annulus for a given reporting period.	See average injection rate comment, above.
Maximum Annulus Pressure	Maximum pressure on the well annulus for a given period.	See average injection rate comment, above.
<i>Enforcement/Compliance Tracking</i>		
Compliance Schedule Written?	Indicate whether a compliance schedule based on an actual violation has been written for the injection well?	
Date Compliance Required	Date certain actions were ordered or expected to be completed to comply with the compliance schedule.	
Note: The above table was prepared from the U.S. EPA "UIC Data Management System - Guidance on State Minimum Data Set for Class II Wells", August 17, 1990.		

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