State of New Mexico
Energy, Minerals & Natural Resources Department
Oil Conservation Division

QUALITY MANAGEMENT PLAN

QUALITY ASSURANCE POLICY, PROCEDURE, AND MANAGEMENT SYSTEMS

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

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QUALITY MANAGEMENT PLAN IDENTIFICATION FORM

Document Title: Quality Management Plan for the New Mexico
                           Oil Conservation Division (OCD)

Document Control Number: **QTRAK 12-347**

Organization Title: Energy, Minerals & Natural Resources Department
                           Oil Conservation Division

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Plan Coverage: The plan covers all of the monitoring and measurement activities mandated
                           through U.S. Environmental Protection Agency (EPA) and OCD regulations
                           and memoranda. This includes all intramural and extramural environmental
                           data generated by monitoring activities conducted through OCD program
                           activities, contracts, grants, interagency agreements, and cooperative
                           agreements. This document will provide QA goals and procedures for all
                           environmental measurements funded by or through the OCD.

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1. QUALITY MANAGEMENT AND ORGANIZATION

1.1   New Mexico Oil Conservation Division (OCD) Mission

The OCD has statutory responsibility to regulate surface or subsurface disposition of solid and liquid wastes generated or used in the exploration, production, refinement, processing, transportation and servicing of oil and natural gas in a manner that protects surface waters, ground waters, public health and the environment.

The mission of OCD Environmental Bureau (E.B.) is to monitor and protect the environment to the extent mandated by the Legislature and OCD Rules and Regulations with the tools that are given to it by the Legislature. Environmental impacts from improper underground waste injection can pose a significant risk to human health and the environment. Ongoing policy of the OCD requires establishment of a centrally managed Quality Assurance (QA) Program, which requires the OCD to develop a Quality Management Plan (QMP) for Underground Injection Control (UIC) protective of drinking water and the Clean Water Act. Adherence to the QMP provides for a uniform approach to data generation with the U.S. EPA and those programs funded in whole or in part by grants or contracts with the U.S. EPA and all state supported OCD programs.

In data gathering systems, QA is concerned with all of the field test activities and/or procedures that have an effect on the quality of the data, as well as the methods and techniques to accurately measure and ensure the quality of the data. Environmentally related measurement activities include all field and laboratory procedures that generate data related to the measurement of chemical, physical or biological parameters in the environment; determining the presence or absence of pollutants or hazardous substances; and studies of measurements of pollution transport and potential impacts to drinking water associated with underground injection control.

1.2   Quality Assurance

Quality Assurance (QA) is a management system that evaluates and documents whether decision makers have the quality of information they need to make good decisions. This Quality Management Plan (QMP) establishes policy and program requirements for the conduct of all environmentally related measurements performed by or for this agency.

The goal of the QA program for the OCD is to ensure that all scientific data generated by or for the OCD will be scientifically valid, legally defensible, and of known and acceptable precision and accuracy. This goal will be achieved by adhering to the following QA procedures throughout an entire technical study, from planning to data collection and evaluation.

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1.2.1 All scientific data generated by or for the OCD shall be of sufficient quality to withstand scientific and legal challenge. This includes equivalent quality data when obtained through contractors, interagency agreements, cooperative agreements, and programs providing for self-reporting of data by regulated entities.

1.2.2 The intended use of the data shall be determined before the data collection efforts begin to ensure that the necessary level of data quality is obtained or met.

1.2.3 All data produced by or for the OCD shall be of known and acceptable precision, accuracy, representativeness, completeness, and comparability.

1.2.4 All projects of the OCD shall receive adequate funding and staff to support and maintain an acceptable level of QA.

1.3   Total Quality Management

As a matter of policy, OCD is strongly committed to good science, aggressive quality assurance practices and Total Quality Management (TQM). TQM states that those closest to the process should be responsible for the process's quality. Consequently, the OCD UIC Program will strive to maintain a high level of TQM.

1.4   QA Structure

This OCD- Environmental Bureau and its QMP assumes QA responsibility to the OCD Environmental Bureau and the responsibilities of the Quality Assurance Officer (QAO). The system of communication and periodic reporting of QA Program status and needs will be established and maintained within the OCD. This shall include periodic training seminars as deemed necessary with all district field personnel, and reviews of the Scientific Laboratory Division QA program.

It is important that the independence and integrity of the QA Officer be protected within the system by being responsible directly to the appropriate level of management. Management in turn will also respond to identified plans, problem, and needs.

QA operations reporting within the OCD will be ongoing from the QA Officer to upper management while QA operations will be reported to the U.S. EPA regional quality assurance office whenever corrective action is determined to be necessary to assure quality operations. The QA Officer will, with the concurrence of the Environmental Bureau Chief and the Division Director, have responsibility for directing those actions. Figure 1-1 is an organizational chart showing the chain-of-command for quality assurance actions for the OCD.

Figure 1-2 is the organizational chart showing the lines of authority in the OCD.

1.5   Effective Date

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1.6   Scope

As required by Title 40 (Parts 30, 31 and 35) and Title 48 (Part 1546) of the Code of Federal Regulations (CFR), this QMP is submitted to cover the activities of the following programs U.S. EPA grants or contracts, and any other entity performing environmentally related measurements for the OCD:

- Underground Injection Control (U.S. EPA Grant);
- Groundwater Program (U.S. EPA 106 Grants);
- OCD Discharge Plan Program;
- NM Scientific Laboratory Division Contracts;
- Commercial Laboratory Contracts; and
- Compliance Monitoring

1.7   OCD QA Officer

The OCD Quality Assurance Officer (QAO) and his/her support staff will be responsible for the following QA activities (see Section 9 for explanation of these functions):

- Oversight of all data generation through Management System Reviews (MSRs);
- Laboratory audits (multimedia and program specific);
- Developing and teaching courses that train OCD staff in QA topics;
- To provide QA specific technical assistance to our customers;
- To provide technical assistance to our customers in the planning of projects that generate environmental data;
- To provide technical assistance to our customers in the development of environmental laws, rules and regulations; and
- Maintenance of a file system that contains a copy of all the current OCD QAPPs.

1.8   OCD Quality Assurance (QA) Officer

The overall responsibilities of the QA Officer include:

1.8.1   The official OCD point of contact for all QA matters pertinent to OCD programs (U.S. EPA and State Programs). The QAO will report directly to the EB Bureau Chief;

1.8.2   Management of all QA activities within the OCD and extramural entities;

1.8.3   Ensuring that all data gathered for or in part in agreement within the U.S. EPA and those funded in whole or in part by grants or contracts with the U.S. EPA will be of known and acceptable quality with respect to provision, accuracy, representativeness, completeness, and comparability utilizing the Data Quality Objectives (DQOs) method;

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1.8.4   Preparing and submitting for approval all on-going and new project plans for QA adequacy and recommending modifications when necessary. Approval for all plans and modifications will follow the lines of authority as depicted in Figure 1-1 with final approval through U.S. EPA; and

1.8.5   Coordinating OCD participation in QA laboratory evaluation program (e.g. performance evaluation studies, with audit samples, inter-laboratory comparison studies, and periodic on-site inspections of a laboratory's QA system and physical facility).

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2. <u>QUALITY SYSTEM AND DESCRIPTION</u>

The OCD quality system relies on a small Quality Assurance Office and on individuals in the Environmental Bureau and the various OCD Districts to accomplish the Quality Assurance function.

In the OCD quality system each level of the organization has a responsibility to provide to its customers the highest quality products and services possible. Effective oversight of the quality process becomes the responsibility of the customer to assure quality is received from their suppliers. In addition, the OCD will implement a series of technical and managerial audits in order to ensure this effective oversight. Details of the quality assessment methods are found in Section 9 of the QMP.

The OCD Environmental Bureau assumes the lead role for preparation of the OCD QMP, and its periodic update.

2.1   Quality Assurance Functions

The OCD Environmental Bureau Chief or designee shall be responsible for the following QA activities within the Division (see Section 9 for explanation of these functions):

2.1.1   Development and consistent implementation of the necessary QMPs for Division Operations involving collection of environmentally related data, including the Division's intramural and extramural (both grants and contracted) projects;

2.1.2   Concurrence and submission of QMPs to U.S. EPA Region 6 Office of Quality Assurance for approval;

2.1.3   Review and approval of QAPPs for which an approved QMP exists;

2.1.4   Assignment of a QA technical Liaison between the Division and the U.S. EPA Region 6 Office of Quality Assurance;

2.1.5   Providing routine technical guidance to customers on QA requirements;

2.1.6   Maintenance or oversight of a file system that contains a copy of all valid QAPPs;

2.1.7   Participation as a Team Member in Management System Reviews (MSRs), Technical System Audits (TSAs) and other audit/review functions as described in Section 9; and

2.1.8.   Assistance in determining QA needs of the OCD

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2.2   Date Quality Objective (DQO) Process

The Data Quality Objective (DQO) Process is an essential tool to be used in planning all environmental data collection activities. DQOs shall be developed following all applicable U.S. EPA guidance. This QMP requires that DQOs be an essential element of all QAPPs, and contain a mechanism for assuring compliance. This is applicable to activities conducted by contractors. For all enforcement related projects, the OCD Assistant General Counsel will be involved, if necessary, in the DQO development process to assure that evidentiary needs are met.

2.3   QA Project Plans (QAPPs)

U.S. EPA Order 5360.1 requires that every project involving the collection of environmental data must have a written Quality Assurance Project Plan (QAPP) approved prior to initiation of data collection activities.

A QAPP presents, in specific terms, the policies, organization, objectives, functional activities, QA, and quality control (QC) activities designed to achieve the DQOs of a particular project or continuing operation. The typical characteristics of a good QAPP are:

•   Requirements for management and technical audits and a process for correction of deficiencies;

•   Requirement for documenting sampling procedures; and,

•   Definition of specific QC activities.

QAPPs will be written for each project or continuing operation by the QAO. Each QAPP will contain the required elements as identified in Chapter III of the November 1999 Interim Final of EPA QA/R-5, EPA REQUIREMENTS FOR QUALITY ASSURANCE PROJECT PLANS FOR ENVIRONMENTAL DATA OPERATIONS.

QAPPs should provide for the review of all activities, which could influence data quality, and the determination of those operations, which must be covered by Standard Operating Procedures (SOPs). At a minimum, the activities to be included in the SOPs or QAPP and reviewed shall include:

•   General network design;
•   Specific sampling site selection;
•   Specific and analytical methodology;
•   Probes, collection devices, storage containers, and sample additives and preservatives;
•   Special precautions, such as heat, light, reactivity, combustibility and holding time;
•   Federal reference, equivalent or alternate test procedures
•   Instrument selection use;
•   Calibration and standardization;
•   Preventative and remedial maintenance;
•   Replicate sampling;

- Blind and spiked samples;

- Collecting samples;
- Quality control procedures such as intra-laboratory and intra-field activities;
- Intra-field activities;
- Documentation;
- Sample custody;
- Transportation;
- Data handling procedures;
- Service contracts;
- Measurements of provision, accuracy, completeness, representativeness, and comparability;
- Document control; and
- Quality assurance reports.

QAPPs must be prepared in document control format, with provision for revision, as needed, and with a record of the official distribution. All project plans must conform to the guidelines established in the U.S. EPA document U.S. EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations, (EPA QA/R-5, November 1999 Interim Final).

Each QAPP will cite the specific QMP, and its effective date, that it falls under. No QAPP will be submitted to U.S. EPA for approval without an approved QMP, as the QMP is essential for beginning the criteria of a QAPP. Implementation of QAPPs will be evaluated by the OCD, and the U.S. EPA Region 6 OQA will maintain oversight through MSRs, Audits and other means.

2.4   Intramural (In-House) Projects

All OCD QMPs and QAPPs will adhere to the standards outlined by U.S. EPA QA/R-2 (formerly QAMS 004/80) and U.S. EPA QA/R-5 (formerly QAMS 005/80), respectively. The OQA shall evaluate the implementation of these plans through the regional audit program or during MSRs.

2.5   Extramural Projects - Grants, Contracts and Cooperative Agreement

This category includes those projects conducted under state financial assistance programs, such as grants, cooperative agreements, interagency agreements, contracts, etc. The QA Project Plans required of awardees or contractors will be developed consistent with U.S. EPA guidance and regulations and this QMP.

2.6   QA Status Report Requirements - QA Project Plans

For data collection projects expected or planned to be completed within eighteen months, a single QA status (final) report will be submitted at the conclusion of the project. For projects expected or planned to continue longer than eighteen months, an interim QA status report will be submitted every twelve months after data collection begins and at the conclusion of the project. These reports will be submitted to the OQA. The QA report on each project will be

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a separately identified Status Report (both interim and final) addressing as a minimum the following areas:

- QA management (any changes);
- Status of completion of the QA project plan;
- Measures of data quality from the project;
- Significant quality problems, quality accomplishments, and status of corrective actions;
- Results of QA performance audits;
- Results of QA systems audits;
- Assessment of data quality in terms of precision, accuracy, completeness, representativeness, and comparability; and
- Quality Assurance related training.

2.7   Standard Operating Procedures (SOPs)

Standard Operating Procedures (SOPs) will be developed as needed and incorporated into this QMP or the QAPPs. SOPs for functions such as sample collection, preservation and shipment, chain of custody, etc. will be prepared by the OCD Environmental Bureau staff. All SOPs will be reviewed and updated/revalidated on as needed basis. Documentation of reviews will be maintained in the environmental bureau files.

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3.   PERSONNEL QUALIFICATIONS AND TRAINING

3.1   QA Staff Qualifications

The staff members of the OCD Environmental Bureau shall fulfill the educational, work experience and training requirements for their positions, as outlined by the New Mexico State Personnel Office Classification Descriptions (See Appendix B). The Environmental Bureau staff will attend meetings and take courses that enhance their knowledge of QA, the technical aspects of the programs they administer, and environmental field sampling and laboratory analytical methodologies, as time and funds permit.

3.1.1   Quality Assurance Officer: The QA Officer should possess an acceptable knowledge through past education, training, and/or experience of the technical aspects of the QA program within his/her responsibility. The Officer should have as a minimum, a Bachelor of Science degree in one of the physical or environmental sciences or have accumulated at least four years of experience within his/her discipline. Also, the Officer should have laboratory experience and should possess at least a general knowledge of all monitoring and analytical activities in the field and in the laboratory and professional status to deal effectively with project managers and organizational administrators and have an acceptable knowledge of appropriate laws, regulations and environmental monitoring guidelines.

3.1.2   Technical Personnel: Those staff members who procure environmental samples, generate environmental data, or interpret environmental conditions using environmental data should possess at a minimum a Bachelor of Science degree in one of the physical or environmental sciences, or have accumulated at a minimum five years experience in an environmental monitoring profession, or receive sufficient training to compensate for any deficiencies in educational preparation and professional experience.

3.2   QA Training

The following U.S. EPA courses will be attended by the QAO and, if possible, the Environmental staff:

- •   Orientation to Quality Assurance Management;
- •   Data Quality Objectives;
- •   Writing Quality Management Plans (QMP); and
- •   Writing Quality Assurance Project Plans (QAPP).

Training programs will be administered, as necessary, to OCD employees that could be engaged in any data gathering projects. This training may include refresher training, technology transfer and individual training aimed at enhancing the individual's qualifications as well as the OCDs ability to carry out a QA program. This training may include attendance at job related training courses, seminars, workshops, or professional meetings. This training can include instruction which is OCD produced, contract supplied, or promoted by professional associations or other government

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entities. The training for all staff will be documented and documentation retained.

Additionally, each year, OCD maintains training for staff in a state-wide electronic OCD Training Folder (folder): "UIC Program" accessible by all UIC Program Staff state-wide. The folder is organized and linked to OCD Web mail announcements with real-time UIC Program EPA/OCD news, regulatory changes, policies, test methods, etc. maintained in the folder. Information is disseminated via Web mail and hyperlinks to access current information, etc., stored in the OCD folder and sent to the OCD District Supervisors to review and discuss at weekly meetings with UIC Program staff. In addition, the information, etc. is discussed again at monthly state-wide staff "all hands" meetings during the first week of every month to review any new environmental regulations, rules and policies, as well as to provide any updates on sample collection and/or analysis to all personnel as a uniform group to ensure staff continue to maintain their qualifications to administer the UIC Program.

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4. <u>PROCUREMENT OF ITEMS AND SERVICES</u>

The goal of OCD is to obtain and supply goods or services that comply with pre-determined levels of quality, and meet the needs and expectations of the customer. To accurately translate the OCD needs and expectations to the supplier, a contractual document that clearly states those needs and expectations will be executed pursuant to the New Mexico Procurement Codes. The Procurement Code establishes statutory procedures for bid evaluation and awarding and amending contracts. Those goods and services supplied by OCD will comply with the requirements of the QMP.

4.1. Applicability

These requirements apply only to those OCD procurement actions or suppliers who provide services or items, such as sample bottles, chemicals, etc., that directly affect the quality of results or products (i.e., analytical laboratory services, sample collection or sampling plan preparation) for environmental programs.

4.2 QA Requirements

All OCD programs that utilize contractual environmental laboratory services will be let for bid pursuant to the New Mexico purchasing rules. Appendix C contains copies of a typical Request For Proposal (RFP) and of our current price agreement for environmental laboratory services. The RFP and Price Agreement include the requirement that a QA plan be submitted.

All contracts for environmental measurements will be monitored and evaluated pursuant to the QAPP developed for the service. The QAPP will address:

- • Method for ensuring that services comply with the contract conditions;
- • Method for corrective action;
- • Criteria used to evaluate the contract compliance; and
- • Criteria for auditing the contractor facilities.

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5. <u>QUALITY DOCUMENTATION AND RECORDS</u>

All quality assurance documents prepared and submitted by the OCD will be reviewed by the OCD Management as outlined in Figure 1-1. Additionally, quality assurance plans will be required of the Scientific Laboratory Division and of any contract services, which are to be paid with grant funds. These will be reviewed and approved, then filed after action in a central Environmental Bureau file room.

5.1   Record Maintenance

All quality assurance documents or records will be filed after action in a central Environmental Bureau file room. The documents will be maintained under the supervision of the Environmental Bureau. The records will be maintained for the period required in the New Mexico State Record Center Record Retention Schedule. Special care will be taken to preserve the integrity of sensitive documents such as audit and performance reports. This care shall include security.

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6. **DATA PROCESSING SYSTEM** (Computer Hardware and Software)

6.2   Environmental Database

  The OCD is currently utilizing the Risk Based Data Management System (RBDMS) to store and maintain environmental data pertaining to field sites. All of the OCD district offices are using the same system. Through the use of SQL Server, the remote systems are fully integrated.

6.2   Computer Hardware and Software

Quality Specifications for computer hardware and software systems is maintained under the New Mexico Energy, Minerals and Natural Resources Department (ENMRD) Information Technology Office (ITO) Information Technology (IT) Plan. The IT Plan is a comprehensive plan that addresses, management roles and responsibility, user requirements, purchasing and evaluation of hardware and software, security, resource management requirements, data handling, training, disaster recovery and loss/damage controls and improvements.

The IT plans have met the requirements for EPA directives 2182 and the EPA directive 2100 including the Year 2000 compliance. The complete IT plan is found in Appendix "D".

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7.   QUALITY PLANNING

All scientific data generated by or for the OCD will be of sufficient or greater quality to withstand scientific and legal challenge. This includes equivalent quality data when obtained through contracts, interagency agreements, cooperative agreements, and programs providing for self-reporting of data by regulated entities.

7.1   Customer Identification

For the purposes of this QMP and all subsequent QAPPs, "customer" will mean an individual(s) or organization(s) for which equipment or services are furnished or work is performed. All environmental measurements and equipment utilized to obtain the measurements will conform to requirements and expectations as defined in this QMP and individual QAPPs.

7.1.1   The U.S. EPA is a customer for data generated by or for the OCD for those programs funded in whole or in part by grants or contracts with the U.S. EPA. In addition, data requested from the OCD by the U.S. EPA that is generated during the normal cause of OCD responsibilities and is not related to a U.S. EPA grant or contract will adhere to the requirements of this QMP.

7.1.2   The OCD is a customer for equipment furnished or data generated to or for the OCD through contracts or agreements. The OCD, as a customer, requires information of sufficient quality so that its decisions are based on valid scientific assumptions and good quality data.

7.1.3   The New Mexico public are customers in that the decisions made by OCD and the USEPA impact the environment and public health.

7.1.4   The regulated community is a customer in that decisions made by OCD and U.S. EPA based on valid quality information will protect the environment and public health, expend the least amount of resources and cause the least amount of disruption of activities.

7.2   Customer Needs

The QA program for the OCD is designed to ensure that all scientific data generated by or for the OCD will be scientifically valid, legally defensible, and of known and acceptable precision and accuracy. This will be achieved by following QA procedures throughout the entire technical study, from planning to data usage.

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Therefore, it is the goal of the OCD that:

- The intended use of the data will be determined before the data collection efforts begin to ensure that the necessary level of data quality is available; and

- All data produced by or for the OCD will be of known and acceptable precision, accuracy, representativeness, completeness, and comparability.

All projects of the OCD will receive funding and staff as available to support an acceptable level of QA.

7.3   Communication of Needs

QAPPs will be developed for each aspect of the acquisition of environmental data including the sample gathering, sample analysis and data use to ensure that:

- The intended measurements or data acquisition methods are appropriate for achieving project objectives;

- Assessment procedures (including QA and QC) are sufficient for obtaining data of the type and quality needed and expected; and

- Any limitations on the use of the data can be identified and documented.

Each project that involves environmental data generation, acquisition or use will be planned utilizing the DQO process detailing the correct sequence and execution of said project so that the customer's needs are translated into specifications which will produce the desired results.

7.4   Documentation

All documentation for a particular project will be contained in the QAPP for that project.   The minimum documentation require are:

- Standard operating procedure for sample collection;
- Schedules for data acquisition;
- Reporting schedules;
- Record retention;
- Method for field notes transcription; and
- Health and safety requirements for project participants.

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8.   IMPLEMENTATION OF WORK PROCESSES

This plan exists to ensure environmental measurements are of known and acceptable quality. This QMP provides policies and procedures for oversight of implementation.

8.1   Implementation Tracking

All activities subject to the requirements of this plan will be tracked by the QAO. The performance of activities will be measured against the technical and quality specifications established in the individual QAPP, as well as against relevant procedures outlined in the appropriate SOPs. This performance will be evaluated through inspections and audits.

8.2   Management Oversight

All projects that produce environmental data are to be monitored and evaluated by the QAO. The level of oversight, inspections and audits will be determined and stated in the QAPP for the project and will be commensurate with the intended use of the project results.

The QAO will prepare periodic reports on the project. The report will evaluate the routine performance of the project measured against the technical and quality specifications established in the project QAPP. The report will be submitted to the Environmental Bureau Chief (EBC) for review.

Any modifications to the project specifications based on evaluation will be approved by the EBC with the concurrence of the Division Director. For projects funded in whole or in part by the U.S. EPA, concurrence from the U.S. EPA will be obtained prior to implementation.

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9.   QUALITY ASSESSMENT AND RESPONSE

Even the best QA plans are of limited value unless they are implemented. In order to ensure that QA plans are being implemented and that they are adequate, a series of technical and managerial audits are necessary. These audits represent the major mechanism of oversight.

The U.S. EPA Quality Staff (QS) has defined seven types of tools that are used in assessing the quality of an organization's programs:

- Management system reviews;
- Surveillance;
- Audits;
- Performance evaluations;
- Peer reviews and technical reviews;
- Readiness reviews; and
- Data quality objectives or assessments.

Audits utilizing the above tools will be performed on all entities providing environmental data to the OCD.

Typically, an Audit Team will be comprised of a Team Leader and one or more members from the OCD Environmental Bureau. The team may be augmented from time to time with members drawn from a variety of possible sources, such as other state program offices, the Scientific Laboratory Division, District environmental staff and U.S. EPA (if available). A description of audit review types is presented below, including some detail about the conduct of existing activities in laboratory technical systems audits, and performance evaluations.

9.1   Quality Assurance Management System Reviews (MSR)

A MSR is an independent assessment of management, the management process and structure established by a group to carry out QA responsibilities. The MSR includes review of the adequacy, use and effectiveness of guidance provided U.S. EPA to the State; the use and effectiveness of guidance provided by the OCD to its contractors; the process for preparing important QA documentation; the relationship among participants in the program activity under review; the knowledge base of the OCD and contractor staff on QA/QC processes and responsibilities; QA process implementation and oversight of QA activities, etc.

Specific QA elements addressed in an MSR include, for example:

- Assessment of the effectiveness of the Quality System of Quality Management;
- Procedures for developing Data Quality Objectives (DQOs);
- Procedures for developing QA Project Plans (QAPPs);
- Procedures for developing Quality Management Plans (QMPs);
- Procedures and schedules for conducting audits;

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- Providing a definite level of financial resources and personnel devoted to implementing the QA program;
- The degree of management support;
- Responsibilities and authorities of the various line managers and the QA Officer for carrying out the QA program; and
- Use of Quality Indicators to monitor Quality Improvement.

A schedule for conducting MSRs for each program on an annual basis will be developed with the concurrence of the manager whose program is to be reviewed and is then included in the annual OQA work plan. MSRs will be performed for each project that involves environmental data generation, acquisition or use such as the Scientific Laboratory Division. If necessary, MSRs can be conducted on an unannounced basis. More frequent reviews and follow-up reviews will be conducted if findings are significant, or corrective actions are ineffective.

The Team Leader must discuss the initial impressions and all preliminary findings from the MSR with the reviewed managers. This briefing will allow for closure of the objectives set forth in the entrance briefing. Following the MSR, the Team Leader, in conjunction with Team Members, will prepare a written report, which will be submitted, to the reviewed manager through the appropriate Division Directors. The reviewed manager will prepare a written statement of corrective actions to each of the findings and will return this response to the chief, Office of Quality Assurance within 30 days unless a different timeframe is agreed upon in advance.

Upon receipt of response, the Team Leader will evaluate corrective actions for adequacy, and for timeliness of implementation. If deemed inadequate, the OCD QA Officer will be notified to initiate appropriate action.

9.2   Quality Assurance Technical Systems Audit (TSA)

Periodic audits of the State laboratory and contracted laboratories will be performed as outlined in the following sections.

A TSA focuses on the given system for environmental data operations and its associated quality control system. The primary purpose is to assess the adequacy of sampling, measurement, analysis, calibration, and similar procedures used to generate the data. TSAs that deal with sampling and measurements are field TSAs (see Section 9.2.2).

9.2.1   Laboratory TSAs

The QAO prepares the schedule for conducting the periodic TSAs of OCD contract laboratories and non-contract laboratories submitting analyses on behalf of the regulated community, makes necessary arrangements, reviews the records of the laboratories in order to devise individual audit protocols, and participates in the TSAs. The QAO has lead responsibility for preparation of the audit report. The QAO performs special purpose audits as requested. The QAO will keep management apprised of any problems warranting their attention during the relevant briefing as outlined in the following sections.

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The primary goals of laboratory audits as conducted by OCD as follows:

- Gather information concerning the laboratory organization, operation and capabilities;
- Review selected audit laboratory QA/QC of actual OCD environmental laboratory analytical data results for conformance with the QAPP;
- Conduct an inspection of the laboratory where samples are run and check reagent expiration dates, equipment calibration sheets, etc. for conformance with standard laboratory operational standards;
- Determine the reliability of the data produced; and,
- Identify and help correct any audit related deficiencies.

Since the laboratory facilities may vary, no standardized audit procedure(s) has been developed; instead, the audit protocol is tailored to fit each laboratory. The general procedure is outlined below:

9.2.1.1 Planning

The QAO is responsible for:

- Coordinating the audit schedule with OCD Management and the appropriate laboratory managers;
- Explaining the audit procedure to the various laboratory managers;
- Finalizing the audit schedule with the audit team members and the laboratories to be audited;
- Reviewing laboratory files on performance evaluation (PE) data and prior audits; and
- Preparing audit protocol as per requirements of the Audit Protocol SOP, and briefing audit team.

9.2.1.2 Auditing

In order to assure that the focus of the TSA is toward verification of a laboratory's conformance to its commitments to OCD, each on-site evaluation will be conducted in the following manner:

- Entrance briefing to introduce team members and to learn of changes in organization, operation, mission, personnel, equipment, etc.;
- Walk through overview of laboratory;
- Review of documentation to determine completeness of chain of custody, analytical records, equipment maintenance, etc.;
- In-depth laboratory review to include interviews with supervisors, technologists and assistants; and
- Exit briefing during which the findings of the audit are discussed in depth with management.

9.2.1.3 Reporting

The QAO will:

- Brief supervisor at OCD on findings;

- Prepare written audit report; and
- Prepare audit report and distribute to laboratory management.

The laboratory manager will be given 30 days to respond in writing to the findings. Upon receipt of the response, the QAO will evaluate and follow up the response, append the response to the report, and then distribute copies of the appended report OCD management.

If the corrective actions proposed are deemed inadequate or ineffective, the QAO will be notified to initiate appropriate action. In addition to the audits of State and certain Federal laboratories performed by the OQA, other TSAs are carried out, as listed below.

9.2.2   Field TSAs

The QAO is responsible for scheduling and conducting TSAs for all internal and contract activities that develop environmental data for the OCDs use.

To ensure QAPP objectives are met and that the data generated is of acceptable quality, and inspections shall include verification of:

- Use of OCD's guidelines for sample collection and field measurement methods;

- Use of OCD's guidelines for field equipment and instruments;

- Calibration of field instruments according to U.S. EPA or manufacturer's specifications before, during and after use in the field; these calibrations should be recorded as a permanent record;

- Periodic inspections, maintenance and servicing of all field office laboratory equipment and instruments;

- Use of OCD's guidelines for sample containers to prevent contamination and to ensure an adequate sample size;

- Use of OCD's guidelines for sample preservation methods and adherence to recommended sample holding times;

- Use of OCD's guidelines for chain of custody procedures in the field and during shipment; and

- Collection of quality control samples (e.g., field blanks and duplicative samples) as needed for the laboratory quality control program;

9.3   Performance Evaluations

Many U.S. EPA programs sponsor performance evaluations. Generally, these evaluations consist of facilities being sent single blind samples for analysis from a central source. The OCD requires its contract laboratories to participate in the U.S. EPA Quality Assurance Proficiency Sample Program, as identified in Appendix C 'REQUEST FOR PROPOSALS, CHEMICAL ANALYSES SERVICES.'

9.4   Data Quality Assessments

The Data Quality Assessment (DQA) process is built on the fundamental premise that "Data Quality" is meaningful only in context of the intended use of the data, by the decision maker. The intended use of the data is established by the project's Data Quality Objectives process (Section 2.2). The DQA process primarily involves the statistical analysis of data for decision-making with respect to the planned or required levels of confidence in the data. The results of a DQA should be used for two specific purposes. First, for the specific decision, it can be used in making recommendations to the decision maker to modify portions of the DQAs. Secondly, it can be used as a guide for the planning and acquisition of supplemental data for this project and potentially for other projects.

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Section 10
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10.   QUALITY IMPROVEMENT

10.1   QA Office Responsibilities

The process of continuous quality improvement leads to the development of a better and more responsive quality system. Toward that end, the QAO will perform the following:

10.1.1 The QAO will conduct technical systems audits of laboratories that are submitting data to OCD and will ask for written comments to findings, and, where appropriate, will perform follow-up.

10.1.2 The QAO will monitor the various performance evaluation studies, e.g., the national performance audit program and the water performance evaluation studies.

10.1.3 QAO will act on the status of laboratories based upon the technical systems audits and performance evaluation studies.

10.1.4 The QAO will conduct technical systems audits.

10.1.5 The QAO will conduct training in topics related to quality assurance.

10.1.6 The QAO will maintain a close liaison with laboratory staff.

10.1.7 The QAO will provide technical assistance to the regulated community.

10. 2   Corrective Action

In order to maintain this continuing quality improvement, the QAO will periodically review SOPs, personnel training programs, and sampling and analytical activities to prevent or minimize problems that may affect the quality of environmental data. If deficiencies are noted, corrective actions shall identify the root cause of the problem, determine if the problem is unique or has more generic implications, and recommend procedures to management to prevent recurrence.

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11.   MODIFICATION/REVISION

11.1   Major versus Minor Modification/Revision of the Quality Management Plan (QMP).

The QAO shall conduct a Major Modification/Revision of the QMP at least every 5-years for submittal to the EPA.

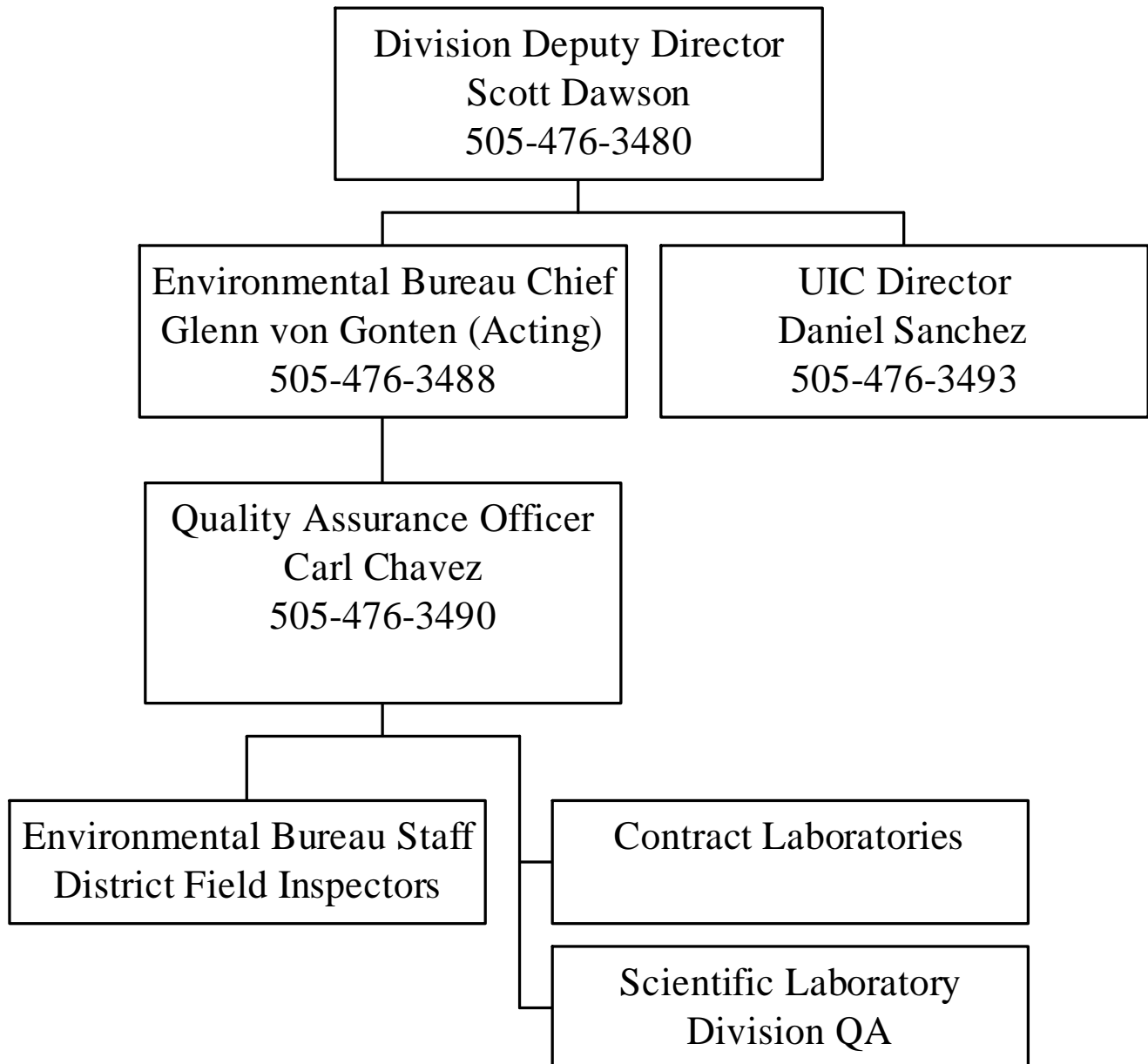The QAO shall conduct a Minor Modification/Revision of the QMP at least annually for submittal to the EPA.

11.2   Deviation(s) from the Quality Management Plan (QMP).

The QAO shall document and report any deviation(s) from the QMP, if any, on an annual basis during the annual review and reporting to the EPA.

The QAO shall identify the root cause of any deviation(s), determine if the deviation(s) is unique or has more generic implications, and recommend procedures to the UIC Director to prevent recurrence and/or revise the QMP accordingly.

If the deviation(s) is deemed to be caused by a deficiency(ies) in the QMP, the QAO shall implement the Modification/Revision process above (Section 11.1) for corrective action(s) to the QMP.
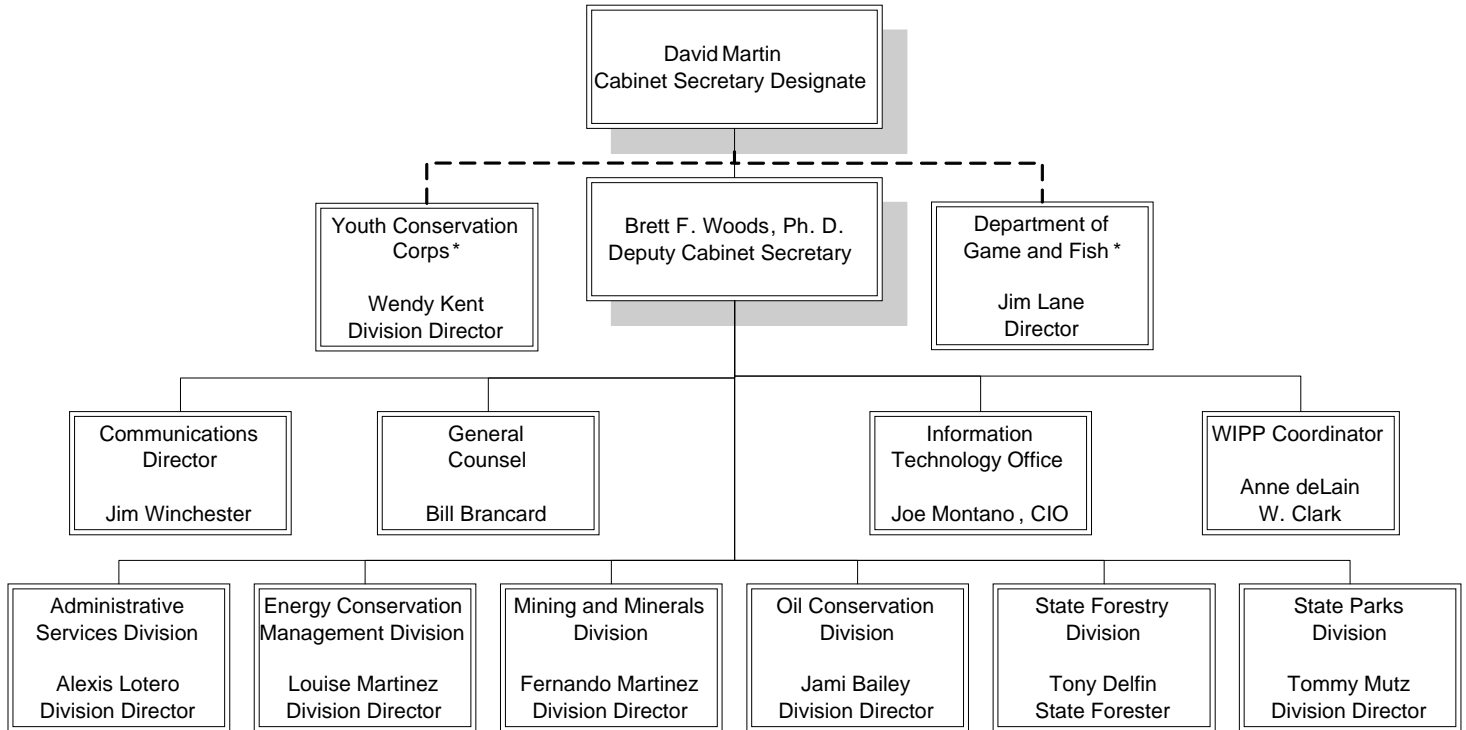
Underground Injection Control (UIC) Organization Chart

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                    ┌─────────────────────────────┐
                    │   Division Deputy Director   │
                    │        Scott Dawson          │
                    │       505-476-3480           │
                    └─────────────────────────────┘
                 ┌─────────────────────┴──────────────────────┐
    ┌────────────────────────────────┐      ┌─────────────────────────────┐
    │ Environmental Bureau Chief      │      │       UIC Director          │
    │ Glenn von Gonten (Acting)       │      │      Daniel Sanchez         │
    │      505-476-3488               │      │      505-476-3493           │
    └────────────────────────────────┘      └─────────────────────────────┘
                   │
    ┌────────────────────────────────┐
    │   Quality Assurance Officer     │
    │        Carl Chavez              │
    │       505-476-3490              │
    └────────────────────────────────┘
         ┌──────────┴──────────┐
┌────────────────────────────┐ ┌─────────────────────────────┐
│ Environmental Bureau Staff  │ │    Contract Laboratories    │
│ District Field Inspectors   │ └─────────────────────────────┘
└────────────────────────────┘ ┌─────────────────────────────┐
                                │    Scientific Laboratory    │
                                │        Division QA          │
                                └─────────────────────────────┘
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Figure 1

Energy, Minerals & Natural Resources Department Organization Chart

David Martin
Cabinet Secretary Designate

Youth Conservation
Corps *

Wendy Kent
Division Director

Brett F. Woods, Ph. D.
Deputy Cabinet Secretary

Department of
Game and Fish *

Jim Lane
Director

Communications
Director

Jim Winchester

General
Counsel

Bill Brancard

Information
Technology Office

Joe Montano , CIO

WIPP Coordinator

Anne deLain
W. Clark

Administrative
Services Division

Alexis Lotero
Division Director

Energy Conservation
Management Division

Louise Martinez
Division Director

Mining and Minerals
Division

Fernando Martinez
Division Director

Oil Conservation
Division

Jami Bailey
Division Director

State Forestry
Division

Tony Delfin
State Forester

State Parks
Division

Tommy Mutz
Division Director

* Administratively attached with no direct budget support from EMNRD   .

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Figure 2

APPENDIX A

DEFINITIONS

Activity - an all-inclusive term describing a specific set of operations or related tasks to be performed, either serially or in parallel (e.g., research and development, field sampling, analytical operations, equipment fabrication), that in total, result in a product or service.

Assessment - the evaluation process used to measure the performance or effectiveness of a system and its elements. In this Standard, assessment is an all-inclusive term used to denote any of the following: audit, performance evaluation, management systems review, peer review, inspection or surveillance.

Audit - a planned and documented investigative evaluation of an item or process to determine the adequacy and effectiveness as well as compliance with established procedures_, instructions, drawings, QAPPs, and other applicable documents.

Characteristic - any property or attribute of a datum, item, process, or service that is distinct, describable, and measurable.

Contractor - any organization or individual that contracts to furnish services or items or perform work.

Computer Program - a sequence of instructions suitable for processing by a computer. Processing may include the use of an assembler, a compiler, an interpreter, or a translator to prepare the program for execution. A computer program may be stored on magnetic media, and be referred to as "software", or may be stored permanently on computer chips, and be referred to as "firmware". Computer programs covered by this Standard are those used for design analysis, data acquisition, data reduction, data storage (data bases), operation or control, and data base or document control registers when used as the controlled source of quality information.

Corrective Action - measures taken to rectify conditions adverse to quality and, where necessary, to preclude their recurrence.

Customer - any individual or organization for which items or services are furnished or work performed in response to defined requirements and expectations. .

Data Quality Assessment (DQA) - is a process for performing statistical analysis to determine whether the quality of a data set is adequate for its intended use.

Data Quality Objectives (DQOs) - a statement of the precise data, the manner in which such data may be combined, and the acceptable uncertainty in those data in order to resolve an environmental problem or condition. This may also include the criteria or specifications needed to design a study that resolves the question or decision addressed by the DQO process.

Data Quality Objectives Process - a Total Quality Management (TQM) tool developed by the U.S. Environmental Protection Agency to facilitate the planning of environmental data collection activities. The DQO process asks planners to focus their planning efforts by specifying the use of the data (the decision), the decision criteria, and their tolerance to accept an incorrect decision based on the data. The products of the DQO process are the DQOs.

Data Usability - the process of ensuring or determining whether the quality of the data produced meets the intended use of the data.

Design Review - a documented evaluation by a team, including personnel other than the original designers, the responsible designers, the customer for the work or product being designed; and, a QA representative to determine if a proposed design will meet the established design criteria and perform as expected when implemented.

Engineered Environmental Systems - an all-inclusive term used to describe pollution control devices and systems, waste treatment processes and storage facilities, and site remediation technologies and their components that may be utilized to remove pollutants or contaminants from the environment. Examples include wet scrubbers (air), soil washing (soil), granulated activated carbon unit (water), and filtration (air, water). Usually, this term will apply to hardware-based systems; however, it will also apply to methods or techniques used for pollutant reduction of the contaminants, such as capping, solidification or vitrification, and biological treatment.

Environmental Conditions - the description of a physical medium (e.g., air, water, soil, sediment) or biological system expressed in terms of its physical, chemical, radiological, or biological characteristics.

Environmental Data - any measurements or information that describes environmental processes or conditions, or the performance of engineered environmental systems.

Environmental Data Operations - work performed to obtain, use, or report information pertaining to environmental processes and conditions.

Environmental Monitoring - the process of measuring or collecting environmental data.

Environmental Processes - manufactured or natural processes that produce discharges to or impact the ambient environmental.

Environmental Programs - an all-inclusive term pertaining to any work or activities involving the environmental, including but not limited to: characterization of environmental processes and conditions; environmental monitoring; environmental research and development; the design, construction and operation of engineered environmental systems; and laboratory operations on environmental samples.

Environmentally Related Measurements - the data collection activity or investigation involving the assessment of chemical, physical or biological factors in the environmental which affect human health or the quality of life.

Environmental Technology - an all-inclusive term used to describe pollution control devices and systems, waste treatment processes and storage facilities, and site remediation technologies and their components that may be utilized to remove pollutants or contaminants from or prevent them from entering the environmental. Examples include wet scrubbers (air), soil washing (soil), granulated activated carbon unit (water), and filtration (air, water). Usually, this term will apply to hardware-based systems; however, it will also apply to methods or techniques used for pollution prevention, pollutant reduction, or containment of contamination to prevent further movement of the contaminants, such as capping, solidification or vitrification, and biological treatment.

Extramural - relating to activities performed for OCD but not by OCD employees, usually by contracts, grants or cooperative agreements. Used in reference to QAPPs and QMPs.

Financial Assistance - the process by which funds are provided by one organization (usually government) to another organization for the purpose of performing work or furnishing services or items. Financial assistance mechanisms include grants, cooperative agreements, and government interagency agreements.

Graded Approach - the process of basing the level of application of managerial controls applied to an' item or work according to the intended use of results and the degree of confidence needed in the quality of the results. (See Data Quality Objectives Process).

Hazardous Waste - any waste materials that satisfy the definition of "hazardous waste" as given in 40 CFR Part 261, "Identification and Listing of Hazardous Waste".

Independent Assessment - an assessment performed by a qualified individual, group, or organization that is not part of the organization directly performing and accountable for the work being assessed.

Inspection - examination or measurement of an item or activity to verify conformance to specific requirements.

Intramural - term used to describe activities performed by OCD employees, usually used in relationship to QAPPs, OMPs, contracts or grants.

Item - an all-inclusive term used in place of the following: appurtenance, facility, sample assembly, component, equipment, material, module, part, product, structure, subassembly, subsystem, system, unit, documented concepts, or data.

Management - those individuals directly responsible and accountable for planning, implementing, and assessing work.

Management System - a structured non-technical system describing the policies, objectives, principles, organizational authority, responsibilities, accountability, and implementation plan of an organization for conducting work and producing items and services.

Management System Review (MSR) - the qualitative assessment of a data collection operation and/or organization(s) to establish whether the prevailing quality management structure, policies, practices and procedures are adequate for ensuring that the type and quality of data needed are obtained.

May - denotes permission but not a requirement.

Method - a body of procedures and techniques for performing an activity (e.g., sampling, chemical analysis, quantification) systematically presented in the order in which they are to be executed.

Mixed Waste - hazardous waste material, as defined by 40 CFR part 261 (RCRA), mixed with radioactive constituents.

Must - denotes a requirement that has to be met.

Objective Evidence - any documented statement of fact, other information or record, either quantitative or qualitative, pertaining to the quality of an item or activity, based on observations, measurements, or tests which can be verified.
Organization - a company, corporation, firm, enterprise, or institution, or part thereof, whether incorporated or not, public or private, that has its own functions and administration.

Peer Review - a documented critical review of work generally beyond the state of art or characterized by the existence of potential uncertainty. The peer review is conducted by qualified individuals (or organization) those are independent of those who performed the work, but are collectively equivalent in technical expertise (i.e., peers) to those who

performed the original work. The peer review is conducted to ensure that activities are technically adequate, competently performed, properly documented, and satisfy established technical and quality requirements. The peer review is an in-depth assessment of the assumptions, calculations, extrapolations, alternate interpretations, methodology, acceptance criteria, and conclusions pertaining to specific work and of the documentation that supports them. Peer reviews provide an evaluation of a subject where quantitative methods of analysis or measures of success are unavailable or undefined, such as in research and development.

Performance Evaluation (PE) - a type of audit in which the quantitative data generated in a measurement system are obtained independently and compared with routinely obtained data to evaluate the proficiency of an analyst or laboratory.

Procedure - a documented set of steps or actions that systematically specifies or describes how an activity is to be performed.

Process - an orderly system of actions that are intended to achieve a desired end or result. Examples of processes include analysis, design, data collection, operation, fabrication, and calculation.

QTRAK - is a Computer Program that contains database information on Quality Management Plans and Quality Assurance Project Plans to the Program Managers, Project Officers, and the OQA for planning and assessment of the status of regional Quality Management Plans and the associated Project Plans.

Qualified Data - any data that have been modified or adjusted as part of statistical or mathematical evaluation, data validation, or data verification operations.

Quality - the sum of features and properties/characteristics or a process, item, or service that bears on its ability to meet the stated needs and expectations of the user.

Quality Assurance (QA) - an integrated system of management activities involving planning, implementation, assessment, reporting and quality improvement to ensure that a process, item, or service is of the type and, quality needed and expected by the customer.

Quality Assurance Forum - the interdivisional organization, with an advisory function for Quality Assurance activities of OCD in general and the Quality Assurance Office specifically. Provides regular feedback to the ESD Director and the customers of the QA Office.

Quality Assurance Management Staff (QAMS) - the U.S. EPA's headquarters staff element that establishes and promulgates Quality Assurance Policy.

Quality Assurance Officer (QAO) - the designated OCD staff member that has the delegated authority for approval of all Quality Management Plans in OCD, Chief of the Office of Quality Assurance.

Quality Assurance Program Description/Plan - see Quality Management Plan.
Quality Assurance Project Plan (QAPP) - a formal document describing in comprehensive detail the necessary QA, QC, and other technical activities that must be implemented to ensure that the results of the work performed will satisfy the stated performance criteria.

Quality Control (QC) - the overall system of technical activities that measures the attributes and performance of a process, item, or service against defined standards to verify that they meet the stated requirements established by the

customer.

Quality Improvement - a management program for improving the quality of operations. Such management programs generally entail a formal mechanism for encouraging worker recommendations with timely management evaluation and feedback or implementation.

Quality Indicators - measurable attributes of the attainment of the necessary quality for a particular environmental decision. Indicators of quality include precision, bias, completeness, representativeness, reproducibility, comparability, and statistical confidence.

Quality Management - that aspect of the overall management system of the organization that determines and implements the quality policy. Quality management includes strategic planning, allocation of resources, and other systematic activities (e.g., planning, implementation, and assessment) pertaining to the quality system.

Quality Management Plan (QMP) - a formal document that describes the quality system in terms of the organizational structure, functional responsibilities of management and staff, lines of authority, and required interfaces for those planning, implementing, and assessing all activities conducted.

Quality System - a structured and documented management system describing the policies, objectives, principles, organizational authority, responsibilities accountability, and implementation plan of an organization for ensuring quality in its work processes, products (items), and services. The quality system provides the framework for planning, implementing, and assessing work performed by the organization and for carrying out required QA and QC.

Readiness Review - a systematic, documented review of the readiness for the startup or continued use of a facility, process, or activity. Readiness reviews are typically conducted before proceeding beyond project milestones and prior to initiation of a major phase of work.

Record - a completed document that provides objective evidence of an item or process. Records may include photographs, drawings, magnetic tape, electronic, and other data recording media.

Remediation - the process of reducing the concentration of a contaminant (or contaminants) in air, water, or soil media to a level that poses an acceptable risk to human health.

Self-Assessment - Assessments of work conducting by individuals, groups, or organizations directly responsible for overseeing· and/or performing the work.

Service - the category of economic activity that does not produce manufactured items. In environmental data operations or engineering projects, such activities include design, inspection, laboratory and/or field analysis, repair, and installation.

Significant Condition - any state, status, incident, or situation of an environmental process or condition of an engineered environmental system in which the work being performed will be adversely affected in a manner sufficiently serious to require corrective action to satisfy quality objectives or specifications and safety requirements.

Specification - a document stating requirements and which refers to or includes drawings or other relevant documents. Specifications should indicate the means and the criteria for determining conformance.

Standard Operating Procedure (SOP) - a written document that details the method for an operation, analysis, or action

with thoroughly prescribed techniques and steps, and that is officially approved as the method for performing certain routine or repetitive tasks.

Supplier - any individual or organization furnishing items or services or performing work according to a procurement document or financial assistance agreement. This is an all-inclusive term used in place of any of the following: vendor, seller, contractor, subcontractor, fabricator, or consultant.

Surveillance - the act of monitoring or observing a process or activity to verify conformance to specified requirements.

Technical Review - a documented critical review of work that has been performed within the state of the art. The review is accomplished by one or more qualified reviewers who are independent of those who performed the work, but are collectively equivalent in technical expertise to those who performed the original work. The reviews are an in-depth analysis and evaluation of documents, activities, material, data, or items that require technical verification or validation for applicability, correctness, adequacy, completeness, and assurance that established requirements are satisfied.

Technical Systems Audit (TSA) - a thorough, systematic, on-site qualitative audit of facilities, equipment, personnel, training procedures, record keeping, data validation, data management, and reporting aspects of a system.

Total Quality Management (TQM) - the process of applying quality management to all activities of the organization, including technical and administrative operations. See Quality Management and Quality System.

Validation - an activity that demonstrates or confirms that a process, item, data set, or service satisfies the requirements defined by the user.

Verification - the act of authenticating or formally asserting the truth that a process, item, data set, or service is, in fact, that which is claimed.

Work - the process of performing a defined task or activity (e. g., research and development, field sampling, analytical operations, equipment fabrication).

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APPENDIX B

PERSONNEL QUALIFICATIONS

New Mexico State Personnel Office

2600 Cerrillos Road
Santa Fe, New Mexico 87505-0127

Classification Description

ENVIROMENTAL ENGINEERS (PE)

Class Title	Class Code	Pay Band	Alt Pay Band*
Environmental Engineers-PE-B	**E2081B**	**60**	**65**
Environmental Engineers-PE-O	**E2081O**	**65**	**70**
Environmental Engineers-PE-A	**E2081A**	**70**	**75**

In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.

Occupation Description

Design, plan or perform engineering duties in the prevention, control and remediation of environmental health hazards utilizing various engineering disciplines. Work may include waste treatment, site remediation, or pollution control technology.

Nature of Work

Environmental engineers use the principles of biology and chemistry to develop solutions to environmental problems. They are involved in water and air pollution control, recycling, waste disposal, and public health issues. Environmental engineers conduct hazardous-waste management studies in which they evaluate the significance of the hazard, advise on its treatment and containment, and develop regulations to prevent mishaps. They design municipal water supply and industrial wastewater treatment systems, conduct research on the environmental impact of proposed construction projects, analyze scientific data, and perform quality-control checks. Environmental engineers are concerned with local and worldwide environmental issues. Some may study and attempt to minimize the effects of acid rain, global warming, automobile emissions, and ozone depletion. They also may be involved in the protection of wildlife. Many environmental engineers work as consultants, helping their clients to comply with regulations, prevent environmental damage, and clean up hazardous sites.

Distinguishing Characteristics of Levels

Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

Basic

- Employees in this Role perform standardized engineering work in defense of New Mexico's environmental quality.

Recommended Education and Experience for Full Performance

Bachelor's Degree in Environmental, Civil, Mechanical, Agricultural, Mining/Mineral Engineering and two (2) years relevant work experience.

Minimum Qualifications

Bachelor's Degree in Environmental, Civil, Mechanical, Agricultural, Mining/Mineral Engineering.

Operational

- Employees in this Role independently perform technical engineering work in defense of New Mexico's environmental quality.
- Employees conduct supplementary investigations, research and surveys, issue permits and approvals, and monitor and/or participate in on-site inspections, both during and after construction of water quality/supply or air pollutant sources to ensure adherence to approved plans.

Recommended Education and Experience for Full Performance*

Bachelor's Degree in Environmental Engineering and four (4) years of experience in soil remediation, waste water, solid waste, or environmental protection.

Minimum Qualifications

Bachelor's Degree in Environmental, Civil, Mechanical, Agricultural and/or Mining/Mineral Engineering and two (2) years of relevant work experience.

Advanced

- Employees in this Role perform engineering work in defense of New Mexico's environmental quality.
- Employees review operation and maintenance manuals, costs estimates, progress reports, and design change orders.

Recommended Education and Experience for Full Performance

Bachelor's Degree in Environmental Engineering and six (6) years of experience in soil remediation, waste water, solid waste, or environmental protection.

Minimum Qualifications

Bachelor's Degree in Environmental Engineering and four (4) years of experience in soil remediation, waste water, solid waste, and/or environmental protection.

Knowledge and Skills

Note: This information has been produced by compiling information and documentation provided by O*NET. O*NET^{TM} is a trademark of the U.S. Department of Labor, Employment and Training Administration.

Knowledge

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.

Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Physics — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes.

Chemistry — Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Administration and Management — Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

Law and Government — Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.

Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.

Skills

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Speaking — Talking to others to convey information effectively.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Systems Analysis — Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Science — Using scientific rules and methods to solve problems.

Operations Analysis — Analyzing needs and product requirements to create a design.

Statutory Requirements: All applicants for this position must be licensed in accordance with Engineering and Surveying Practice Act, Sections 61-23-1 through 61-23-32 NMSA 1978 and 16.39.1 through 16.39.8 NMAC, as applicable. Registration as a Professional Engineer by the NM Licensing Board.

You must include your license or certificate number in the "License" section of the application form.

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization, essential functions*, and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.
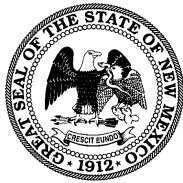
Default FLSA Status: Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/07/2001   **Revised:** 9/20/2011

Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.

New Mexico State Personnel Office

2600 Cerrillos Road
Santa Fe, New Mexico 87505-0127

Classification Description

ENVIROMENTAL SCIENSTISTS AND SPECIALISTS, INCLUDING HEALTH

Class Title	Class Code	Pay Band	Alt Pay Band*
Environmental Scientists & Spec-B	**F2041B**	**55**	**65**
Environmental Scientists & Spec-O	**F2041O**	**60**	**70**
Environmental Scientists & Spec-A	**F2041A**	**65**	**75**

In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.

Occupation Description

Conduct research or perform investigation for the purpose of identifying, abating or eliminating sources of pollutants or hazards that affect either the environment or the health of the population. Utilizing knowledge of various scientific disciplines may collect, synthesize, study, report and take action based on data derived from measurements or observations of air, food, soil, water and other sources.

Nature of Work

Environmental scientists and specialists use their knowledge of the natural sciences to protect the environment by identifying problems and finding solutions that minimize hazards to the health of the environment and the population. They analyze measurements or observations of air, food, water, and soil to determine the way to clean and preserve the environment. Understanding the issues involved in protecting the environment degradation, conservation, recycling, and replenishment is central to the work of environmental scientists. They often use this understanding to design and monitor waste disposal sites, preserve water supplies, and reclaim contaminated land and water. They also write risk assessments, describing the likely effect of construction and other environmental changes; write technical proposals; and give presentations to managers and regulators.

Distinguishing Characteristics of Levels

Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

Basic

- Employees in this Role perform routine investigations into environmental problems.
- Employees collect and submit samples for laboratory or field analysis; assist in making inspections; conduct routine field and office project reviews; may compile project-oriented engineering, social, economic and other technical data necessary for public hearings.

Recommended Education and Experience for Full Performance

Bachelor's Degree in Physical, Natural, or Environmental Science, Soil Science, or Engineering.

Minimum Qualifications

Bachelor's Degree in Physical, Natural, or Environmental Science, Soil Science, or Engineering.

Operational

- Employees in this Role review applications, preliminary and final plans, and specifications for proposed plants, facilities, and/or equipment to determine completeness, technical feasibility, engineering accuracy, and compliance.
- Employees conduct supplementary investigations, research and surveys as needed; announce and conduct public hearings; issue permits and approvals and notify concerned public of the action; participate in inspections, cost estimates, progress reports, and design change orders; perform tests and audits test results to determine conformity; and compile findings and technical data for reports and projections.

Recommended Education and Experience for Full Performance

Bachelor's Degree in Physical, Natural, or Environmental Science, Soil Science, or Engineering and four (4) years of work experience in public/environmental health, environmental science, Air Quality Management, Biology, Engineering, Chemistry, Geology, Hazardous Waste Management, Wildlife Management, and/or Water Resources.

Minimum Qualifications

Bachelor's Degree in Physical, Natural, or Environmental Science, Soil Science, or Engineering and two (2) years of work experience in public/environmental health, environmental science, Air Quality Management, Biology, Engineering, Chemistry, Geology, Hazardous Waste Management, Wildlife Management, and/or Water Resources.

Advanced

- Employees in this Role determine adverse and beneficial environmental, social, and economic effects of highway proposals, archaeological sites and excavations.
- Employees coordinate environmental and archaeological activities with project development and design; analyze and generate procedural changes; determine manpower needs; review and authorize mitigation contracts for ongoing and completed projects; assemble data for planning; engage in or monitor research; develop public information programs; assist management in planning objectives, budget, records, and reports; prepare complex scientific reports and advanced analysis of data.

Recommended Education and Experience for Full Performance

Bachelor's Degree in Physical, Natural, or Environmental Science, Soil Science, or Engineering and six (6) years of work experience in public/environmental health, environmental science, Air Quality Management, Biology, Engineering, Chemistry, Geology, Hazardous Waste Management, Wildlife Management, and/or Water Resources.

Minimum Qualifications

Bachelor's Degree in Physical, Natural, or Environmental Science, Soil Science, or Engineering and five (5) years of work experience in public/environmental health, environmental science, Air Quality Management, Biology, Engineering, Chemistry, Geology, Hazardous Waste Management, Wildlife Management, and/or Water Resources.

Knowledge and Skills

Note: This information has been produced by compiling information and documentation provided by O*NET. O*NET^{TM} is a trademark of the U.S. Department of Labor, Employment and Training Administration.

Knowledge

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Chemistry — Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Biology — Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment.

Law and Government — Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Geography — Knowledge of principles and methods for describing the features of land, sea, and air masses, including their physical characteristics, locations, interrelationships, and distribution of plant, animal, and human life.

Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Persuasion — Persuading others to change their minds or behavior.

Negotiation — Bringing others together and trying to reconcile differences.

Social Perceptiveness — Being aware of others' reactions and understanding why they react as they do.

Instructing — Teaching others how to do something.

Physics — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes.

Time Management — Managing one's own time and the time of others.

Skills

Science — Using scientific rules and methods to solve problems.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Speaking — Talking to others to convey information effectively.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Coordination — Adjusting actions in relation to others' actions.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Statutory Requirements: N/A

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization*, *essential functions*, and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/07/2001   **Revised:** 9/20/2011

Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.

New Mexico State Personnel Office

2600 Cerrillos Road
Santa Fe, New Mexico87505-0127

Classification Description

ENGINEERS SPECIALIST, ALL OTHER (NL)

Class Title	Class Code	Pay Band	Alt Pay Band*
Engineers Specialist, All Other (NL)-B	**E3000B**	**65**	**70**
Engineers Specialist, All Other (NL)-O	**E3000O**	**70**	**75**
Engineers Specialist, All Other (NL)-A	**E3000A**	**75**	**80**

In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.

Occupation Description
All engineers not listed separately.

Nature of Work
Engineers develop new products or work in testing, production, or maintenance fields. During the process of development of new products, engineers consider several factors which include development; specification of functional requirements; design and test components; integrate components to produce the final design; and evaluate the design's overall effectiveness, cost, reliability, and safety. This process applies to the development of many different products, such as chemicals, computers, power plants, helicopters, and toys. Engineers who work in testing, production, or maintenance may supervise production in factories, determine the causes of a component's failure, and test manufactured products to maintain quality. They also estimate the time and cost required to complete projects. Engineers also use computers extensively to produce and analyze designs; to simulate and test how a machine, structure, or system operates; to generate specifications for parts; to monitor the quality of products; and to control the efficiency of processes.

Distinguishing Characteristics of Levels
Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

Basic
- Employees in this Role apply engineering principles and scientific and mathematical processes to develop solutions to technical problems.
- Employees assist in the analysis and planning of technical projects and provide input into recommendations; assist in analyzing, planning, and implementing hydrographic surveys, field inspections, and stream and underground water basin analysis; work with senior staff to prepare technical reports and surveys; use Geographic Information Systems, water measuring devices, computerized maps, Ariel photography, and historical data to locate and research water issues; operate surveying, drafting, CAD and plotting equipment; perform calculations; maintain databases and files; review and approve/disapprove water rights applications; confirm compliance with applicable statutes, rules, regulations and laws.

Recommended Education and Experience for Full Performance
Bachelor's Degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and four (4) years relevant engineering experience.

Minimum Qualifications
Bachelor's Degree from an accredited college or university plus two (2) years of relevant experience. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling six (6) years may substitute for the required education and experience.

Operational
- Employees in this Role independently perform specialized functions within a field of engineering and make recommendations for project implementation.
- Employees prepare technical reports based on their knowledge of the principles and practices of engineering and on actual analysis and research completed; are responsible for major components of entire projects; prepare project completion time and cost estimates; review sub-division water supply proposals; make recommendations regarding water conservation; inspect low and significant hazard dams; review design plans for rehabilitation of ditches and irrigation systems; compile and analyze current and past trends related to water usage, flows, and levels; guide and mentor technicians and other engineers; testify as expert witness regarding engineering investigations, permit review, and in other technical analysis.

Recommended Education and Experience for Full Performance*
Bachelor's Degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and six (6) years relevant engineering experience.

Minimum qualifications
Bachelor's degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and four (4) years relevant experience. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling eight (8) years may substitute for the required education and experience.

Advanced
- Employees in this Role provide engineering and scientific functions of the most difficult and complex scope, requiring mastery of engineering and extensive understanding of agency programs.
- Employees assume responsibility for the direction, control and supervision of engineering projects to assure that the final product has been critically examined and evaluated for compliance with appropriate policy and professional standards; design and develop new systems and products to improve project implementation; are responsible for evaluating the effectiveness of programs and projects; train, provide guidance, and oversee professional and technical staff; assist in the development of administrative policies and regulations; inspect existing and under construction low and significant hazard dams; develop groundwater and surface water models.

Recommended Education and Experience for Full Performance
Master's Degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and four (4) years of relevant engineering experience.

State of New Mexico
Energy, Minerals & Natural Resources Department
Oil Conservation Division

Minimum Qualifications
Bachelor's Degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and five (5) years relevant engineering experience. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling nine (9) years may substitute for the required education and experience.

Knowledge and Skills
Note: This information has been produced by compiling information and documentation provided by O*NET. O*NET^{TM} is a trademark of the U.S. Department of Labor, Employment and Training Administration.

Knowledge

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Production and Processing — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Computers and Electronics — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.

Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.

Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Administration and Management — Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

Clerical — Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.

Skills

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Science — Using scientific rules and methods to solve problems.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Speaking — Talking to others to convey information effectively.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Coordination — Adjusting actions in relation to others' actions.

Statutory Requirements: This is a non-licensed occupation.

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization*, *essential functions*, and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/07/2001   **Revised:** 9/20/2011

Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.

State of New Mexico
Energy, Minerals & Natural Resources Department
Oil Conservation Division

New Mexico State Personnel Office
2600 Cerrillos Road
Santa Fe, New Mexico87505-0127

Classification Description

ENGINEER SPECIALIST, ALL OTHER SUPERVISOR (NL)

Class Title	Class Code	Pay Band	Alt Pay Band*
Engineer Specialist, AO Supervisor (NL)	E3000S	80	85

In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.

Purpose
Devotes a substantial portion of time assigning and directly supervising work of at least two (2) full time equivalent employees**, acting upon leave requests, conducting annual performance evaluations and recommending disciplinary actions. Interviewing and recommending selection of applicants and conducting training of personnel. All engineers not listed separately.

Nature of Work
The Engineer Specialist Supervisor devotes a substantial portion of time assigning and directly supervising work of at least two (2) full time equivalent employees and develops new products or work in testing, production, or maintenance fields. During the process of development of new products, engineers consider several factors which include development; specification of functional requirements; design and test components; integrate components to produce the final design; and evaluate the design's overall effectiveness, cost, reliability, and safety. This process applies to the development of many different products, such as chemicals, computers, power plants, helicopters, and toys. Engineers who work in testing, production, or maintenance may supervise production in factories, determine the causes of a component's failure, and test manufactured products to maintain quality. They also estimate the time and cost required to complete projects. Engineers also use computers extensively to produce and analyze designs; to simulate and test how a machine, structure, or system operates; to generate specifications for parts; to monitor the quality of products; and to control the efficiency of processes.

Distinguishing Characteristics
The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.
- Devotes a substantial portion of time assigning and directly supervising work of at least two (2) permanent/full time employees. Acts upon leave requests, conducts annual performance evaluations and recommends disciplinary actions.
- Conducts training of personnel; may interview and recommend selection of applicants.
- Provides career coaching through mentoring and arranges for outside training opportunities when possible.
- Makes well-informed, effective, and timely decisions and perceives the impact and implications of those decisions.
- Makes point of view in a clear and convincing manner.
- Listens effectively and clarifies information as needed.

- Identifies and analyzes problems; weighs relevance and accuracy of information; generates and evaluates alternative solutions; makes recommendations.
- Writes in a clear and concise manner.
- Develops networks and builds alliance; collaborates across boundaries to build strategic relationships and achieve common goals.
- Builds and manages workforce based on organizational goals, budget considerations, and staffing needs
- Ensures that employees are appropriately recruited, selected, and appraised; addresses performance issues.
- Keeps up to date on occupationally specific technological developments; makes effective use of technology to achieve results.
- Employees in this Role provide engineering and scientific functions of the most difficult and complex scope, requiring mastery of engineering and extensive understanding of agency programs.
- Employees assume responsibility for the direction, control and supervision of engineering projects to assure that the final product has been critically examined and evaluated for compliance with appropriate policy and professional standards; design and develop new systems and products to improve project implementation; are responsible for evaluating the effectiveness of programs and projects; train, provide guidance, and oversee professional and technical staff; assist in the development of administrative policies and regulations; inspect existing and under construction low and significant hazard dams; develop groundwater and surface water models.

Recommended Education and Experience for Full Performance***
Master's Degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and four (4) years of relevant engineering experience**,** (2) years of which must be supervisory.

Minimum Qualifications
Bachelor's Degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and five (5) years relevant engineering experience. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling nine (9) years may substitute for the required education and experience.

Knowledge and Skills

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Knowledge

Leadership - Knowledge of leading through influence and persuasion by establishing mutual trust, respect, and loyalty, through shared beliefs, values, and goals; Being cognizant of subordinates' needs, goals, and aspirations, and to carefully consider these personal variables when making decisions.

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Production and Processing — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Computers and Electronics — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.

Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.

Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Administration and Management — Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

Clerical — Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.

Skills

Leadership - Displaying attributes that makes employees willing to follow; applying effort to increase productiveness in areas needing the most improvement; establishing a spirit of cooperation and cohesion for achieving goals; making the right things happen on time; providing performance feedback, coaching, and career development to individuals to maximize their probability of success; giving subordinates the authority to get things accomplished in the most efficient and timely manner.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Science — Using scientific rules and methods to solve problems.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Speaking — Talking to others to convey information effectively.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Coordination — Adjusting actions in relation to others' actions.

Statutory Requirements: This is a non-licensed occupation.

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization*, *essential functions*, and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 04/27/2012   **Revised:**

**Means two (2) or any combination of full-time equivalent (FTE) status that equals at least two (2) regular or term status employees in non-temporary positions.

***Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation. Not to be construed as minimum qualifications.

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.

New Mexico State Personnel Office

2600 Cerrillos Road
Santa Fe, New Mexico 87505-0127

Classification Description

ENGINEERS SPECIALIST, ALL OTHER (NL)

Class Title	Class Code	Pay Band	Alt Pay Band*
Engineers Specialist, All Other (NL)-B	E3000B	65	70
Engineers Specialist, All Other (NL)-O	E3000O	70	75
Engineers Specialist, All Other (NL)-A	E3000A	75	80

In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.

Occupation Description
All engineers not listed separately.

Nature of Work
Engineers develop new products or work in testing, production, or maintenance fields. During the process of development of new products, engineers consider several factors which include development; specification of functional requirements; design and test components; integrate components to produce the final design; and evaluate the design's overall effectiveness, cost, reliability, and safety. This process applies to the development of many different products, such as chemicals, computers, power plants, helicopters, and toys. Engineers who work in testing, production, or maintenance may supervise production in factories, determine the causes of a component's failure, and test manufactured products to maintain quality. They also estimate the time and cost required to complete projects. Engineers also use computers extensively to produce and analyze designs; to simulate and test how a machine, structure, or system operates; to generate specifications for parts; to monitor the quality of products; and to control the efficiency of processes.

Distinguishing Characteristics of Levels
Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

Basic
- Employees in this Role apply engineering principles and scientific and mathematical processes to develop solutions to technical problems.
- Employees assist in the analysis and planning of technical projects and provide input into recommendations; assist in analyzing, planning, and implementing hydrographic surveys, field inspections, and stream and underground water basin analysis; work with senior staff to prepare technical reports and surveys; use Geographic Information Systems, water measuring devices, computerized maps, Ariel photography, and historical data to locate and research water issues; operate surveying, drafting, CAD and plotting equipment; perform calculations; maintain databases

and files; review and approve/disapprove water rights applications; confirm compliance with applicable statutes, rules, regulations and laws.

Recommended Education and Experience for Full Performance
Bachelor's Degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and four (4) years relevant engineering experience.

Minimum Qualifications
Bachelor's Degree from an accredited college or university plus two (2) years of relevant experience. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling six (6) years may substitute for the required education and experience.

Operational
- Employees in this Role independently perform specialized functions within a field of engineering and make recommendations for project implementation.
- Employees prepare technical reports based on their knowledge of the principles and practices of engineering and on actual analysis and research completed; are responsible for major components of entire projects; prepare project completion time and cost estimates; review sub-division water supply proposals; make recommendations regarding water conservation; inspect low and significant hazard dams; review design plans for rehabilitation of ditches and irrigation systems; compile and analyze current and past trends related to water usage, flows, and levels; guide and mentor technicians and other engineers; testify as expert witness regarding engineering investigations, permit review, and in other technical analysis.

Recommended Education and Experience for Full Performance*
Bachelor's Degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and six (6) years relevant engineering experience.

Minimum qualifications
Bachelor's degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and four (4) years relevant experience. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling eight (8) years may substitute for the required education and experience.

Advanced
- Employees in this Role provide engineering and scientific functions of the most difficult and complex scope, requiring mastery of engineering and extensive understanding of agency programs.
- Employees assume responsibility for the direction, control and supervision of engineering projects to assure that the final product has been critically examined and evaluated for compliance with appropriate policy and professional standards; design and develop new systems and products to improve project implementation; are responsible for evaluating the effectiveness of programs and projects; train, provide guidance, and oversee professional and technical staff; assist in the development of administrative policies and regulations; inspect existing and under construction low and significant hazard dams; develop groundwater and surface water models.

Recommended Education and Experience for Full Performance

Master's Degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and four (4) years of relevant engineering experience.\

Minimum Qualifications

Bachelor's Degree in Engineering, Hydrology, Hydrogeology, Water Resources, or Physical Science and five (5) years relevant engineering experience. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling nine (9) years may substitute for the required education and experience.

Knowledge and Skills

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Knowledge

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Production and Processing — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Computers and Electronics — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.

Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.

Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Administration and Management — Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

Clerical — Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.

Skills

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Science — Using scientific rules and methods to solve problems.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Speaking — Talking to others to convey information effectively.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Coordination — Adjusting actions in relation to others' actions.

Statutory Requirements: This is a non-licensed occupation.

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization, essential functions*, and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/07/2001   **Revised:** 9/20/2011

*Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.

New Mexico State Personnel Office

2600 Cerrillos Road
Santa Fe, New Mexico 87505-0127

Classification Description

ENVIROMENTAL SPECIALISTS (NL)

Class Title	Class Code	Pay Band	Alt Pay Band*
Environmental Specialists (NL)-B	**E2082B**	**60**	**65**
Environmental Specialists (NL)-O	**E2082O**	**65**	**70**
Environmental Specialists (NL)-A	**E2082A**	**70**	**75**

In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.

Occupation Description

Design, plan or perform engineering duties in the prevention, control and remediation of environmental health hazards utilizing various engineering disciplines. Work may include waste treatment, site remediation, or pollution control technology.

Nature of Work

Environmental Specialists use the principles of biology and chemistry to develop solutions to environmental problems. They are involved in water and air pollution control, recycling, waste disposal, and public health issues. Environmental Specialists conduct hazardous-waste management studies in which they evaluate the significance of the hazard, advise on its treatment and containment, and develop regulations to prevent mishaps. They design municipal water supply and industrial wastewater treatment systems, conduct research on the environmental impact of proposed construction projects, analyze scientific data, and perform quality-control checks. Environmental Specialists are concerned with local and worldwide environmental issues. Some may study and attempt to minimize the effects of acid rain, global warming, automobile emissions, and ozone depletion. They also may be involved in the protection of wildlife. Many Environmental Specialists work as consultants, helping their clients to comply with regulations, prevent environmental damage, and clean up hazardous sites.

Distinguishing Characteristics of Levels

Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

Basic

- Employees in this Role perform standardized engineering work in defense of New Mexico's environmental quality.

Recommended Education and Experience for Full Performance

Bachelor's Degree in Environmental Science, Animal Science, Natural Science, Biological Science, Physical Science or Chemistry and two (2) years of experience in environmental science, animal science, natural science, biological science, physical science and/or chemistry.

Minimum Qualifications
Associate's Degree in Environmental Science, Animal Science, Natural Science, Biological Science, Physical Science and/or chemistry and two (2) years of work experience in environmental science, animal science, natural sciences, biological science, physical science and/or chemistry. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling four (4) years may substitute for the required education and experience.

Operational
- Employees in this Role independently perform technical engineering work in defense of New Mexico's environmental quality.
- Employees conduct supplementary investigations, research and surveys, issue permits and approvals, and monitor and/or participate in on-site inspections, both during and after construction of water quality/supply or air pollutant sources to ensure adherence to approved plans.

Recommended Education and Experience for Full Performance
Bachelor's Degree in Environmental Science, Animal Science, Natural Sciences, Biological Science, Physical Science or Chemistry and four (4) years of experience in environmental science, animal science, natural science, biological science, physical science and/or chemistry.

Minimum qualifications
Bachelor's Degree in Environmental Science, Animal Science, Natural Science, Biological Science, Physical Science or Chemistry and two (2) years of experience in environmental science, animal science, natural sciences, biological science, physical science and/or chemistry. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling six (6) years may substitute for the required education and experience.

Advanced
- Employees in this Role perform engineering work in defense of New Mexico's environmental quality.
- Employees review operation and maintenance manuals, costs estimates, progress reports, and design change orders.

Recommended Education and Experience for Full Performance
Bachelor's Degree in Environmental Science, Animal Science, Natural Science, Biological Science, Physical Science or Chemistry and six (6) years of experience in environmental science, animal science, natural science, biological science, physical science and/or chemistry .

Minimum Qualifications
Bachelor's Degree in Environmental Science, Animal Science, Natural Science, Biological Science, Physical Science or Chemistry and four (4) years of experience in environmental science, animal science, natural science, biological science, physical science and/or chemistry .Any combination of

education from an accredited college or university in a related field and/or direct experience in this occupation totaling eight (8) years may substitute for the required education and experience.

Knowledge and Skills

Note: This information has been produced by compiling information and documentation provided by O*NET. O*NET^{TM} is a trademark of the U.S. Department of Labor, Employment and Training Administration.

Knowledge

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.

Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Physics — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes.

Chemistry — Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Administration and Management — Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

Law and Government — Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.

Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.

Skills

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Speaking — Talking to others to convey information effectively.

Complex Problem Solving — Identifying complex problems and reviewing related information to

develop and evaluate options and implement solutions.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Systems Analysis — Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Science — Using scientific rules and methods to solve problems.

Operations Analysis — Analyzing needs and product requirements to create a design.

Statutory Requirements: This is a non-licensed occupation.

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization, essential functions*, and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/07/2001   **Revised:** 9/20/2011

*Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.

New Mexico State Personnel Office
2600 Cerrillos Road
Santa Fe, New Mexico87505-0127

Classification Description

PETROLEUM SPECIALIST

Class Title	Class Code	Pay Band	Alt Pay Band*
Petroleum Specialist-B	E2171B	65	70
Petroleum Specialist-O	E2171O	70	75
Petroleum Specialist-A	E2171A	75	80

In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.

Occupation Description
Devise methods to improve oil and gas well production and determine the need for new or modified tool designs. Oversee drilling and offer technical advice to achieve economical and satisfactory progress.

Nature of Work
Petroleum Specialists design methods for extracting oil and gas from deposits below the earth. Once these resources have been discovered, petroleum engineers work with geologists and other specialists to understand the geologic formation and properties of the rock containing the reservoir, to determine the drilling methods to be used, and to monitor drilling and production operations. They design equipment and processes to achieve the maximum profitable recovery of oil and gas. Because only a small proportion of oil and gas in a reservoir flows out under natural forces, petroleum engineers develop and use various enhanced recovery methods, including injecting water, chemicals, gases, or steam into an oil reservoir to force out more of the oil and doing computer-controlled drilling or fracturing to connect a larger area of a reservoir to a single well. Because even the best techniques in use today recover only a portion of the oil and gas in a reservoir, petroleum engineers research and develop technology and methods for increasing the recovery of these resources and lowering the cost of drilling and production operations.

Distinguishing Characteristics of Levels
Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

Basic
- Employees in this Role perform standardized engineering duties relative to regulation of oil and gas production.

Recommended Education and Experience for Full Performance
Bachelor's Degree in Environmental, Mechanical, Civil, or Geological Engineering and four (4) years of experience in a government regulatory role including oil field experience.

Minimum Qualifications
Bachelor's Degree in Environmental, Mechanical, Civil, or Geological Engineering and two (2) years of experience in a government regulatory role including oil field experience. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling six (6) years may substitute for the required education and experience.

Operational
- Employees in this Role review, evaluate, and approve applications from the oil and gas industry.
- Employees conduct hearings to review evidence from applicants for exceptions to rules and evaluate gas well tests and test procedures.

Recommended Education and Experience for Full Performance*
Bachelor's Degree in Environmental, Mechanical, Civil, or Geological Engineering and six (6) years of experience in a government regulatory role including oil field experience.

Minimum Qualifications
Bachelor's Degree in Environmental, Mechanical, Civil, or Geological Engineering and four (4) years of experience in a government regulatory role including oil field experience. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling eight (8) years may substitute for the required education and experience.

Advanced
- Employees in this Role solve problems in the development of engineering related policies/procedures for oil and gas production and conservation.

Recommended Education and Experience for Full Performance
Bachelor's Degree in Environmental, Mechanical, Civil, or Geological Engineering and eight(8) years of experience in a government regulatory role including oil field experience.

Minimum Qualifications
Bachelor's Degree in Environmental, Mechanical, Civil, or Geological Engineering and six (6) years of experience in a government regulatory role including oil field experience. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling ten (10) years may substitute for the required education and experience.

Knowledge and Skills
Note: This information has been produced by compiling information and documentation provided by O*NET. O*NET^{TM} is a trademark of the U.S. Department of Labor, Employment and Training Administration.

Knowledge

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Physics — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes.

Computers and Electronics — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.

Administration and Management — Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

Economics and Accounting — Knowledge of economic and accounting principles and practices, the financial markets, banking and the analysis and reporting of financial data.

Chemistry — Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Skills

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Speaking — Talking to others to convey information effectively.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Coordination — Adjusting actions in relation to others' actions.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Systems Analysis — Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

Statutory Requirements:

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization, essential functions*, and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.
Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/07/2001   **Revised:** 7/27/2012

*Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.

New Mexico State Personnel Office
2600 Cerrillos Road
Santa Fe, New Mexico87505-0127

Classification Description

PETROLEUM SPECIALIST SUPERVISOR

Class Title	Class Code	Pay Band	Alt Pay Band*
Petroleum Specialist Supervisor	**E2171S**	**80**	**85**

In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.

Purpose
Devotes a substantial portion of time assigning and directly supervising work of at least two (2) full time equivalent employees**, acting upon leave requests, conducting annual performance evaluations and recommending disciplinary actions. Interviewing and recommending selection of applicants and conducting training of personnel. Devises methods to improve oil and gas well production and determines the need for new or modified tool designs. Oversee drilling and offer technical advice to achieve economical and satisfactory progress.

Nature of Work
Petroleum Specialist Supervisor devotes a substantial portion of time assigning and directly supervising work of at least two (2) full time equivalent employees and designs methods for extracting oil and gas from deposits below the earth. Once these resources have been discovered, petroleum engineers work with geologists and other specialists to understand the geologic formation and properties of the rock containing the reservoir, to determine the drilling methods to be used, and to monitor drilling and production operations. They design equipment and processes to achieve the maximum profitable recovery of oil and gas. Because only a small proportion of oil and gas in a reservoir flows out under natural forces, petroleum engineers develop and use various enhanced recovery methods, including injecting water, chemicals, gases, or steam into an oil reservoir to force out more of the oil and doing computer-controlled drilling or fracturing to connect a larger area of a reservoir to a single well. Because even the best techniques in use today recover only a portion of the oil and gas in a reservoir, petroleum engineers research and develop technology and methods for increasing the recovery of these resources and lowering the cost of drilling and production operations.

Distinguishing Characteristics
The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

- Devotes a substantial portion of time assigning and directly supervising work of at least two (2) permanent/full time employees. Acts upon leave requests, conducts annual performance evaluations and recommends disciplinary actions.
- Conducts training of personnel; may interview and recommend selection of applicants.
- Provides career coaching through mentoring and arranges for outside training opportunities when possible.
- Makes well-informed, effective, and timely decisions and perceives the impact and implications of those decisions.
- Makes point of view in a clear and convincing manner.
- Listens effectively and clarifies information as needed.
- Identifies and analyzes problems; weighs relevance and accuracy of information; generates and evaluates alternative solutions; makes recommendations.
- Writes in a clear and concise manner.
- Develops networks and builds alliance; collaborates across boundaries to build strategic relationships and achieve common goals.
- Builds and manages workforce based on organizational goals, budget considerations, and staffing needs
- Ensures that employees are appropriately recruited, selected, and appraised; addresses performance issues.
- Keeps up to date on occupationally specific technological developments; makes effective use of technology to achieve results.
- Employees in this Role solve problems in the development of engineering related policies/procedures for oil and gas production and conservation.

Recommended Education and Experience for Full Performance
Bachelor's Degree in Environmental, Mechanical, Civil, or Geological Engineering and eight (8) years of experience in a government regulatory role including oil field experience, four (4) years of which must be supervisory.

Minimum Qualifications
Bachelor's Degree in Environmental, Mechanical, Civil, or Geological Engineering and six (6) years of experience in a government regulatory role including oil field experience. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling ten (10) years may substitute for the required education and experience.

Knowledge and Skills
Note: This information has been produced by compiling information and documentation provided by O*NET. O*NET^TM is a trademark of the U.S. Department of Labor, Employment and Training Administration.

Knowledge

Leadership - Knowledge of leading through influence and persuasion by establishing mutual trust, respect, and loyalty, through shared beliefs, values, and goals; Being cognizant of subordinates' needs, goals, and aspirations, and to carefully consider these personal variables when making decisions.

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Physics — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes.

Computers and Electronics — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.

Administration and Management — Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

Economics and Accounting — Knowledge of economic and accounting principles and practices, the financial markets, banking and the analysis and reporting of financial data.

Chemistry — Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Skills

Leadership - Displaying attributes that makes employees willing to follow; applying effort to increase productiveness in areas needing the most improvement; establishing a spirit of cooperation and cohesion for achieving goals; making the right things happen on time; providing performance feedback, coaching, and career development to individuals to maximize their probability of success; giving subordinates the authority to get things accomplished in the most efficient and timely manner.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Speaking — Talking to others to convey information effectively.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Coordination — Adjusting actions in relation to others' actions.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Systems Analysis — Determining how a system should work and how changes in conditions,

operations, and the environment will affect outcomes.

Statutory Requirements: N/A

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization*, *essential functions*, and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/27/2012   **Revised:**

**Means two (2) or any combination of full-time equivalent (FTE) status that equals at least two (2) regular or term status employees in non-temporary positions.

***Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation. Not to be construed as minimum qualifications.

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.

State of New Mexico
Energy, Minerals & Natural Resources Department
Oil Conservation Division

APPENDIX C

**REQUEST FOR ENVIRONMENTAL
LABORATORY PRICE AGREEMENT**

GSD/PD (Rev. 01/11)

State of New Mexico
General Services Department

Price Agreement

Awarded Vendor
8 Vendors- See Page 6 - 7

Telephone No. _____

Price Agreement Number: **10-521-00-05322**

Payment Terms: **See Page 6 - 7**

F.O.B.: **Destination**

Delivery: **See Page 6 -7**

Ship To:
New Mexico Energy, Minerals, and Natural Resources Department
Oil Conservation Division (Various Locations)

Procurement Specialist: Mike Riggs

Telephone No.: (505) 827-0564

Invoice:
Same as Ship To

For questions regarding this contract please contact:
Glenn Von Gonten (505) 476-3488

Title: **Analytical Laboratory Services**

Term: **April 1, 2011 thru March 31, 2012**

This Price Agreement is made subject to the "terms and conditions" shown on the reverse side of this page, and as indicated in this Price Agreement,

Accepted for the State of New Mexico

Date: 3/31/2011

New Mexico State Purchasing Agent

Terms and Conditions
(Unless otherwise specified)

I. General: When the State Purchasing Agent or his/her designee issues a purchase document in response to the Vendor's bid, a binding contract is created.

2. Variation in Quantity: No variation in the quantity of any item called for by this order will be accepted unless such variation has been caused by conditions of loading, shipping, packing or allowances in manufacturing process and then only to the extent, if any, specified in this order.

3. Assignment:

a. Neither the order, nor any interest therein, nor any claim thereunder, shall be assigned or transferred by the Vendor, except as set forth in Subparagraph 3b or as expressly authorized in writing by the State Purchasing Agent or his/her designee. No such assignment or transfer shall relieve the Vendor from the obligations and liabilities under this order.

b. Vendor agrees that any and all claims for overcharge resulting from antitrust violations which are borne by the State as to goods, services, and materials purchased in connection with this bid are hereby assigned to the State.

4. State Furnished Property: State furnished property shall be returned to the State upon request in the same condition as received except for ordinary wear, tear and modifications ordered hereunder.

5. Discounts: Prompt payment discounts will not be considered in computing the low bid. Discounts for payment within twenty (20) days will be considered after the award of the contract. Discounted time will be computed from the date of receipt of the merchandise invoice, whichever is later.

6. Inspection: Final inspection and acceptance will be made at the destination. Supplies rejected at the destination for nonconformance with specifications shall be removed at the Vendor's risk and expense, promptly after notice of rejection.

7. Inspection of Plant: The State Purchasing Agent or his/her designee may inspect, at any reasonable time, the part of the Contractor's, or any subcontractor's plant or place of business, which is related to the performance of this contract.

8. Commercial Warranty: The Vendor agrees that the supplies or services furnished under this order shall be covered by the most favorable commercial warranties the Vendor gives for such to any customer for such supplies or services. The rights and remedies provided herein shall extend to the State and are in addition to and do not limit any rights afforded to the State by any other clause of this order. Vendor agrees not to disclaim warranties of fitness for a particular purpose of merchantability.

9. Taxes: The unit price shall exclude all state taxes.

10. Packing, Shipping and Invoicing:

a. The State's purchasing document number and the Vendor's name, user's name and location shall be shown on each packing and delivery ticket, package, bill of lading and other correspondence in connection with the shipments. The user's count will be accepted by the Vendor as final and conclusive on all shipments not accompanied by a packing ticket.

b. The Vendor's invoice shall be submitted in triplicate, duly certified and shall contain the following information: order number, description of supplies or services, quantities, unit price and extended totals. Separate invoices shall be rendered for each and every complete shipment.

c. Invoices must be submitted to the using agency and NOT the State Purchasing Agent.

11. Default: The State reserves the right to cancel all or any part of this order without cost to the State, if the Vendor fails to meet the provisions of this order and, except as otherwise provided herein, to hold the Vendor liable for any excess cost occasioned by the State due to the Vendor's default. The Vendor shall not be liable for any excess costs if failure to perform the order arises out of causes beyond the control and without the fault or negligence of the Vendor, such causes include but are not restricted to, acts of God or the public enemy, acts of the State or Federal Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather and defaults of subcontractors due to any of the above, unless the State shall determine that the supplies or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the Vendor to meet the required delivery scheduled. The rights of the State provided in this paragraph shall not be exclusive and are in addition to any other rights now being provided by law or under this order.

12. **Non-Collusion:** In signing this bid the Vendor certifies he/she has not, either directly or indirectly, entered into action in restraint of free competitive bidding in connection with this offer submitted to the State Purchasing Agent or his/her designee.

13. **Nondiscrimination:** Vendor doing business with the State of New Mexico must be in compliance with the Federal Civil Rights Act of 1964 and Title VII of the Act (Rev. 1979) and the Americans with Disabilities Act of 1990 (Public Law 101-336).

14. **The Procurement Code:** Sections 13-1-28 through 13-1-99 NMSA 1978, imposes civil and criminal penalties for its violation. In addition the New Mexico criminal statutes impose felony penalties for bribes, gratuities and kickbacks.

15. All bid items are to be NEW and of most current production, unless otherwise specified.

16. **Payment for Purchases:** Except as otherwise agreed to: late payment charges may be assessed against the user state agency in the amount and under the conditions set forth in Section 13-1-158 NMSA 1978.

17. **Workers' Compensation:** The Contractor agrees to comply with state laws and rules pertaining to Workers' Compensation benefits for its employees. If the Contractor fails to comply with Workers' Compensation Act and applicable rules when required to do so, this Agreement may be terminated by the contracting agency.

18. Bids must be submitted in a sealed envelope with the bid number and opening date clearly indicated on the bottom left hand side of the front of the envelope. Failure to label bid envelope will necessitate the premature opening of the bid in order to identify the bid number.

New Mexico Employees Health Coverage

A. If Contractor has or grows to six (6) or more employees who work or who are expected to work an average of at least twenty (20) hours per week over a six (6) month period during the term of the contract, Contractor certifies, by signing this agreement, to have in place and agree to maintain for the term of the contract health insurance for those employees and offer that health insurance to those employees no later than July I, 2010, if the expected annual value in the aggregate of any and all contracts between Contractor and the State exceed two hundred fifty thousand dollars ($250,000).

B. Contractor agrees to maintain a record of the number of employees who have (a) accepted health insurance; (b) declined health insurance due to other health insurance coverage already in place; or (c) declined health insurance for other reasons. These records are subject to review and audit by a representative of the State.

C. Contractor agrees to advise all employees of the availability of State publicly financed health care coverage programs by providing each employee with, as a minimum, the following website link for additional information: http://insurenewmexico.state.nm.us/

New Mexico Pay Equity Initiative

Contractor agrees, if it has ten (I 0) or more New Mexico employees OR eight (8) or more employees in the same job classification, at any time during the term of this contract, to complete and submit the PE10-249 form on the annual anniversary of the initial report submittal for contracts up to one (1) year in duration. If contractor has (250) or more employees, contractor must complete and submit the PE250 form on the annual anniversary of the initial report submittal for contracts that are up to one (1) year in duration. For contracts that extend beyond one (1) calendar year, or are extended beyond one (1) calendar year, contractor also agrees to complete and submit the PEI0-249 or PE250 form, whichever is applicable, within thirty (30) days of the annual contract anniversary date of the initial submittal date or, if more than 180 days has elapsed since submittal of the last report, at the completion of the contract, whichever comes first. Should contractor not meet the size requirement for reporting at contract award but subsequently grows such that they meet or exceed the size requirement for reporting, contractor agrees to provide the required report within ninety (90) days of meeting or exceeding the size requirement. That submittal date shall serve as the basis for submittals required thereafter.

Contractor also agrees to levy this requirement on any subcontractor(s) performing more than 10% of the dollar value of this contract if said subcontractor(s) meets, or grows to meet, the stated employee size thresholds during the term of the contract. Contractor further agrees that, should one or more subcontractor not meet the size requirement for reporting at contract award, but subsequently grows such that they meet or exceed the size requirement for reporting, contractor will submit the required report, for each such subcontractor, within ninety (90) days of that subcontractor meeting or exceeding the size requirement. Subsequent report submittals, on behalf of each such subcontractor, shall be due on the annual anniversary of the initial report submittal. Contractor shall submit the required form(s) to the State Purchasing Division of the General Services Department, and other departments as may be determined, on behalf of the applicable subcontractor(s) in accordance with the schedule contained in this paragraph. Contractor acknowledges that this subcontractor requirement applies even though contractor itself may not meet the size requirement for reporting and be required to report it self.

Notwithstanding the foregoing, if this Contract was procured pursuant to a solicitation, and if Contractor has already submitted the required report accompanying their response to such solicitation, the report does not need to be re- submitted with this Agreement.

The PE10-249 and PE250 worksheet is available at the following website:
http://www.generalservices.state.nm.us/spd/guidance.doc

Department Price Agreement

Article I– Statement of Work

Under the terms and conditions of this Price Agreement, the using agency may issue orders for items and/or services described herein.

The terms and conditions of this Price Agreement shall form a part of each order issued hereunder.

The items and/or services to be ordered shall be listed under Article IX– Price Schedule. All orders issued hereunder will bear both an order number and this Price Agreement number. It is understood that no guarantee or warranty is made or implied by either the New Mexico State Purchasing Agent or the user that any order for any definite quantity will be issued under this Price Agreement. The Contractor is required to accept the order and furnish the items and/or services in accordance with the articles contained hereunder for the quantity of each order issued.

Article II-Term

The term of this Price Agreement for issuance of orders shall be as indicated in specifications.

Article III -specifications

Items and/or services furnished hereunder shall conform to the requirements of specifications and/or drawings applicable to items listed under Article IX -Price Schedule. Orders issued against this schedule will show the applicable price agreement item(s), number(s), and price(s); however they may not describe the item(s) fully.

Article IV– Shipping and Billing Instructions

Contractor shall ship in accordance with the instructions of this form. Shipment shall be made only against specific orders which the user may place with the contractor during the term indicated in Article II -Term. The Contractor shall enclose a packing list with each shipment listing the order number, price agreement number and the commercial parts number (if any) for each item. Delivery shall be made as indicated on page 1. If vendor is unable to meet stated delivery the State Purchasing Agent must be notified.

Article V - Termination

This Price Agreement may be terminated by either signing party upon written notice to the other at least thirty (30) days in advance of the date of termination. Notice of termination of the price agreement shall not affect any outstanding orders.

Article VI -Amendment

This Price Agreement may be amended by mutual agreement of the New Mexico State Purchasing Agent and the contractor upon written notice by either party to the other. An amendment to this Price Agreement shall not affect any outstanding orders issued prior to the effective date of the amendment as mutually agreed upon, and as published by the New Mexico State Purchasing Agent. Amendments affecting price adjustments and/or extension of contract expiration of contract are not allowed unless specifically provided for in the bid and contract documents.

Article VII- Issuance or Orders

Only written signed orders are valid under this Price Agreement.

Article VIII - Packing (if applicable)

Packing shall be in conformance with standard commercial practices.

Article IX- Price Schedule

Prices as listed in the price schedule hereto attached are firm.

Price Agreement#: 10-521-00-05322

(AA) 0000064612

Envirosearch Corporation

dba Cardinal Laboratories

101 East Marland

Hobbs, NM 88240

(575) 393-2326

Payment Term: Net 30

FOB: Destination

Delivery: As Requested

(AB) 0000064612

Envirosearch Corporation

dba Green Analytical Laboratories

75 Suttle Street

Durango, CO 81303

(970) 247-4220

Payment Term: Net 30

FOB: Destination

Delivery: As Requested

(AC) 0000050567   54R58

Hall Environmental Analysis Laboratory

490 I Hawkins NE Suite D

Albuquerque, NM 87109

(505) 345-3975

Payment Term: Net 30

FOB: Destination

Delivery: As Requested

(AD) 0000091901

Pace Analytical

9608 Loiret Blvd

Lenexa, KS 66219

(303) 522-9706

Payment Term: Net 30

FOB: Destination

Delivery: PDF File & Excel EDD

(AE) 0000086995

Summit Environmental Technologies, Inc.

2709 Pan American Freeway, NE Ste. A/C

Albuquerque, NM 87107

(505) 345-3335

Payment Term: Net 20

FOB: Destination

Delivery: As Requested

(AF) 0000010813

Testamerica Laboratories, Inc.

Testamerica St. Louis

13715 Rider Trail North

St. Louis, MO 63045

(314) 298-8566

Payment Term: Net 30

FOB: Destination

Delivery: As Requested

Price Agreement #: 10-521-00-05322

(AG) 0000044396

TraceAnalysis, Inc.

Dr. Blair Leftwich

670 I Aberdeen, Suite 9

Lubbock, TX 79424-1501

(806) 794-1296

Payment Term: 20 days

5% FOB: Destination

Delivery: Federal Express

(AH) 0000091363

B & A Laboratories

dba Xenco Laboratories

12600 W 1-20 East

Odessa, TX 79765

(432) 563-1800

Payment Term: Net 30

FOB: Destination

Delivery: As Requested

Establish a Price Agreement for Analytical Laboratory Services for the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division.

The term of this agreement shall be for one (1) year from date of award with the option to extend for a period (s) of three (3) additional years, on a year-to-year basis, by mutual agreement of all parties and approval of the New Mexico State Purchasing Director at the same price, terms and conditions. This agreement shall not exceed four (4) years.

In the event of a product cost increase an escalation request will be reviewed by this office on an individual basis. Please be aware this measure is not intended to allow any increase in profit margin, only to compensate for an actual cost increase. Prices firm on first year.

1.0 Introduction:

The Oil Conservation Division of the Energy, Minerals and Natural Resources Department, hereinafter referred to as "OCD," requests bids for analytical laboratory services to be performed on field samples collected by OCD. The purpose of this procurement is to establish a Price Agreement for the analytical services, and may result in contracts awarded to multiple vendors.

The successful vendor(s) will be laboratories accredited by the National Environmental Laboratory Accreditation Conference to perform the analytical services. The successful vendor(s) shall provide sampling supplies to OCD, handle samples submitted for analysis in accordance with Environmental Protection Agency Chain-of-Custody (COC) procedures, perform the requested analyses as identified in Attachment A following approved methodologies, and provide timely analytical results in an electronic form suitable for inclusion in a Microsoft Word or Adobe Acrobat format. In addition, the successful vendor(s) must post the analytical results on a secured website maintained by the vendor that allows customers to login and privately access and download analytical data.

All work shall be performed on a fixed price basis at the price specified in the Fee Schedule. Prices shall include the cost of sampling supplies and shipping.

There is no guarantee that OCD will require any particular analysis, or any particular number of analyses, during the term of the contract.

2.0 Definitions:

This section contains definitions and abbreviations that are used throughout this ITB.

"Vendor" means environmental laboratory services vendor or business contractor desiring to obtain a contract with OCD to provide services for a fee.

"COC" means Chain-of-Custody Form used to legally document the sampling event, type of analytical tests requested, the OCD District Office contact information, and custody transfer up to receipt at the laboratory.

"Contract" means a written Price Agreement for the procurement of items of tangible personal property and services.

"Contractor" means a successful bidder who enters into a binding contract.

"Deliverable" means product outcome, services or tangible property that is a requirement of the contract, Invitation for Bid, work order, or project design pursuant to all aspects of the scope of work and specifications.

"Desirable" the terms "may", "can", "should", "preferably", or "prefers" identify a desirable or discretionary item.

"EPA" means the United States Environmental Protection Agency.

"GSD" means General Services Department.

"ITB" means Invitation for Bid and is an agreement between the vendor and State of New Mexico for providing services for an agreed fee over a period under agreed terms of an IFB Agreement.

"Mandatory" the terms "must", "shall", "will", "is required", or "are required", identify a mandatory item or factor. Proposals that fail to meet a mandatory item or factor may be rejected.

"Minimum" means to identify a desirable or discretionary factor and limit of variation, function over a specific interval or criteria.

"NELAC standards" means the standards adopted at the 2003 National Environmental Laboratory Accreditation Conference, EPA/600/R-04/003.

"NELAC" means the National Environmental Laboratory Accreditation Conference.

"OCD" means the New Mexico Oil Conservation Division.

"Quality Assurance" means contractor's formal review of care, problem identification, corrective actions to remedy any deficiencies and evaluation of actions taken in service within specifications.

"QA/QC" means Quality Assurance/Quality Control and/or minimum environmental standards accepted by the EPA for collection of reliable and useable data to assess risks to human health and the environment.

"Quality Control" means formal enhanced integrity and data processing by the contractor, thereby reducing turnaround time to the OCD and ultimately improving the quality of the final product with confirmation/calibration tests, site verification, and technical procedures that measures the attributes and performance of the process to ensure high quality data.

"Sampler" or **"Sample Collector"** means OCD sampler or New Mexico certified sampler.

"State Purchasing Agent" or "SPA" means the purchasing agent for the state of New Mexico at GSD or GSD's designated representative.

3.0 Scope of Work:

3.1 General: Upon receipt of an environmental sample and a COC Form from OCD requesting analytical work described in Attachment A ("Fee Schedule"), the Contractor shall perform the requested analytical work at the fixed price set out in Attachment A and timely report the results of its analysis to OCD in the specified formats. All work performed shall at a minimum comply with the EPA "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846) or other method(s) approved in advance by OCD.

3.2 NELAP Accreditation: Analytical work under the contract must be performed by a laboratory accredited under the National Environmental Laboratory Accreditation Program (NELAP).

3.3 Web Site: The Contractor must maintain a secured web site that allows customers to login and privately access and download analytical data.

3.4 Laboratory-Provided Supplies: The Contractor shall provide OCD with ice chests, sample containers (including blind duplicates, as requested with specified preservatives), laboratory chain-of-custody forms, labels, field blanks, and miscellaneous supplies such as gloves, markers, *etc.,* within 72 hours of verbal or email request by OCD.

3.5 Shipping: The cost of shipping laboratory-provided supplies to OCD and the cost of shipping samples from OCD to the Contractor or approved sub-contractor shall be included in the fixed price set out in Attachment A. Common carrier items (items exceeding 108" girth and/or 70 lbs.) may be subject to additional freight, at cost, to be pre-paid by the laboratory and added as a separate item on the invoice.

3.6 Laboratory Handling and Documentation of Samples: The Contractor shall handle all samples submitted for analyses in accordance with the EPA Chain-of-Custody (COC) procedures specified in Section 9.2.2.7 of Chapter Nine of SW-846. OCD will ship samples to the Contractor, or any approved sub-contractor, as mutually agreed upon, unless the Contractor specifies its own pick-up service. Any work requested by OCD through submission of a COC Form will be completed in accordance with this Contract. In the event of any conflict, this Contract takes precedence.

3.7 Analytical Methods and Detection Limits: The Contractor shall analyze environmental samples using the EPA methods specified in Attachment A. The Contractor may use equivalent methods of analysis when authorized in advance by OCD.

3.8 Time for Completing Analysis: All samples shall be analyzed within the method-specified holding time following appropriate analytical method procedures. The Contractor shall NOT bill OCD for samples not analyzed within the required holding time, unless specifically requested to do so by OCD.

3.9 Laboratory-Provided Deliverables: The Contractor shall provide a data package including complete analytical data results by summary reports using standard certified laboratory EPA QA/QC and DQO formats with data summary and a letter and table format of all analyses, with a cover letter. The Contractor shall certify its analyses in a Quality Control Report submitted with the data package.

The Contractor must submit analytical results to the OCD district office or the environmental bureau specified on the COC form in an electronic form suitable for inclusion in a Microsoft Word, Microsoft Excel, Comma Separated (CSV), or Adobe Acrobat format, and post the analytical results on the laboratory website. One original written hard paper copy shall be supplied at no extra cost if requested by OCD.

3.10 Time for Submitting Results: The Contractor shall submit the data package to the appropriate OCD district office or the environmental bureau at the address shown on the COC form within 30 calendar days from receipt of samples for normal priority samples, within 14 calendar days from receipt of samples for priority 2 samples, and within 24 hours from receipt of samples for priority 1 samples. Surcharges for priority 1 and 2 samples shall be included in the Attachment A. Cost for normal priority samples not received within a thirty-calendar-day turnaround time shall be reduced at a rate of 10% of the standard rate of the overdue analyses for each additional work week up to 50% of the total cost of the analyses, unless a delay in delivery has been requested by the Contractor and approved by OCD in writing. The results of the analyses must be posted on the laboratory website within 30 calendar days of completion.

3.11 Disposal of Samples: Upon completion of analyses, the Contractor shall be responsible for the disposal of all samples, but shall not dispose of the samples for at least 30 days after delivery of the sample results packets, unless otherwise specified by OCD.

3.12 QA/QC: The Contractor must provide quality assurance/quality control (QA/QC) of laboratory methods by testing laboratory control samples with duplicates (LCS/LCSD) and matrix spike/matrix spike duplicates (MS/MSD) with OCD sample batches on a regular basis to maintain and document the precision and accuracy of its environmental laboratory instruments.

The Contractor must maintain a written quality assurance/quality control (QA/QC) plan as required by US EPA QA/R-5 or any updated version thereof.

3.13 OCD Inspection: The Contractor shall make available its premises and appropriate staff when required at mutually-agreed times for inspection by OCD personnel or designated third parties for the purpose of laboratory audit, data verification and validation.

4.0 Contract Requirements:

4.1 Term: The term of this Contract shall be for one (1) year from the date of the award with the option to extend for a period of three (3) additional years, on a year-by-year basis, at the same prices, terms, and conditions by agreement of all parties and approval of the New Mexico State Purchasing Agent. The total length of this Contract shall not exceed four (4) years.

4.2 Subcontracting: The Contractor shall not subcontract any portion of this agreement without the prior written approval of OCD. All sub-contractors must be identified on Attachment A identifying the specific services each subcontractor will provide. Any changes to the subcontracting information provided on the Attachment A requires the prior written approval of OCD. No subcontracting shall relieve the Contractor from its obligations and liabilities under this Contract, nor shall any subcontracting obligate payment from OCD.

4.3 Amendment: This Contract shall not be amended except by written amendment agreed to by all Contractors and OCD, and approved by the State Purchasing Agent.

4.4 No Additional Fees. The Contractor shall not collect any additional fee from facilities for services provided under this contract.

4.5 Invoicing: Upon completion of requested deliverables, the Contractor shall submit the invoice to OCD district office or the environmental bureau that submitted the COC requesting the invoiced services. The Contractor's invoice must include a detailed statement accounting for all services performed, including references to relevant item number from the Attachment A. All invoices received for services rendered near the end of the State Fiscal Year (June 30th) must be received by OCD no later than July 15th. Invoices received after such date may be delayed an additional 60 calendar days for final payment.

4.6 Acceptance: The OCD district office or the environmental bureau requesting laboratory services shall be responsible for approving deliverables. In accordance with Section 13-1-158 NMSA 1978, OCD shall determine if the deliverable meets all specifications. No payment shall be made for any deliverable until the individual deliverable that is the subject of the payment invoice has been accepted in writing by OCD. In order to accept the deliverable, OCD will assess the quality assurance level of the deliverable and determine at a minimum that the deliverable:

> 1. Complies with the deliverable requirements as defined in the scope of work;
> 2. Complies with the terms and conditions of the Invitation for Bid;
> 3. Meets the performance measures for the deliverable and this agreement; and
> 4. Meets or exceeds the generally accepted industry standards and procedures for the deliverables. if the deliverable is deemed acceptable under quality assurance by OCD, OCD will notify the Contractor of acceptance.

4.7 Rejection: Unless OCD gives notice of rejection within 30 calendar days, the deliverable will be deemed to have been accepted. If the deliverable is deemed unacceptable under quality assurance, then OCD will supply a consolidated

set of comments indicating issues, unacceptable items, and/or requested revisions accompanying the rejection in writing within 30 calendar days from the date OCD receives the deliverable and accompanying payment invoice. Upon rejection and receipt of comments, the Contractor will have I0 business days to resubmit the deliverable to OCD with all appropriate corrections or modifications made. OCD will again determine whether the deliverable is acceptable under quality assurance, and provide a written determination within 30 calendar days of receipt of the deliverable. If the deliverable is once again deemed unacceptable under quality assurance and thus rejected, then the Contractor will be required to provide methods and a timeline for corrective action that is acceptable to OCD. The Contractor may also be subject to all damages and remedies attributable to the late delivery of the deliverable under the terms of this agreement and available at law or equity. In the event that a deliverable must be resubmitted more than twice for acceptance, the Contractor shall be deemed as in breach of this agreement. OCD may seek any and all damages and remedies under the terms of this contract and available at law or equity. Additionally, OCD may terminate this contract.

4.8 Payment: The Contractor shall receive payment within 30 calendar days from date of receipt of a detailed invoice for accepted deliverable. All invoices must be processed and approved by the OCD district office or the environmental bureau that requested the services.

If payment is made by mail, the payment shall be deemed tendered on the date it is postmarked. However, OCD shall not incur late charges, interest, or penalties for failure to make payment within 30 calendar days from the date OCD receives the deliverable and accompanying payment invoice.

4.9 Default: The Contractor is in apparent default of the contract, if the Contractor:

1. Fails to begin the work under the contract within the time specified;
2. Fails to perform the work with sufficient supervision, workmen, equipment, or materials to assure the prompt completion of said work;
3. Performs the work unsuitably or neglects or refuses testing materials or to perform any new work as may be rejected as unacceptable and unsuitable;
4. Fails to resume work which has been discontinued within a reasonable time after notice to do so; or
5. Becomes insolvent or is declared bankrupt or commits any acts of bankruptcy or insolvency.

Upon the default of the Contractor, OCD may undertake to complete the work with its own forces, or may procure a completing contractor to finish the work. All costs and charges thereby incurred by OCD, together with the cost of completing the work under contract, will be deducted from funds which are due or may become due the defaulting Contractor.

4.10 Termination: This agreement may be terminated by either the Contractor or OCD upon written notice delivered to the other party at least 30 calendar days before the intended date of termination. By such termination, neither the Contractor nor OCD may nullify obligations already incurred for performance or failure to perform complete laboratory services before the date of termination. The provision is not exclusive and does not waive other legal rights and reminds afforded the state in such circumstances as default/breach of contract. OCD shall pay the Contractor for acceptable work, determined in accordance with the specifications and standards set forth in this IFB, performed before the effective date of termination, but shall not be liable for any work performed after the effective date of termination.

5.0 Contractor Further Agrees:

5.1 Workers Compensation: Contractor agrees to comply with state laws and rules pertaining to workers' compensation insurance coverage for its employees. If Contractor fails to comply with the Workers' Compensation Act and applicable rules when required to do so, the contract may be cancelled effective immediately.

5.2 Prices Quoted. Prices quoted on Attachment "A" represent the total compensation to be paid by OCD for goods and/or services provided, with the exception of state gross receipts tax or local option tax(es) and additional freight as described under "Shipping", which shall be added at time of invoicing. The Contractor is responsible for payment of all costs of labor, equipment, tools, materials, federal tax, permits, licenses, fees, and any other items necessary to complete the work provided. The prices quoted in this contract include an amount sufficient to cover such costs.

5.3 Terms and Specifications: The conditions and specifications sent out in the "Invitation for Bid" are inseparable and indivisible. Any vendor, by submitting a bid, agrees to be bound by all such conditions or specifications sent out in this "Invitation for Bid". Any attempt to vary or change the conditions or specifications of the bid shall, at the discretion of the state, constitute grounds for rejection of the entire bid.

5.4 Taxes: Price quoted on Attachment "A" shall not include state gross receipts tax or local option tax(es). Such tax or taxes shall be added at time of invoicing at current rate, and shown as a separate item to be paid by OCD.

5.5 Independent Contractor: The Contractor shall be considered an independent contractor and not an employee of the State of New Mexico. However, directions as to time and place of performance and compliance with rules and regulations may be required by OCD.

5.6 Penalties: The Procurement Code, Sections 13-1-28 through 13-1-199 NMSA 1978, imposes civil and misdemeanor criminal penalties for its violation. In addition, the New Mexico criminal statutes impose felony penalties for bribes, gratuities, and kick-backs.

6.0 Bids:

6.1 General: Submittal of a bid constitutes an offer to perform the work described in the Scope of Work at the prices set out in the Fee Schedule under a contract subject to the Contract Requirements.

6.2 Ambiguities, Inconsistencies, and Errors: Bidders shall promptly notify OCD of any ambiguity, inconsistency, or error which they may discover upon the examination of the bidding documents.

6.3 Changes: All ITB items bid must conform to all requirements sited herein.

6.4 Identifying Information. The bidder shall fill out the identifying information required in Attachment A including the bidder's contact information, Federal Tax ID number, NM Gross Receipts Tax number and/or Social Security number.

6.5 Price Bids. The bidder must fill out the Attachment "A", including a price per unit of work or analysis. The price bid represents the total compensation to be paid by OCD for goods and/or services provided, with the exception of state gross receipts tax or local option tax(es) and additional freight as described under "Shipping", which shall be added at time of invoicing. The price bid shall include all costs associated with providing OCD with the necessary sampling supplies, performing the requested analysis, providing the results in the required formats (including posting results on a secured website maintained by the bidder and providing OCD with access to the website to view and download the posted information), shipping costs including shipping sampling supplies and analysis results to OCD and shipping samples from OCD to the Contractor or the approved subcontractor, and the handling and disposal of wastes that may occur during shipping or at the laboratory. The Contractor is responsible for payment of all costs of labor, equipment, tools, materials, federal tax, permits, licenses, fees, and any other items necessary to complete the work provided. The price bid shall include an amount sufficient to cover such costs. Once a contract is in place, no additional charges shall be considered or paid other than those agreed to in the contract.

6.6 Subcontractors: If the bidder will use a subcontractor to perform all or part of the analytical work, the bidder must identify each subcontractor on the Attachment A and identify the specific work each subcontractor will perform.

6.7 Attachments: Each bid packet must include the following:

1. Attachment "A", including a completed Fee Schedule with specified information; and,
2. Proof of NELAC accreditation to perform the required analytical work for each laboratory performing analytical work under the IFB, including all subcontractors.

6.8 Submittal: The <u>bidder must</u> submit one hard copy of the bid packet and one electronic copy (CD-Rom) of the Attachment "A" Fee Schedule in a sealed envelope or package labeled with the opening date written on the lower left hand corner of the outside of the envelope or package. Proposals submitted by facsimile or e-mail will not be accepted. Submit the ITB bid packet to:

General Services Department
PO Box 6850
Santa Fe, New Mexico 87502-6850

7.0 Method of Award:

7.1 Date, Time, and Place of Bid Opening: The date, time, and place of bid opening shall be as set by GSD on the notice for this ITB.

7.2 Rejection of Bids: GSD shall have the right to reject any or all bids, and in particular to reject a bid submitted without all required attachments or a bid in any way incomplete or irregular.

7.3 Evaluation Criteria: Award of an ITB shall be to a bidder or bidders performing the work described in "Scope of Work" based on the prices agreed to in the Attachment "A". Awards shall be made in the best interest of the State of New Mexico. The State Purchasing Agent reserves the right to award this ITB bid in total or by specific groups of items on the basis of the individual price per analysis or item or any combination of these, which in his/her judgment, best serves the interest of the State of New Mexico. Multiple awards to bidders on the ITB may be made in the best interest of the State.

7.4 Use of Price Agreement: No particular quantities of each item shall be purchased throughout the duration of the Price Agreement, and there is no guarantee, expressed or implied herein, that any particular item or test, or any particular number of tests, or other tests from the Attachment "A" will ever be ordered within the term of the Price Agreement.

Attachment A Fee Schedule

1. Comprehensive Analytical Suite:

• EPA SW-846 Method 8021B- Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors;
• EPA SW-846 Method 8260C- Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)GC/MS constituents as listed in the method plus MTBE;
• EPA SW-846 Method 8270D - Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) as listed in the method plus 1-methylnaphthalene and 2-methylnaphthalene;
• EPA SW-846 Method 8310 Polynuclear Aromatic Hydrocarbons *(Note: method 8270 SIMS allowed if detection limits meet or exceed WQCC numerical standards.)*;
• EPA SW-846 Method 6010C/6020A- Metals Inductively Coupled Plasma-Atomic Emission Spectrometry (dissolved);
• EPA SW-846 Method 7470N7471B- Mercury (dissolved);
• General Chemistry (Cations and Anions) methods from 40 CFR 136.3 to include: fluoride (EPA Method 300); calcium (Method 6010C); potassium (EPA SW-846 Method 60IOC); magnesium (EPA SW-846 Method 6010C), sodium bicarbonate (EPA Method 310.1), carbonate (EPA Method 310.1), chloride (EPA Method 300.0, 300.1, or SM 4500B), sulfate (EPA Method 300.1), total dissolved solids (EPA Method 160.1) for aqueous only, cation/anion balance (EPA Method 300), pH (EPA Method 150.1), specific conductivity (EPA Method 120.1) and bromide (EPA Method 320.1);
• EPA SW-846 Method 8015C- Nonhalogenated Organics by Gas Chromatography (GRO/DRO) Petroleum Hydrocarbons;
• EPA Method 418.1 Total Extractable Petroleum Hydrocarbons or other OCD approved methods;
• EPA Method 405.1 - Biochemical Oxygen Demand (BOD); and
• EPA Method 410.1- Chemical Oxygen Demand (COD).

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous: 3 x 4 ounce glass jars with Teflon lined screw cap, no preservative

Aqueous:		
	VOCs	3 x 40 mL VOAs with HCL
	SVOCs	1 x 1 L glass, no preservative
	Metals	1 x 500 mL plastic with HN03
	Gen Chem	1 x 1 L, plastic, no preservative
	GRO	3 x 40 ml VOAs with HCL
	DRO	3 x 40 ml VOAs with
	TPH- 418.1	HCL 1 x 1 L glass with
	BOD	HCL
	COD	1 x 1 L HDPE, no preservative
		1 x 250 mL HDPE with H2S04

Item	Approx. Qty.	Unit	Article and Description	Unit Price

001   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$750	$750	$850	$518	$600	$1,340	$603	$800

002   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$769	$769	$850	$571	$600	$1,340	$603	$800

2. Field Soil Test:

- EPA SW-846 Method 8021B (BTEX) Aromatic Volatile Organics;
- EPA SW-846 Method 8015B-Mod (GRO/DRO) Petroleum Hydrocarbons; and
- Chlorides (General Chemistry) Method specified in 40 CFR 136.3

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous: 3 x 4 ounce glass jars with Teflon lined screw cap, no preservative

003   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$105	$105	$120	$123	$75	$250	$70	$105

3. Aromatic Volatile Organics: EPA SW-846 Method 8021B (BTEX), Constituents as listed in the method plus MTBE, 1-3-5 Trimethylbenzene (TMB) and 1-2-4 Trimethylbenzene (TMB).

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous: 1 x 4 ounce glass jars with Teflon lined screw cap, no preservative
Aqueous: 3 x 40 mL VOAs with HCL

004   Soils/Non-Aqueous

(AA)	(A B)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$54	$54	$45	$45 (8260)	$35	$90	$30	$45

005   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$54	$54	$45	$45 (8260)	$35	$90	$30	$45

State of New Mexico
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Item	Approx. Qty.	Unit	Article and Description	Unit Price

4. Petroleum Hydrocarbons: EPA SW-846 Method 8015B (GRO/DRO)

- Gasoline Range Organics (Alkane Range- C5-CI 0)
- Diesel Range Organics (Alkane Range - CIO-C28)

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous:
1 x 4 ounce glass jar with Teflon lined lid, no preservative
Aqueous: 6 x 40 mL VOAs with HCL

006   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$54	$54	$70	$75	$50	$140	$40	$60

007   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$54	$54	$70	$75	$50	$140	$40	$60

5. Total Extractible Petroleum Hydrocarbon: EPA Method 418.1

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous:
1 x 4 ounce glass jar with Teflon lined lid, no preservative
Aqueous: 1 x 1 L glass bottle with HCL

008   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$54	$54	$40	$40	$45	$70	$45	$90

009   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$54	$54	$50	$40	$45	$70	$45	$90

6. Chlorides: EPA Methods 300.0, 300.1, or SM 4500B

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous:
1 x 4 ounce glass jar with Teflon lined lid, no preservative
Aqueous: 1 x 500 mL plastic bottle

010   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$15	$15	$25	$13	$10	$20	$10	$15

011   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$9	$9	$25	$13	$10	$20	$10	$15

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Item	Approx. Qty.	Unit	Article and Description	Unit Price

7. OCD Field Soil Leachate Test: SPLP EPA SW-846 Methods 1312/8260C/8270D:
• EPA SW-846 Method 8021B (BTEX) for Aromatic Volatile Organics;
• EPA SW-846 Method 8015B (GRO/DRO) for Petroleum Hydrocarbons;
• EPA SW-846 Methods 6010C ICP-AES and 6020A ICP-MS for metals and inorganics
• EPA SW-846 Method 7470A/747IB for Mercury
• EPA SW-846 method 8310 for Polycyclic Aromatic Hydrocarbons *(Note: method 8270 SIMS allowed if detection Limits meet or exceed WQCC numerical standards.);* and
• Method 300.0, 300.1 for Chlorides (General Chemistry)

Vendor shall provide the following type and number of containers with the specified preservative.
Soils/Non-Aqueous: 1 x 4 ounce glass jar with Teflon lined lid, no preservative

012   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$472.20	$472.20	$455	$400 if BTEX /GRO run together by 8260 $375	$600	$595	$288	$500

8. General Chemistry: CATIONS AND ANIONS:
• Methods from 40 CFR 136.3 to include the following: fluoride, calcium, potassium, magnesium, sodium bicarbonate, carbonate, chloride, sulfate, total dissolved solids for aqueous only, cation/anion balance, specific conductivity, pH, and bromide.

Vendor shall provide the following type and number of containers with the specified preservative.
Soils/Non-Aqueous: 2 x 4 ounce glass jars with Teflon lined lid, no preservative
Aqueous: 1 x 1 L plastic, no preservative

013   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)	
$117	$117	$140	$84	$120	$255	$111	$160	

014   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$108	$108	$140	$132	$120	$255	$111	$160

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Item	Approx. Qty.	Unit	Article and Description	Unit Price

9. Volatile Organic Compounds GC/MS: EPA SW-846 Method 8021B (BTEX + MTBE + 1-3-5 Trimethylbenzene (TMB) AND 1-2-4 Trimethylbenzene (TMB).

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous: 1 x 4 ounce glass jar with Teflon lined lid, no preservative
Aqueous: 3 x 40 mL VOAs with HCL

015   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$54	$54	$50	$45 (8260)	$25	$90	$70	$45

016   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$54	$54	$50	$45 (8260)	$25	$90	$70	$45

10. Semi-Volatile Organics GC/MS: EPA SW-846 Method 8270D: Constituents as listed in the method plus 1-methylnaphthalene and 2-methylnaphthalene

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous: 1 x 4 ounce glass jar with Teflon lined lid, no preservative
Aqueous: 1 x L glass, no preservative

017   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$270	$270	$250	$165	$125	$240	$140	$175

018   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$270	$270	$250	$165	$125	$240	$140	$175

11. Polynuclear Aromatic Hydrocarbons: EPA SW-846 Method 8310: Constituents as listed in 8310 plus 1-methylnaphthalene and 2-methylnaphthalene (Note: EPA SW-846 METHOD 8270 SIMS allowed if detection limits are less than the WQCC standards.).

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous: 1 x 4 ounce glass jar with Teflon lined lid, no preservative
Aqueous: 1L glass, no preservative

019   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$150	$150	$130	$75	$75	$180	$90	$100

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Item	Approx. Qty.	Unit	Article and Description	Unit Price

020   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$150	$150	$130	$75	$75	$180	$90	$100

12. Phenols: EPA SW-846 Method 8270D:

Vendor shall provide the following type and number of containers with the specified preservative.
Soils/Non-Aqueous: 1 x 4 ounce glass jar with Teflon lined lid, no preservative
Aqueous: 1 x 1 L glass, no preservative

021   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$150	$150	$200	$165	$50	$240	$80	$100

022   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$150	$150	$200	$165	$50	$240	$80	$100

13. Metals by SW-846 Methods 6010C/6020A/ 7470A/7471B: Metals by EPA methods 6000 or 7000 series if detection limits meet or are less than WQCC numerical standards.

Vendor shall provide the following type and number of containers with the specified preservative.
Soil: 3 x 4 ounce glass jars with Teflon lined lid, no preservative
Aqueous: 1 x 500 mL plastic with HN03

• Arsenic: ICP-AES EPA SW-846 METHOD 6010C

023   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	*(AG)	(AH)
$19.20	$19.20	$30	$7	$180	$40	$122	$115

*Vendor (AG) Note: WQCC A+B+C Note: 17 metals $6.00/metal Mercury $20.00

024   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	*(AG)	(AH)
$9.60	$9.60	$30	$7	$180	$40	$122	$115

*Vendor (AG) Note: WQCC A+B+C Note: 17 metals $6.00/metal Mercury $20.00

• Barium: ICP-AES EPA SW-846 METHOD 6010C

025   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$19.20	$19.20	$12	$7	$10	$40	$6	$10

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Item	Approx. Qty.	Unit	Article and Description							Unit Price

026   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$9.60	$9.60	$12	$7	$10	$40	$6	$10

• Chromium ICP-AES EPA SW-846 METHOD 6010C

027   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$19.20	$19.20	$12	$7	$10	$40	$6	$10

028   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$9.60	$9.60	$12	$7	$10	$40	$6	$10

• Cadmium: ICP-AES EPA SW-846 METHOD 6010C

029   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$19.20	$19.20	$12	$7	$10	$40	$6	$10

030   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$9.60	$9.60	$12	$7	$10	$40	$6	$10

• Lead: ICP-AES EPA SW-846 METHOD 6010C

031   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$19.20	$19.20	$12	$7	$10	$40	$6	$10

032   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$9.60	$9.60	$12	$7	$10	$40	$6	$10

• Mercury (S): AA EPA SW-846 METHOD 7471B

033   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$24	$24	$30	$20	$25	$35	$20	$10

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Item	Approx. Qty.	Unit	Article and Description	Unit Price

• Mercury (L): AA EPA SW-846 METHOD 7470A

034   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$24	$24	$30	$20	$25	$35	$20	$10

• Selenium: ICP-AES EPA SW-846 METHOD 6010C

035   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$19.20	$19.20	$12	$7	$10	$40	$6	$10

036   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$9.60	$9.60	$12	$7	$10	$40	$6	$10

• Silver: ICP-AES EPA SW-846 METHOD 6010C/6020A

037   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$19.20	$19.20	$12	$7-6010 $10-	$10	$40	$6	$10

038   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$9.60	$9.60	$12	$7-6010 $10-6020	$10	$40	$6	$10

14. RCRA Hazardous Waste 40 CFR 261 - Ignitable, Corrosive, Reactive Characteristics SW-846

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous: 1 x 4 ounce glass jar with Teflon lined lid, no preservative
Liquid: 1 L glass, no preservative

• lgnitability Method: ASTM D92 (Degrees Fahrenheit)

039   Non-Aqueous/Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$27	$27	$40	$35	$25	$35	$10	$25

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Item	Approx. Qty.	Unit	Article and Description	Unit Price

• Corrosivity Method: EPA SW-846 METHOD 9045C (pH Units)

040   Non-Aqueous/Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$12	$12	$10	$8	$10	$15	$10	$10

• Reactivity Method: As specified in EPA SW-846 Chapter 7, Section 7.3 for Reactive Cyanide and Reactive Sulfide

041   Non-Aqueous/Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$54	$54	$70	$35	$50	$100	$10	$60

15. Full TCLP PER EPA SW-846 Method 1311- Less Pesticides and Herbicides

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous: 2 - 4 ounce glass jar with Teflon lined lid, no preservative
Aqueous: 3 x 40 mL VOAs with HCL
1 x L glass, no preservative
1 x 500 ml plastic, no preservative

042   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$690	$690	$500	$429	$400	$565	$282	$385

043   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$690	$690	$500	$429	$400	$565	$282	$385

16. TCLP per EPA SW-846 Method 1311 (Metals Only):

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous: 1 x 4 ounce glass jar with Teflon lined lid, no preservative
Aqueous: 1 x 500 mL plastic, no preservative

044   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$117	$117	$160	$134	$120	$180	$102	$110

045   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$86.40	$86.40	$100	$134	$100	$180	$102	$110

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Item	Approx. Qty.	Unit	Article and Description	Unit Price

17. Paint Filter Test (Landfill/Land farm Applications) EPA SW-846 Method 9095

Vendor shall provide the following type and number of containers with the specified
preservative. Soils/Non-Aqueous: 1x 4 ounce glass jar with Teflon lined lid, no preservative

046   (Soils and other material)

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$12	$12	$10	$12	$20	$25	$15	$15

18. Nitrogen Suite: SDWA 300 Series Nitrogen
- Ammonia (Method 350.3)
- Nitrite (Method 300)
- Nitrate (Method 300)
- Total Kjeldahl Nitrogen (Method 351.2);

Vendor shall provide the following type and number of containers with the specified preservative. Aqueous:
TKN/NH3: 1- 500 mL with H2S04
N02/N03: 1 - 500 mL plastic, no preservative

047   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$63	$63	$65	$53	$65	$135	$50	$90

19. Radiological Analyses:
- WQCC Combined Radium-226 and Radium-228 - EPA method E903 and E904

Vendor shall provide the following type and number of containers with the specified preservative. Aqueous: 1 L
plastic bottle with HN03

048   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$270	$270	$155	$135	$75	$240	$204	$150

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Item	Approx. Qty.	Unit	Article and Description	Unit Price

20. Oil Field NORM *(Naturally Occurring Radioactive Material):* **20.3.14 NMAC** *(for oilfield soils, sludges, scales, produced water, and equipment)*

- Radium 226*   EPA Method E903.0
- Radium 228*   EPA Method E904.0
- Gamma Emitting Radionuclide   EPA Method E901.1
- Gross Alpha and Beta EPA   EPA Method E900.0
- Lead 210   EPA Method E905.0 Mod.

* Solids/Non-Aqueous samples should be analyzed for all listed parameters. Aqueous samples should be analyzed for Radium 226 and 228.

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous: 1 x 1kg plastic bag, double wrapped, no preservative
Aqueous: 1 x 1L plastic with HN03

049   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$125	$125	$325	$100	$275	$610	$215	$380

050   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$270	$270	$155	$135	$75	$240	$204	$150

(AH) *All radio-chemistry to be performed by ARS Laboratories out of Louisiana

21. WQCC 20.6.2.3103 NMAC Constituents- Subsections A, B and C.

Preservative. Soils/Non-Aqueous: 4 x 4 ounce glass jar with Teflon lined lid, no preservative
Vendor shall provide the following type and number of containers with the specified Aqueous: Metals: 1 x 500 mL plastic with HN03
VOCs: 6 x 40 mL VOAs with HCl
CN: 1 x 500 mL plastic with NaOH
General Chemistry: 2 x 1 L plastic, no preservative
Rad: 2 x 1 L glass, no preservative PAH: 1 x 1L glass, no preservative PCB: 1 x 1L glass, no preservative

051   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$859.70	$859.70	$850	$538	$625	$1,070	$625	$800

(AH) *All radio-chemistry to be performed by ARS Laboratories out of Louisiana

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Item	Approx. Qty.	Unit	Article and Description	Unit Price

052   Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$985.20	$985.20	$850	$586	$625	$1,070	$625	$800

(AH) *All radio-chemistry to be performed by ARS Laboratories out of Louisiana

22. Other Analyses:
- Fraction Organic Carbon   ASTM d 2974 (Walkley Black
- Specific Gravity   Method) ASTM D 2937-94
- Moisture Content   ASTM D 2216-92
- Bulk Density   ASTM D 2937-94
- Dry Sieve Analysis   ASTM D 422-63
- Hydraulic Conductivity   EM 1110-2-1906

Vendor shall provide the following type and number of containers with the specified preservative. Soils/Non-Aqueous: 1 x 1 kg plastic bag, double wrapped, no preservative

053   Soils/Non-Aqueous

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
$342	$342	$475	$411	$145	$645	$301	$275

054   Aqueous

(AA)	(AB)	(AE)	(AF)	(AH)
$342	$342	$145	$645	$275

23. Emergency (Turn-Around): Please indicate additional surcharge in percent (%) for all above line items. Please add additional sheets if necessary.

055   1 - Day - Priority 1 turn around surcharge

(AA)	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
100%	100%	100%	150%	100%	200%	50%	100% $16350

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Item	Approx. Qty.	Unit	Article and Description	Unit Price

056

(AA)

0%

14 - Day Priority 2 turn around surcharge

	(AB)	(AC)	(AD)	(AE)	(AF)	(AG)	(AH)
	0%	20%	3-5 Day -50% 2 Day- 100% 6-9 Day -25% Business day, depending on lab availability	0%	50%	0%	15% $9,401.25

56 Items Total

OFFICES AND CONTACT INFORMATION
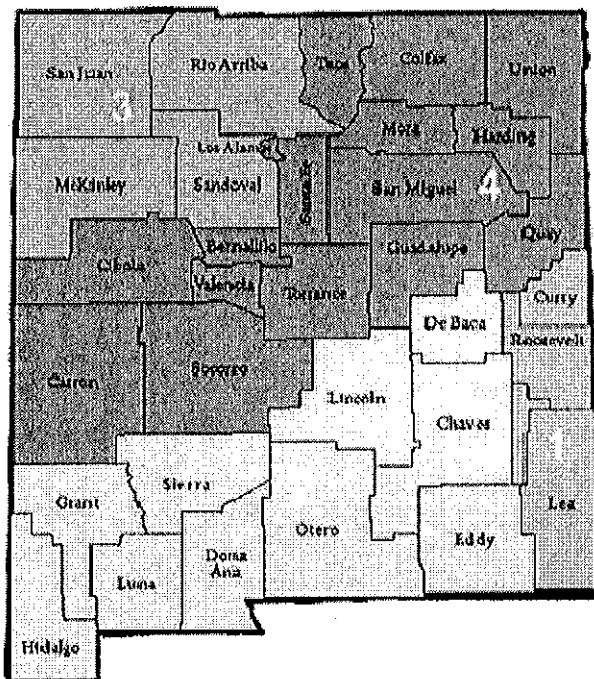
District 1 - Hobbs
1625 N. French Drive
Hobbs, New Mexico 88240
Office: (575) 393-6161, Fax: (575) 393-0720
Emergency Number: Mobile: (575) 370-3186
Business Hours: 7:00AM - 12:00 PM and 1:00 - 4:00 PM, Monday through Friday

District 2 - Artesia
811 S. First Street
Artesia, NM 88210
Office: (575) 748-1283, Fax: (575) 748-9720
Business Hours: 7:00AM - 12:00 PM and 1:00 - 4:00 PM, Monday through Friday

District 3 - **Aztec**
1000 Rio Brazos Road
Aztec, New Mexico 87410
Office: (505) 334-6178, Fax: (505) 334-6170
Business Hours: 7:00AM - 12:00 PM and 1:00 - 4:00 PM, Monday Through Friday

District 4- Santa Fe
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Office: (505) 476-3470, Fax: (505) 476-3462
Business Hours: 8:00AM - 12:00 PM and 1:00 - 5:00 PM, Monday through Friday

Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Office: (505) 476-3490, Fax: (505) 476-3462
Business Hours: 8:00AM - 12:00 PM and 1:00 - 5:00 PM, Monday through Friday

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APPENDIX D

INFORMATION TECHNOLOGY (IT) PLAN

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ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

ANNUAL INFORMATION
TECHNOLOGY
PLAN &
FUNDING REQUEST

FOR FY14

John H. Bemis, Cabinet Secretary   **September 2012**
Joe Montaño, Chief Information Officer

State of New Mexico
Energy, Minerals & Natural Resources Department
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EXECUTIVE SUMMARY

This Information Technology Plan supports the Agency's strategic plan as well as the agency's business goals and objectives and is aligned with the State IT Strategic plan and gives a summary of the entire enterprise of the Energy, Minerals and Natural Resources Department (EMNRD), the accomplishments for FY12 and the information systems that support it for FY13 (July 1, 2012 through June 30, 2013). The IT plan for FY14 also describes the initiatives that the department is planning to take during the next fiscal year.

The EMNRD Information Technology Plan focuses on supporting the department's programs and goals and is in alignment with the *New Mexico Information Technology Strategic Plan FY2010 - FY2013*. The primary goals are to: (1) Reduce cost of government operations through IT; and (2) Reduce cost of information technology operations through an enterprise model; and (3) Improve delivery of services to the residents of New Mexico; and (4) Support economic development.

Each year, EMNRD makes substantial financial expenditures to operate and develop information technology (IT) systems and projects that support the agency goals and initiatives. Information technology encompasses computer and communications infrastructure, including hardware and software, communications (voice and data) and databases, as well as the applications that run on, or use, that infrastructure to deliver the actual services to internal and external customers.

The EMNRD Information Technology Office (ITO) will continue to analyze needs and make recommendations for the use of appropriate and efficient technology to improve business processes. Major projects planned or already underway include: enhancements to EMNRD's Microsoft System Center Configuration Manager (SCCM) to provide improved systems management; continued development and expansion of geospatial capabilities including both internal and external web maps; investigation of solutions for remote and mobile access for employees and system administrators to support laptops and other mobile devices including Android and Apple phones and tablets; providing a new EMNRD web presence with the modernization of our public website and re-skinning of our public web applications; redesigning and converting the OCD imaging processes to utilize industry standard PDF images; and a broad series of modernizations and enhancements to our most important agency applications.

EMNRD ITO emphasizes security and endeavors to maintain a highly secure and reliable network infrastructure. Each year ITO contracts to have an independent, in-depth security assessment performed that included networks, applications, web sites, processes, procedures, documentation, and employee security awareness. ITO has been pleased with the positive evaluations from these assessments, but will continue to make improvements in our security posture whenever possible.

The FY12 Actual IT expenditures for EMNRD were $3,658.1, for FY13 the IT Operating Budget is $4,013.5 and the FY14 IT Budget Request is $4,096.7. EMNRD is not requesting funding for any projects greater than $100.0.

The department contact for the EMNRD Information Technology Plan: Mr. Joe Montaño, CIO 476-3280.

1. The Agency Context for IT Infrastructure and Operations
1.1 Agency Mission
The New Mexico Energy, Minerals and Natural Resources Department (EMNRD) mission focuses on supporting the department's programs and goals, and complies with the *New Mexico Information Technology Strategic Plan FY2010 - FY2013*.

EMNRD Mission Statement:
The mission of EMNRD is to position New Mexico as a national leader in energy and natural resource areas. This includes developing reliable supplies of energy and energy-efficient technologies with a balanced approach toward conserving renewable and nonrenewable resources; protecting the environment and ensuring responsible reclamation of land and resources affected by mineral extraction; growing and managing healthy, sustainable forests; and improving the state park system that protects New Mexico's natural, cultural, and recreational resources for posterity and contributes to a sustainable economy statewide.

EMNRD Vision Statement:
A New Mexico where individuals, agencies and organizations work collaboratively on energy and natural resource management to ensure a sustainable environmental and economic future.

Mission Statements of EMNRD sub-organizations:

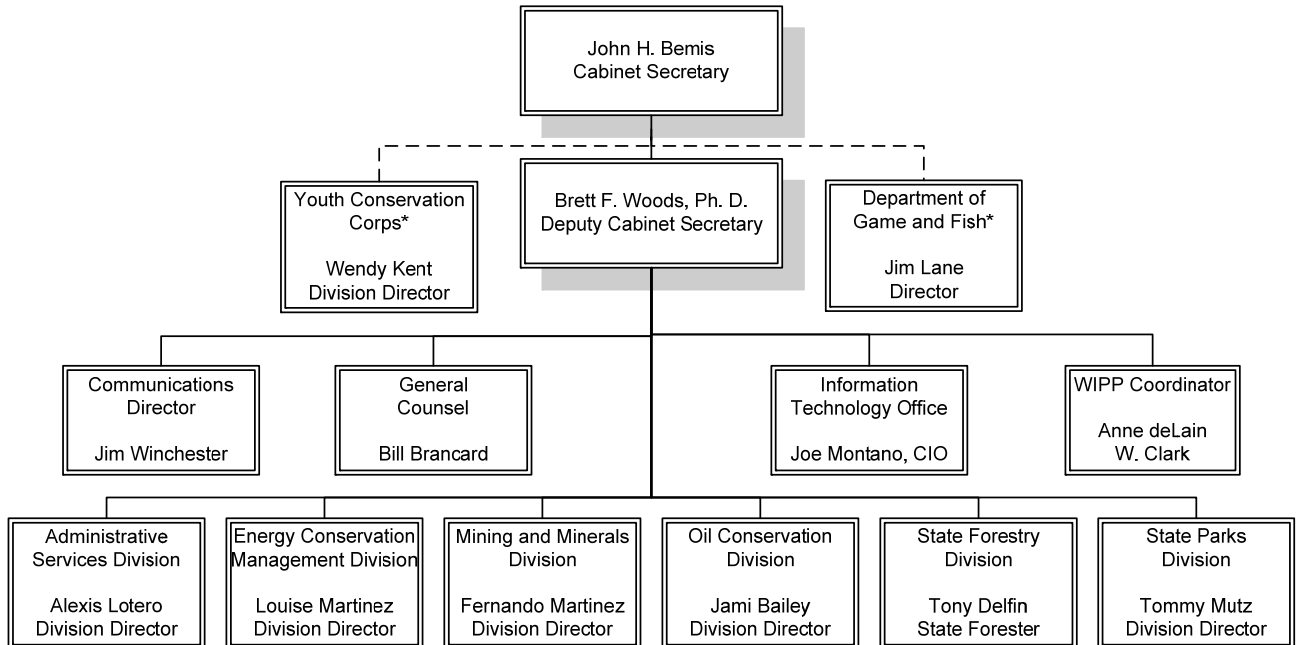|	
Program Support (PS)	*To help all divisions meet their goals and objectives by providing administrative services as well as policy direction and management.*
Waste Isolation Pilot Plant (WIPP), Transportation Safety Program	*To represent the interests of the State of New Mexico regarding the safe and uneventful transportation of nuclear waste through the state.*
Youth Conservation Corps (YCC)	*Promote the education, success and wellbeing of the youth in our communities and provide community benefits of lasting value through the conservation and enhancement of New Mexico's natural resources and lasting community benefits.*
Energy Conservation and Management Division (ECMD)	*Develop and implement effective clean energy programs—renewable energy, energy efficiency and conservation, alternative transportation and fuels —to promote environmental and economic sustainability for New Mexico and its citizens.*
Forestry Division (FD)	*Promote healthy, sustainable forests in New Mexico for the benefit of current and future generations.*
Mining and Minerals Division (MMD)	*Promote the public trust by ensuring the responsible utilization, conservation, reclamation and safeguarding of land and resources affected by mining.*

Oil Conservation Division (OCD)	*To assure the protection, conservation, management, and responsible development of oil, gas, and associated natural resources through professional, dynamic regulation and advocacy for the ultimate benefit of New Mexico.*
State Parks Division (SPD)	*Protect and enhance natural and cultural resources, provide first-class recreational and education facilities and opportunities, and promote public safety to benefit and enrich the lives of visitors.*

1.2 Agency Description

The New Mexico Energy, Minerals and Natural Resources Department protects and conserves the state's natural resources and provides recreational opportunities throughout the state. The department is home to five programmatic divisions and one supportive division and employs ~500 Full Time Equivalents (FTEs) throughout the state. EMNRD is structured as indicated below in the organization chart:

Energy, Minerals and Natural Resources Department (EMNRD)
Organization Chart

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                          ┌──────────────────────┐
                          │   John H. Bemis       │
                          │   Cabinet Secretary   │
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      ┌──────────────────────────────┼──────────────────────────────┐
┌─────────────────┐       ┌──────────────────────┐        ┌──────────────────┐
│ Youth Conservation│     │ Brett F. Woods, Ph. D.│       │ Department of     │
│ Corps*           │      │ Deputy Cabinet Secretary│     │ Game and Fish*   │
│ Wendy Kent       │      └──────────────────────┘        │ Jim Lane         │
│ Division Director│                                       │ Director         │
└─────────────────┘                                        └──────────────────┘
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Communications Director	General Counsel	Information Technology Office	WIPP Coordinator
Jim Winchester	Bill Brancard	Joe Montano, CIO	Anne deLain W. Clark

Administrative Services Division	Energy Conservation Management Division	Mining and Minerals Division	Oil Conservation Division	State Forestry Division	State Parks Division
Alexis Lotero Division Director	Louise Martinez Division Director	Fernando Martinez Division Director	Jami Bailey Division Director	Tony Delfin State Forester	Tommy Mutz Division Director

* Administratively attached with no direct budget support from EMNRD.

Agency Goals

Make our state a leader in developing reliable supplies of energy, and energy efficient technologies and practices, with a balanced approach towards conserving our renewable and non-renewable resources,

Protect the environment and ensure responsible reclamation of land and resources affected by mineral extraction,

Be effective in leading our state in growing healthy, sustainable forests and managing them for a variety of users and ecologically sound uses, and

Improve the state park system into a nationwide leader that protects New Mexico's natural, cultural and recreational resources for posterity and contributes to a sustainable economy statewide.

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Program Support (PS)

The Office of the Secretary, Administrative Services Division and the Information Technology Office are part of Program Support. Program support employs ~45 FTEs in Santa Fe.

The Office of the Secretary (OFS) serves as the focal point for the EMNRD's communications with the Governor, other state agencies, and legislators. It establishes EMNRD policies and provides legal and programmatic direction to the divisions. OFS also houses the state's NM WIPP Transportation Safety Program and the Youth Conservation Corps Program.

The NM WIPP Transportation Safety Program is a cooperative effort among the shipment-corridor states, tribes, local officials and the U. S. Department of Energy (DOE). The program goes beyond what is required by law and has been proven through actual use in the transportation of WIPP shipments. Its goal is the safe and uneventful transport of radioactive materials. In fact, no shipment of radioactive or hazardous materials undergoes as much scrutiny by transportation safety specialists as WIPP shipments.

The Youth Conservation Corps (YCC) is attached to OFS. This program awards contracts through a competitive process under which contractors employ youth between the ages of 14 to 25 in projects that improve New Mexico's natural and community resources. These projects provide a positive work experience for youth while preserving the state's natural and historical resources.

The Administrative Services Division (ASD) provides administrative support to EMNRD's five Program Divisions and the Office of the Secretary in the daily performance of their respective missions. ASD provides financial, human resources, employee training and other support services to EMNRD at all of its statewide locations.

The Information Technology Office (ITO) is the central Information Technology (IT) and Information Systems (IS) provider for EMNRD. ITO is responsible for maintaining and supporting computer systems, network and telecommunications infrastructure, and providing applications and GIS development and support for the department. ITO provides the focus for the development of IT and IS strategy and policy for the Department. ITO is also responsible for the department's IT budget and procurement as it relates to Information Technology.

Program Support (PS)
Organization Chart
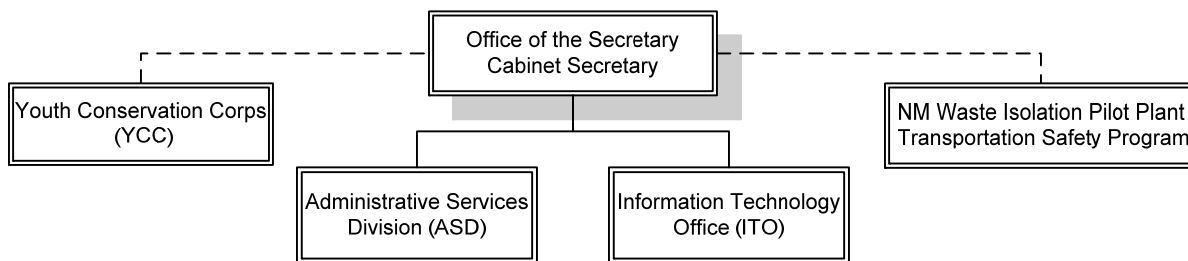
Program Support Goals

- *Improve processes by streamlining and providing automation*
- *Treat all employees as valued customers by promptly responding to their needs*
- *Provide leadership and direction to employees in order to enhance accountability*
- *Improve efficiency and cost effectiveness of agency systems and projects through standardized processes for acquisition, development, maintenance and support of information technology resources*
- *Provide superior customer service by offering high quality information technology resources that empower agency employees to excel*
- *Produce innovative solutions in adherence with State standards, industry best practices and agency IT policies*

WIPP Goals

- *Manage and Administrate the Task Force in an open and effective manner*
- *Maintain the optimal level of safety for the NM citizenry with regard to WIPP shipments*
- *Maintain an open and continual line of communication with the NM citizenry on WIPP issues*

YCC Goals

- *Strive for healthy natural resources and lasting community benefits*
- *Instilling values of hard work and accomplishments*
- *Promotion of education and training*
- *Strive for maximization of the resources available to the Youth Conservation Corps*

Energy Conservation and Management Division (ECMD)

ECMD currently employs ~9 FTEs.

**Energy Conservation and Management Division (ECMD)**
Organization Chart

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┌─────────────────────────────┐
│   Office of the Secretary   │
│      Cabinet Secretary      │
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     ┌──────────────────┐
     │    Division      │
     │    Director      │
     └──────────────────┘
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      ┌───────┴────────┐
┌──────────────┐  ┌──────────────────┐
│ Energy       │  │ Program          │
│ Technology & │  │ Development      │
│ Engineering  │  │ & Outreach       │
│ Bureau       │  │ Bureau           │
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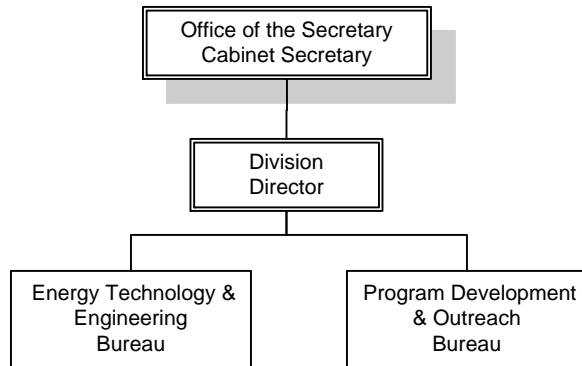
ECMD Goals

- *Advance and attract clean energy industry - Evaluate and maintain inventory of clean energy industry projects.*
- *Promote State-of-the art energy technologies and energy efficient ("green") building construction practices – Evaluate and maintain inventory of clean energy tax credit applications reviewed and tax credits certified.*
- *Promote and facilitate reduction in energy use in public facilities - Promote energy conservation to reduce energy consumption in all sectors of the New Mexico economy, including residential, commercial, industrial, transportation and institutional (government/schools).*
- *Decrease dependence on foreign oil – Facilitate compliance with state and federal mandates for acquisition of alternative fuel vehicles.*
- *Protect Public health and safety – Make necessary preparation to help ensure the provision of adequate assistance to New Mexico citizens and business in the event of an energy emergency.*
- *Promote employees' career development – Provide guidance, support and resources for ECMD staff to excel on both a professional and personal level.*

Forestry Division (FD)

The Forestry Division's (FD) central purpose is to promote healthy forests in New Mexico for the benefit of current and future generations. The Division identifies and manages insects, pests, and disease problems that impact forest and community tree health. It partners with New Mexico communities, land owners and the federal government to suppress wildfires, manages timber sales, protect ecosystems and endangered species and remediate burned acreage. In addition, the division collaborates with the Corrections Department to develop inmate work camps to work on conservation projects. Forestry also manages wild land fire by promoting efficient suppression and fire fighter safety. Forestry employs ~68 FTEs throughout the state in the following districts/units: Chama, Cimarron, Bernalillo, Las Vegas, Socorro, Capitan, Smokey Bear Park and the Inmate Work Camp (Los Lunas). The central office is located in Santa Fe and the Forest and Watershed Health office is located in Albuquerque.

Forestry Division (FD)
Organization Chart
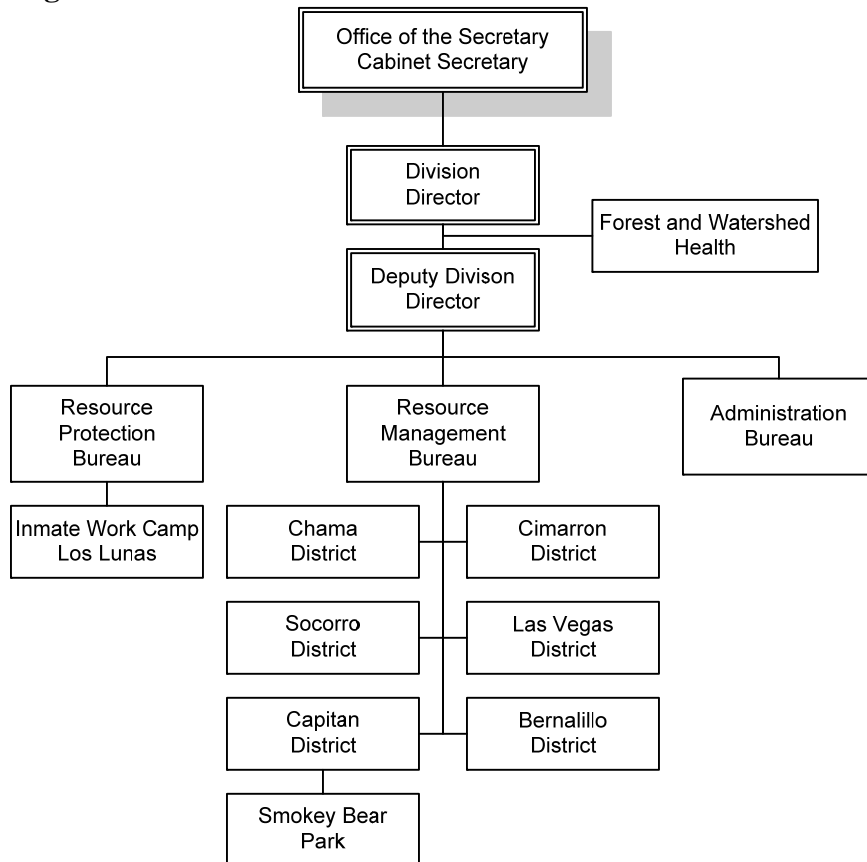
Forestry Division Goals

> *Provide technical assistance and promotes sound forest and watershed management toward statewide ecological balance*
> *Empower New Mexico communities to protect, enhance and utilize their forest resources*
> *Provide for fire fighter safety and community protection while promoting natural resource benefit. The Forestry Division is committed to developing qualified, equipped fire fighters to safely and effectively suppress and manage fire*

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Mining and Minerals Division (MMD)

The Mining and Minerals Division (MMD) is located in the Wendell Chino Building, Santa Fe, New Mexico. The Division employs ~32 FTEs dispersed among the Office of the Director, covering general administrative duties (budget and accounting functions) and policy issues, and the four programs in the Mine Reclamation Bureau:

Abandoned Mine Lands Program implements a federally funded program to safeguard and reclaim abandoned mine hazards caused by past mining.

Coal Reclamation Program regulates the operation and reclamation of coal mines under the Surface Mining Act to protect New Mexicans from the adverse effects of coal mining and to maintain primary jurisdiction over the regulation of coal mining and reclamation operations within New Mexico.

Mining Act Reclamation Program implements the New Mexico Mining Act to ensure the responsible utilization and reclamation of all lands affected by hard rock mining activities.

Mine Registration and Reporting Program responsible for the registration of active mines and mills, annual reporting statistical information on the state's mineral industry, public outreach and safeguarding inspections of operations that are suspended to verify they represent no safety hazard to the public.

Mining and Minerals Division (MMD)
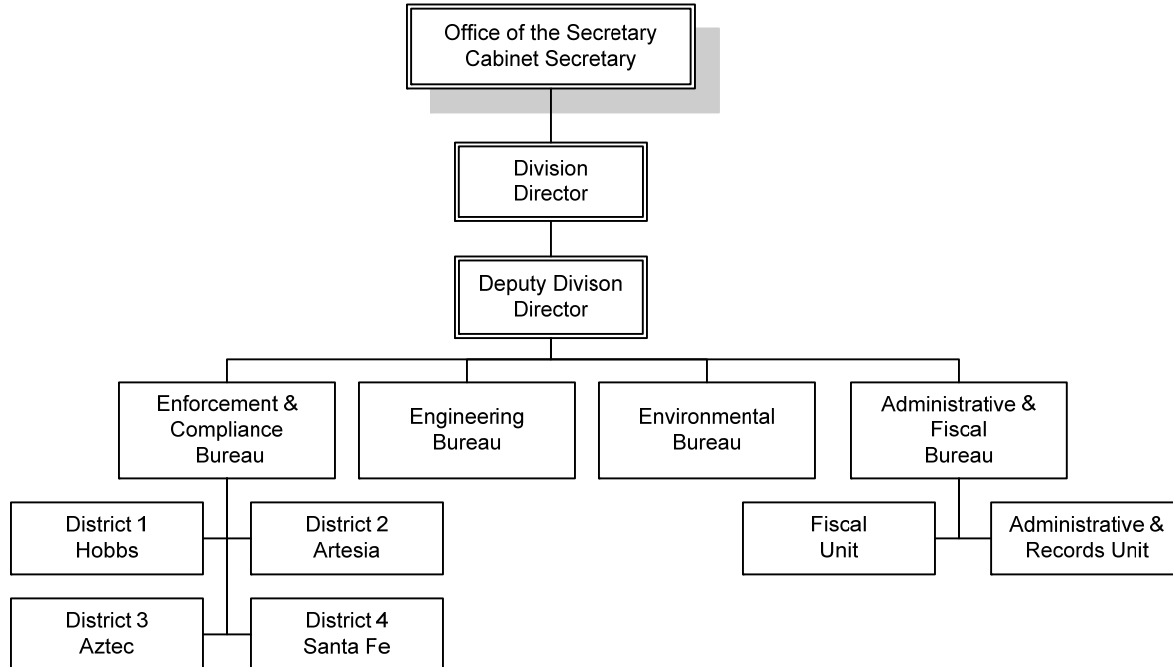## Organization Chart
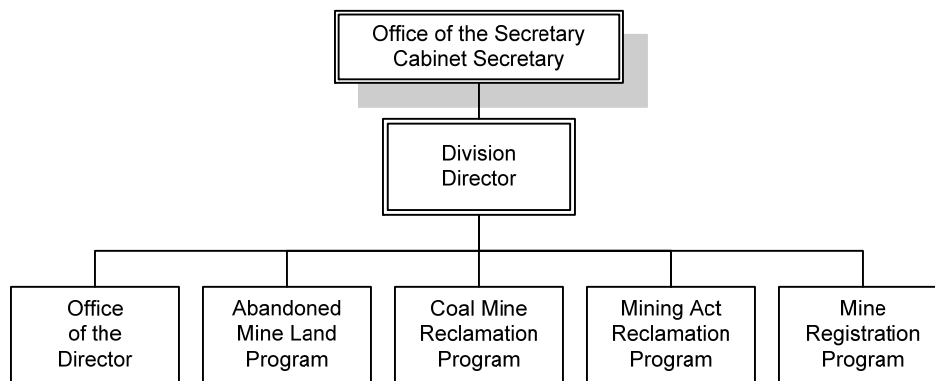
MMD Goals

 - *Ensure Responsible Reclamation of Lands and Resources Affected by Mining*
 - *Promote the Public Trust Through Outreach and Innovation*
 - *Review and administer permits for mining and reclamation operations and inspect and enforce on permitted lands*
 - *Safeguard and reclaim abandoned mine areas*
 - *Identify mining operations and unreclaimed mine areas*
 - *Inform and educate the public and provide them with opportunities for participation*
 - *Develop and embrace innovative approaches to implement our mission and objectives*

Oil Conservation Division (OCD)

The Oil Conservation Division (OCD) administers policy and regulations relating to the oil, gas and geothermal industry of New Mexico. OCD employs ~61 FTEs in Santa Fe and throughout the state in the following three district offices: Hobbs, Artesia and Aztec.

Oil Conservation Division (OCD)
Organization Chart

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                    ┌─────────────────────┐
                    │ Office of the Secretary │
                    │   Cabinet Secretary   │
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                     ┌──────────────────┐
                     │    Division       │
                     │    Director       │
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                     │ Deputy Divison    │
                     │    Director       │
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│Enforcement│ │Engineering│ │Environmental │ │Administrative│
│& Compliance│ │  Bureau  │ │   Bureau     │ │ & Fiscal     │
│  Bureau   │ │          │ │              │ │  Bureau      │
└──────────┘ └──────────┘ └──────────────┘ └──────────────┘
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| District 1 Hobbs | District 2 Artesia | | Fiscal Unit | Administrative & Records Unit |

| District 3 Aztec | District 4 Santa Fe |

OCD Goals

> *Prevent the waste of oil, gas or geothermal resources of the state; protect correlative rights of the owners of those resources and foster the efficient development of those resources.*

> *Protect human health and the environment from the detrimental effects of development of the state's oil, gas and geothermal resources*

State Parks Division (SPD)

The State Parks Division (SPD) strives to conserve and manage natural and cultural resources for present and future generations, while meeting increasing public demand for a variety of recreational experiences. Parks Division employs ~287 FTEs at the main Santa Fe office and throughout the state in the following regions:

Region 1- This office oversees management of the following nine parks in Northwestern New Mexico: Bluewater Lake; El Vado Lake; Fenton Lake; Heron Lake; Hyde Memorial; Manzano Mountains; Navajo Lake; Cerrillos Hills; and Rio Grande Nature Center.

Region 2 - This office oversees management of the following ten parks in Northeastern New Mexico: Cimarron; Clayton Lake; Conchas Lake; Coyote Creek; Eagle Nest Lake; Morphy Lake; Storrie Lake; Sugarite Canyon; Ute Lake; Vietnam Veteran's Memorial and may take over management of Pecos Canyon.

Region 3 - This office oversees management of the following eight parks in Southwestern New Mexico: Caballo Lake; Percha; City of Rocks; Elephant Butte Lake; Leasburg; Pancho Villa; Rockhound and Mesilla Valley Bosque.

Region 4 - This office oversees management of the following eight parks in Southeastern New Mexico: Bottomless Lake; Brantley Lake; Living Desert; Oasis; Oliver Lee; Santa Rosa Lake; Sumner Lake; and Villanueva.

State Parks Division (SPD)
Organization Chart
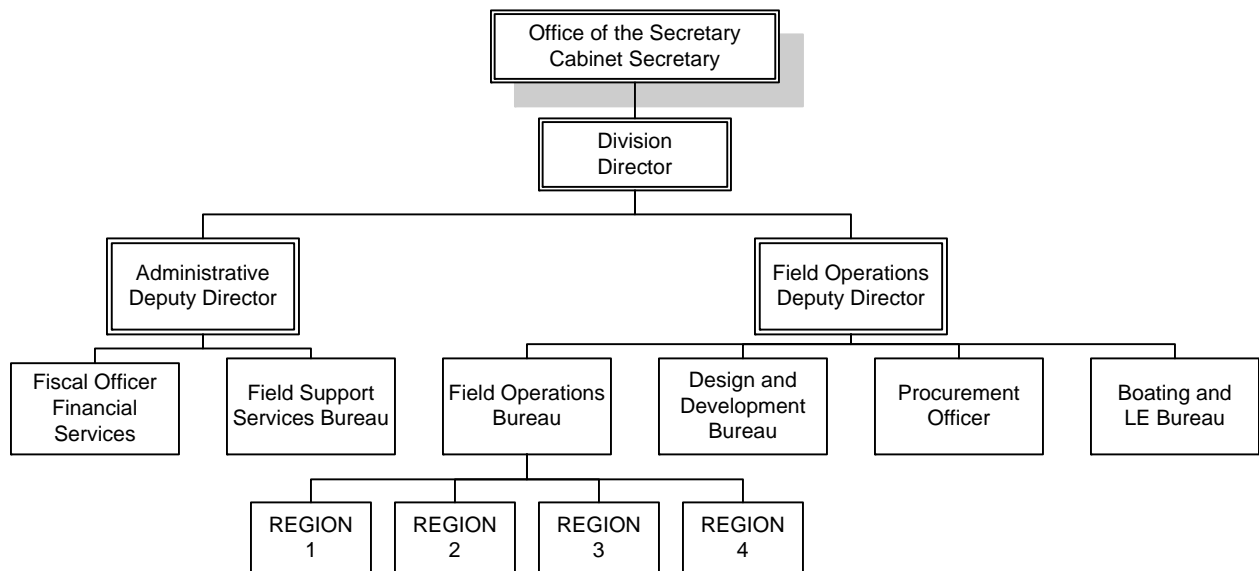
State Parks Division Goals

> ➢ *Exemplary protection and management of natural, cultural and recreational resources*
> ➢ *An expanded state park interpretation program that educates the public, attracts visitors, and enhances visitor satisfaction*
> ➢ *Improve marketing and public outreach programs to promote state parks and*

sustain New Mexico's economy
- *Promote organizational development*
- *Improve law enforcement and boating policies and programs*
- *Establish a more diverse and stable funding system*
- *Expand/Improve State Parks Facilities and Trails Opportunities*

1.3 Changes in Federal or State of New Mexico Requirements with IT Impact

List the changes in Federal or State of New Mexico requirements that will significantly impact the agency use of IT and IT applications.

Federal or State of New Mexico Initiative, statutory mandates or regulatory compliance change	Impact
State requirement for capture of operator submitted Hydraulic Fluid Fracturing Disclosure forms	EMNRD has had to implement a system prior to federal or national standards being established. The possibility exists that this system will need to be adapted or superseded to meet a future standard.

1.4 Agency IT Description of Services

The Information Technology Office (ITO) is the central information technology and information systems provider for EMNRD, WIPP, and YCC. ITO is responsible for the department's IT hardware, software, applications, databases, GIS, network installations, maintenance and security. ITO meets or exceeds applicable state standards and complies with the *New Mexico Information Technology Strategic Plan FY2010 - FY2013*.

ITO's objective is to provide the most reliable, effective and appropriate IT resources necessary to allow the department to offer the best service possible to the public. ITO continuously works with our supported divisions to determine how existing and future IT resources can be leveraged to improve their business processes.

ITO manages the department's IT staff, infrastructure and its own budgets, and approves purchase documents and vouchers for IT expenditures department-wide. ITO maintains a Help Desk System for the department's employees to track and monitor requests. ITO tracks, manages and maintains the department's IT assets, equipment and telecommunications services.

ITO offers a full range of application and website development services including all stages in the development life cycle. This includes the feasibility, requirements gathering and specification, design, implementation, testing, maintenance and decommissioning.

ITO provides a comprehensive set of enterprise database services. These services include installation and configuration of the department's database servers, application integration and data migration, performance auditing and tuning, backup and recovery, and ensuring the integrity and security of the databases.

ITO is working with all EMNRD Divisions to expand the geospatial services offered within the agency, which will enhance EMNRD's ability to provide transparent and efficient services to NM citizens. EMNRD is making greater use of cloud-based services as well as mobile mapping technologies such as GIS maps combined with GPS positioning for data collection and field verification. In concert with this work are EMNRD's efforts to provide a comprehensive and standardized local repository for the Department's geospatial data, as well as procedural changes that support enterprise-level coordination.

1.4.1 Infrastructure Services

List the range of infrastructure services the IT organization provides to the agency and/or to other agencies: Include the services the agency provides for smaller boards, commissions, or other agencies

IT Service	Delivered by which section of the agency IT unit	Delivered to which Division(s) or Bureau(s)	# of Users Impacted Internally	# of Users Impacted External
Service Support Center	All	All	> 500	0
Data Storage	Network/Telecommunications	All	> 500	Many
Backup & Business Continuity /Disaster Recovery Planning	Network/Telecommunications	All	> 500	Many
Wide Area Networking (WAN)	Network/Telecommunications	FD, OCD, SPD, YCC	250	0
Local Area Networking (LAN)	Network/Telecommunications	All	> 500	Many
Managed Desktop Services	Desktop Support	All	> 500	0
IT Purchasing	IT Financial Support	All	> 500	0
Data & Voice Services	Network/Telecommunications	All	> 500	Many
Web Conferencing	Network/Telecommunications	All	25	Few
Desktop Auditing & Reporting	Desktop Support	All	> 500	0
Network Engineering & Design	Network/Telecommunications	All	> 500	0
Security	Security	All	> 500	Many
Remote Access	Network/Telecommunications	All	40	0
Radio Services Management	Network/Telecommunications	FD, PRD	200	Few

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1.4.2 Business Application Services

List the range of business application services the IT organization provides to the agency and/or to other agencies: Include the services the agency provides for smaller boards, commissions, or other agencies

IT Service	Delivered by which section of the agency IT unit	Delivered to which Division(s) or Bureau(s)	# of Users Impacted Internally	# of Users Impacted External
Software Application Design	Applications	All	> 500	0
Web Application Development (.NET)	Applications	All	> 500	0
Windows Application Development (.NET)	Applications	All	> 500	0
Application Maintenance & Enhancement	Applications	All	> 500	Many
Application Support	Applications	All	> 500	Many
Application Testing and Validation	Applications	All	> 500	0
Database Administration	Database	All	> 500	Many
Relational Database Design	Database	All	> 500	0
Web Services & Support	Web	All	> 500	Many
Web-based GIS mapping applications: planning, design, implementation and maintenance	GIS	All	> 500	Many
.NET-based GIS application components: planning, design, implementation and maintenance	GIS	All	~ 100-200	Few
GIS-related server infrastructure (research, planning,	GIS	All	> 500	Many

IT Service	Delivered by which section of the agency IT unit	Delivered to which Division(s) or Bureau(s)	# of Users Impacted Internally	# of Users Impacted External
installation, implementation, maintenance): web map servers, licensing servers, geodatabase servers				
Geospatial desktop software & hardware purchasing & maintenance	GIS	All	~ 200	0
Geospatial Expert Analysis, including GIS, GPS, remote sensing & image processing	GIS	All	~ 30	~ 20-50
Geospatial Training, including GIS, GPS, remote sensing & image processing	GIS	All	~ 200	Few
Geospatial Project Assistance, including GIS, GPS, remote sensing & image processing	GIS	All	~ 10	Few

1.5 Agency IT Performance Measures

What Performance Measures or Metrics exist for IT services delivery to the Agency? Items in table are for illustration purposes only.

IT Area	Objective	IT Performance Measure	Target
Network Security	*Protect all systems from malware infections*	Percent of systems protected from virus infection within department network	100%
Infrastructure	*Network Availability*	Percent of total scheduled time the network is available to department users	93%
Infrastructure	*Support 50+ remote offices*	Maintain a minimum two scheduled field visits per office per year, proactively performing system maintenance	2 scheduled visits per site per year
Infrastructure	*Documented Level 1 service desk requests*	Resolved documented Level 1 service desk requests	95%
GIS	*Sufficient licenses to meet demand, balanced with cost of purchasing additional licenses*	Average daily licenses consumed (ADLC) versus Total Licenses Available (TLA) for the main license pool	50% < ADLC < 90% of TLA

1.6 Agency IT Strategic Goals

IT Goal, Objectives, and Strategies Worksheet		
Agency Name:	**ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT**	
IT Strategic Goal #1		
Goal:	**To streamline operations and to increase staff productivity by refining EMNRD business processes and technical infrastructure through continuous process improvement**	
Identify the agency primary goal, or strategy this IT strategic goal supports.		
Agency Goal, or strategy	Develop and maintain quality data and information systems	
State IT Strategic Plan Initiative/Strategy that supports this agency strategic goal	*Promote an Enterprise Model for managing projects* *(An initiative from Goal 5 in the NEW MEXICO INFORMATION TECHNOLOGY STRATEGIC PLAN FY2010 – FY2013)*	
Budget and Source of Funds – Appropriation requests and base budgets		
	FY13	**FY14**
Budget in $	TBD, based on budget	TBD, based on budget
Source of Funds	GF,FF,OSF	GF,FF,OSF
What is to be accomplished - what the agency proposes to buy, build or update, or service to be improved.		**When is the outcome to be accomplished** –identify the fiscal year of the expected outcome.
Outcome 1	Continue efforts to modernize our IT infrastructure, networks, tools and business processes.	FY13 & FY14
Outcome 2	Continue efforts to update and exercise the Disaster Recovery & Business Continuity Plan.	FY13 & FY14
Outcome 3	Continue to improve our test and production environments to support newer technology.	FY13 & FY14
Outcome 4	Consolidate EMNRD's Desktop GIS, web-mapping, and geodata stores, using a services-oriented approach that provides more efficient geospatial capabilities.	FY13 & FY14

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IT Goal, Objectives, and Strategies Worksheet		
Agency Name:	**ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT**	
IT Strategic Goal #2		
Goal:	**Enhance delivery of services to the public and support economic development.**	
Identify the agency primary goal, or strategy this IT strategic goal supports.		
Agency Goal, or strategy	Promote the public trust through outreach and innovation	
State IT Strategic Plan Initiative/Strategy that supports this agency strategic goal	*Establish and maintain a State of New Mexico government agency application information map* *(An initiative from Goal 1 in the NEW MEXICO INFORMATION TECHNOLOGY STRATEGIC PLAN FY2010 – FY2013)*	
Budget and Source of Funds – Appropriation requests and base budgets		
	FY13	**FY14**
Budget in $	TBD, based on budget	TBD, based on budget
Source of Funds	GF,FF,OSF	GF,FF,OSF
What is to be accomplished - what the agency proposes to buy, build or update, or service to be improved.	**When is the outcome to be accomplished –**identify the fiscal year of the expected outcome.	
Outcome 1	More easily-accessible, high quality geospatial information will be provided to the public, enhancing transparency and decision-making across all sectors.	FY13 & FY14
Outcome 2	Improvements in our reporting processes and technical infrastructure will better inform the public of spending and outcomes, maintaining our integrity and the public trust.	FY13 & FY14
Outcome 3	Firms and individuals who work with EMNRD will have improved and more efficient and automated ways of communicating and interacting with us, increasing efficiency and supporting	FY13 & FY14

	business.	
Outcome 4	The public will be offered new and enhanced services.	FY13 & FY14

IT Goal, Objectives, and Strategies Worksheet		
Agency Name:	**ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT**	
IT Strategic Goal #3		
Goal:	**Reduce the cost to provide high quality IT services for the agency**	
Identify the agency primary goal, or strategy this IT strategic goal supports.		
Agency Goal, or strategy	Develop and maintain quality data and information systems	
State IT Strategic Plan Initiative/Strategy that supports this agency strategic goal	*Evaluate enterprise licensing and implement as appropriate* *(An initiative from Goal 6 in the NEW MEXICO INFORMATION TECHNOLOGY STRATEGIC PLAN FY2010 – FY2013)*	
Budget and Source of Funds – Appropriation requests and base budgets		
	FY13	**FY14**
Budget in $	TBD, based on budget	TBD, based on budget
Source of Funds	GF, FF,OSF	GF, FF,OSF
What is to be accomplished - what the agency proposes to buy, build or update, or service to be improved.		**When is the outcome to be accomplished** –identify the fiscal year of the expected outcome.
Outcome 1	Continued implementation of server virtualization is expected to reduce hardware requirements and energy consumption while improving the reliability, manageability and recoverability of the department's servers	FY13 & FY14
Outcome 2	Multiple desktop management enhancements offering greater efficiencies in staff utilization, including automated patch deployment, tighter security controls, user managed password resets and other features and capabilities which allow higher reliability, security and increased efficiency of	FY13 & FY14

	employee's desktop computers	

IT Goal, Objectives, and Strategies Worksheet	
Agency Name:	**ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT**
IT Strategic Goal #4	
Goal:	**Continue to improve security and security monitoring capabilities.**
Identify the agency primary goal, or strategy this IT strategic goal supports.	
Agency Goal, or strategy	Develop and maintain quality data and information systems
State IT Strategic Plan Initiative/Strategy that supports this agency strategic goal	A comprehensive security policy will be maintained to define standards, identify responsibilities, and validate compliance. (*A strategy from Goal 7 of the NEW MEXICO INFORMATION TECHNOLOGY STRATEGIC PLAN FY2010 – FY2013*)
Budget and Source of Funds – Appropriation requests and base budgets	

	FY13	**FY14**
Budget in $	TBD, based on budget	TBD, based on budget
Source of Funds	GF, FF,OSF	GF, FF,OSF

What is to be accomplished - what the agency proposes to buy, build or update, or service to be improved.		**When is the outcome to be accomplished** –identify the fiscal year of the expected outcome.
Outcome 1	Continued improvements to ensure a highly secure and reliable network infrastructure	FY13 & FY14
Outcome 2	Complete implementation of recommended changes from both independent and internal security assessments	FY13
Outcome 3	Improved security of laptops and off-network computers	FY13 & FY14
Outcome 4	Reduction in malware infections due to user activity through network controls and user training	FY13 & FY14

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IT Goal, Objectives, and Strategies Worksheet	
Agency Name:	**ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT**
IT Strategic Goal #5	
Goal:	**Provide training and knowledge transfer to our technical team to enable support of current and developing technologies.**
Identify the agency primary goal, or strategy this IT strategic goal supports.	
Agency Goal, or strategy	Promote Employees' Career Development
State IT Strategic Plan Initiative/Strategy that supports this agency strategic goal	Develop an agile IT workforce to promote enterprise IT knowledge management (*An initiative from Goal 2 of the NEW MEXICO INFORMATION TECHNOLOGY STRATEGIC PLAN FY2010 – FY2013*)

Budget and Source of Funds – Appropriation requests and base budgets		
	FY13	**FY14**
Budget in $	TBD, based on budget	TBD, based on budget
Source of Funds	GF	GF

What is to be accomplished - what the agency proposes to buy, build or update, or service to be improved.		**When is the outcome to be accomplished** –identify the fiscal year of the expected outcome.
Outcome 1	Recruit high quality workers for any open positions.	FY13 & FY14
Outcome 2	Continue to maintain funding for training classes.	FY13 & FY14
Outcome 3	Continue to participate in and hold training, lessons learned, and internal knowledge transfer sessions.	FY13 & FY14
Outcome 4	As appropriate, leverage DoIT technology training classes.	FY13 & FY14

1.7 Equipment and Software that is anticipated to be refreshed in FY13-14

List by type of asset equipment/software the approximate dollar amount to be refreshed either this or next fiscal year.

Type of IT Asset	Description	FY13	FY14
Desktop	Desktop/Laptop computers	~$150.0 Annually	~$150.0 Annually
Servers	2 servers - Dell PowerEdge 810 configured for VMware hosts 4 servers – Dell PowerEdge 310 configured as Primary Domain Controllers	~$60.0 Annually	~$60.0 Annually
Network	Field office network cabling and equipment maintenance and upgrades as needed and as budget permits	~$90.0 Annually	~$90.0 Annually
Enterprise Licensing	Maintenance and licenses as needed and as budget permits	~$175.0 Annually	~$175.0 Annually

2. Agency Compliance with IT Consolidation

This section will not be part of the FY14 Agency IT Plan. The information previously included in this section will be gathered through a reporting and/or survey function. DoIT will follow-up with agency staff at a future date.

3. Agency Accomplishments and Planning

3.1 Agency Major IT Accomplishments of FY12 IT Plan

An asterisk '*' in the "*Actual Expenditures and Funding Source(s)*" indicates that there were no direct expenditures other than staff time to complete this accomplishment.

Accomplishment	Actual Expenditures and Funding Source(s)	What agency bought, built, or updated.	Impact of Accomplishment
Implementation of Microsoft System Center Configuration Manager (SCCM)	$74.9 OSF/GF	Automation of O/S deployment, software update management, and configuration management.	Automated deployment of OS, Software, and Software patches.
OCD RBDMS 2010	$31.7 GF/FF	Modernized RBDMS executable to work with Windows 7/Access 2010; rebuilt the OCD district servers and all inspector laptops with new RBDMS and SQL versions; reconstructed the three tier SQL merge replication between Santa Fe, the (3) districts and (27) inspector laptops.	Modernization of this core application and its associated infrastructure allows OCD to continue their Oil & Gas related compliance activities without disruption.
Implemented public wireless internet access at State Parks	$65.0 OSF	Wireless hardware, equipment and installation services. Sites include Ute lake, Bottomless Lake and Coyote Creek.	State Parks expects to realize an increase in visitor revenue at Parks by providing wireless internet access to the public.
Implemented new and improved Backup and Recovery hardware and software	$54.2 OSF	Avamar servers and software, Networker software.	Dramatically improved backup and recovery capabilities of the department's systems.
OCD Permitting Hydraulic Fracturing Fluid Disclosure Form & Upload	*	The OCD permitting application was modified to capture and process Hydraulic Fracturing Fluid Disclosure form	Implementation, in an automated format, of a new and highly visible regulation.

Accomplishment	Actual Expenditures and Funding Source(s)	What agency bought, built, or updated.	Impact of Accomplishment
		submitted by Oil & Gas operators.	
Upgraded VM technologies/functionality	$39.0 GF/FF	Replaced VMware host servers and upgraded VMware software.	Improved VM systems capability, connectivity, redundancy and stability.
Implemented remote system monitoring and management software and hardware	$17.3 GF/OSF	Upgraded Solarwinds Orion software. Purchased Solarwinds ROVE Admin and NTI datacenter environmental monitor	Improved remote monitoring of the departments critical systems.
CAaNES Security Assessment	$12.5 GF/OSF	Network and Application Security Assessment Services	Application security was strengthened.
Desktop & Mobile GIS/GPS Support	*	Provided support for ~100 desktop GIS users, 60+ mobile GIS users, 80+ GPS users, and server-side installations; migrated entire agency to ArcGIS v10 SP2; purchased maintenance on hardware & software; updated components as needed.	Improved service for an increasing number of users, with limited staffing.
Standardization of IT equipment.	*	Continued standardized purchasing of desktops, laptops, printers, scanners, multifunction devices, and general peripherals.	This has increased the efficiency of operations by reducing the variety of hardware and software deployed.
Maintain 4-year IT hardware replacement cycle	*	Maintained replacement cycle by replacing 65 desktops,	Reliability and user experience enhanced. Expensive unscheduled field

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Accomplishment	Actual Expenditures and Funding Source(s)	What agency bought, built, or updated.	Impact of Accomplishment
		34 laptops and 26 printers.	visits minimized.
Field Office Support	*	Supplied all EMNRD field offices with on-site computer and network maintenance and support.	Maintenance and support increases the effectiveness of the organization.
Enterprise Geodatabases: Consolidated geospatial data stores maintained	*	ESRI ArcSDE tied to MS SQL Server on virtualized Windows Server 2008 64-bit platforms: use of SDE-based and file geodatabases on servers and at division-level.	More efficient use of resources by consolidating geospatial data into central repositories. Up-to-date on version, needed to remain compatible with other systems
ArcGIS Server	*	Continued migration from Autodesk MapGuide to ESRI ArcGIS Server using MS Silverlight API and custom template; six web maps in development mode.	Improved decision-making support for management and staff, better ability to plan (e.g., Parks facilities management); greater accountability and transparency provided to public & citizens, outmoded technology is replaced with more efficient tools.
GIS Imagery Server and Image Services maintained	*	Updated geospatial imagery datasets; centralized storage; increased use of cloud-based base maps (streets, imagery, topo, etc.)	Use of centralized "tiled" imagery services as a statewide coverage provides a much better frame of reference for geospatial decision-making tools.
GIS Services	*	Support of Divisions for various GIS services (expert analysis, mapping, geodatabase development) on multiple projects	Divisions lacking sufficient GIS expertise were able to address business needs in-house, without expending funds on outside contractors; products are compatible with other EMNRD systems and

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Accomplishment	Actual Expenditures and Funding Source(s)	What agency bought, built, or updated.	Impact of Accomplishment
		related to Division business needs or issues	w/ state standards
Standardized Web map Authoring Template	*	EMNRD constructed web map authoring template based upon ESRI AGS Silverlight API using C#, XML, XAML, and MS Silverlight	EMNRD constructed web map authoring template based upon ESRI AGS Silverlight API using C#, XML, XAML, and MS Silverlight
Replaced servers	$15.3 GF/FF	Servers	Replaced outdated domain controllers and VMware management server.
Implemented VMware View and Remote VPN capabilities for secure remote network access	$3.8 OSF	CheckPoint Mobile VPN and VMware View software	Replaced outdated Citrix server and improved security and functionality for remote users.
Implemented WindowsInTune	$2.5 OSF	Remote computer and software management.	Provides ability to manage and patch off-network PCs.
Implemented Certificate Server	*	N/A	Improved security of internal web sites and services.
Windows 7 Deployment	*	Windows 7 Enterprise deployment created; consisting of standardizing OS configuration, software configuration and repacking for network image installation.	Reduced travel time to manage and more efficient builds.
Replaced existing web servers with Windows Server 2008 R2 / IIS 7.5	*	N/A	Improved capacities and security of the department's web servers and sites.
Replaced Core Firewall management server	$5.0 GF/OSF	Replaced CheckPoint Windows based firewall management server with CheckPoint Appliance	The replacement firewall management appliance improves reliability and security of the department's network systems and reduces annual maintenance costs
Implemented Secure File	$0.7 OSF	SFTP server software	Improved security for

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Accomplishment	Actual Expenditures and Funding Source(s)	What agency bought, built, or updated.	Impact of Accomplishment
Transfer Protocol (SFTP) services			transferring large data files
Qwest/ CenturyLink dedicated circuit upgrade	*	Upgrade all dedicated Centurylink circuits from ATM and Frame-Relay service MPLS service.	To provide more reliable data service to the following sites: Santa Fe Chino, Las Vegas Forestry, Socorro Forestry, Cimarron Forestry, Artesia OCD, Aztec OCD and Navajo Lake Parks.
Satellite Internet service upgrades	$8.0 OSF	Updated satellite equipment from Info-SAT service to WildBlue service.	Less cost for faster and more reliable Internet service for very remote office locations.
Rockhound and Bottomless State Park broadband wireless ISP service conversion.	$6.0 OSF	Converted state parks from satellite service to a local broadband wireless service. VPN/firewall appliance was installed.	To provide faster, cheaper and more reliable data service.
Implemented public wireless internet access at Chino Building	$9.0 GF	Wireless hardware, equipment and installation services. All conference rooms in the Chino building have access to wireless service	EMNRD has received many visitor, industry and contractor requests for wireless service. By providing wireless internet access to the public and contractors, internal networks remain secure.
Ute Lake, and Coyote Creek Elephant Butte State Park visitor center, training center and pay booth network extension	$20.0 OSF	1.5 miles of single mode fiber optic cable plus LAN switches, fiber converters and battery backup systems	Park manager can now provide improved service to park visitors and conduct office business from multiple buildings.
New Building data and voice installation at Cerrillos Hills, RGNC and Cimarron Canyon State Parks	$8.0 OSF	New site wiring and broadband service	New data and voice service.
Upgraded Capitan and	*	Upgraded data service	Improved reliability and

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Accomplishment	Actual Expenditures and Funding Source(s)	What agency bought, built, or updated.	Impact of Accomplishment
Chama forestry offices to business class Internet service		from DSL to business class EIA service.	quality of broadband data service
Upgraded OCD Artesia office from dedicated Qwest/CenturyLink service to broadband fiber service	$2.0 GF	Fiber broadband service and VPN/firewall appliance were installed.	Increased network performance with monthly cost savings of over $800.00
IQSweb version 3	*	The COTS IQSweb application for emergency incident resource management was configured, installed, and deployed to Forestry Division.	This change was mandatory to continue to participate in the federally sponsored Resource Ordering & Status System (ROSS) which enables (fire) dispatch offices to electronically exchange and track tactical and logistical information in near real-time.
EMNRD Application Management System (EMNRDApps)	*	A web application hosting a database of EMNRD applications was created allowing us to closely monitor web application status, errors and logs.	The service monitor allows us to be notified of issues with our web applications so we can pro-actively fix them before they disrupt our users.
OCD Imaging Upgrades	*	The OCD Imaging, OCD eDocs and Image Submission websites were upgraded to .NET 4.0. The upgrades also addressed outstanding issues with these web applications.	Improved quality and reliability of a premier EMNRD application.
SysAid Service Desk	$4.0 GF/OSF	The project replaced our expensive to maintain legacy Service Desk.	Greatly reduced costs. More modern and easily configured system.
Parks Trip Ticketing	*	A new web based system was	Increased compliance with the trip ticketing rules,

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Accomplishment	Actual Expenditures and Funding Source(s)	What agency bought, built, or updated.	Impact of Accomplishment
		implemented to automate and manage the outfitter trip ticketing process.	detailed reporting and tracking of individual outfitter trips down to a site basis.
Forestry FMS Rewrite	*	The existing intranet application was adapted to now generate and track the resource orders associated with fires.	Greater efficiency in processing resource related financial transactions.
MMD MARP 3.0	*	Built a replacement windows application with greater usability, more data elements captured, improved auditing and search capabilities.	The new system improves the ability of the MARP staff to manage and regulate their mining permits.
OCD Permitting Spills Reporting	*	New custom spill search and display screens were added to the existing OCD public website.	Increased public transparency.
OCD ONGARD Batch Upgrade	*	The nightly OCD/ONGARD batch process was rewritten to use generic (and supported) fast unload functionality.	This supports the ONGARD stabilization project.
ITO Inventory	*	The existing ITO Inventory application was replaced by a system with enhanced inventory verification capabilities, including bar code reader support.	Better support of our IT inventory tracking needs.
EMNRD Contracts	*	The existing ASD Contracts intranet application was replaced by a system	The current, up to date versions of all agency contracts are easily accessible.

Accomplishment	Actual Expenditures and Funding Source(s)	What agency bought, built, or updated.	Impact of Accomplishment
		that now contains the actual contract scans.	
EMNRD Assets	*	This web application was upgraded to be compatible with the new Bassets5x system	System continues to be available to track fixed asset change requests.
Upgraded existing web applications to ASP.NET 4.0	*	Upgrade and modernize 50+ web applications from ASP.NET 2.0 to ASP.NET 4.0. Apply uniform coding standards and library infrastructure; fix outstanding issues and errors; standardize our user documentation and help functionality; and cull any redundant or unnecessary web applications from the EMNRD app portfolio.	The direct, immediate impact to the agency will be moderated. However periodic modernization of web applications before they become obsolete is very important over time, particularly for security.
Deployment of VM SQL Server	*	Existing VM hosts were used to implement SQL Server 2008 R2 instances for both our development and production environments.	Savings of space, cost and energy. Improved ability to recover from a catastrophic database server failure incident.

3.2 Agency Major IT Issues/Concerns within the Agency

This section will not be part of the FY14 Agency IT Plan. The information previously included in this section will be gathered through a reporting and/or survey function. DoIT will follow-up with agency staff at a future date.

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3.3 Agency Major IT Initiatives for Current Fiscal Year FY13

3.3.1 Major Initiative List

Provide a brief description of FY13 IT initiatives, appropriations, and expenditures. Include what the agency proposes to buy, build or update with regard to IT projects, and what progress will be made on major projects. Provide projected spending levels and describe how these expenditures will assist the agency in achieving its overall mission, goals, and objectives.

Major Initiative	Relationship of this initiative to the Strategic Goals of section 1.6 …	Impact to the Agency if Accomplished. What Business requirement or business problem is to be addressed?	Impact to the Agency if not Accomplished – what risks are associated with this effort?	What the agency proposes to buy, build or update	If this is a multi-year project what will be accomplished in FY13.	Describe the critical success factors for this Initiative:
Enhance Microsoft System Center Configuration Manager (SCCM)	Supports Strategic Goals #1, #2, #3, #4	Asset intelligence and application management and deployment.	Continue with manual inventory and manual software deployment.	SCCM contractor support.	N/A	Increase availability of IT staff resources for other support functions and projects.
EMNRD Website Redesign	Supports Strategic Goals #1, #2, #3	Modernize look and feel of the EMNRD public website.	Legacy website would continue to be our public presence.	Contractual web development services.	N/A	Support from management. Support from division content providers.
Windows 7	Supports Strategic Goals #1, #4	Network/system security and future software and hardware compatibility, superior OS.	Fall behind technical industry standards; Windows XP is no longer supported.	Deploy Windows 7 throughout the agency with minimal hardware upgrades.	Continued new computer/OS rollout for FY12 deliveries and rebuilds.	Time and staff resources to complete an organization wide deployment across 55 sites.
Replacement site-to-site VPN solution	Supports Strategic Goals #1, #4	Will provide more reliable, easier to manage and cost effective site-to-site VPN solution	Remote VPN sites will continue to experience sporadic outages and low network throughput.	Install a core VPN concentrator and replace VPN appliance at remote locations.	N/A	Intensive evaluation testing and well-designed implementation planning.
OCD ONGARD UI Replacement Project	Supports Strategic Goals #1, #2, #3	Increased quality and ease of use for OCD, reduced mainframe charges and user training complexity.	Difficulties in having to make synchronized data changes in two different applications. Increased training complexity and higher mainframe costs.	Build the Well Edit functionality that will enable data changes to be made at EMNRD, avoiding the need for users to make coordinated data edits across multiple organizations' systems.	Limited rollout of partial functionality.	Efficient coordination between EMNRD and the ONGARD service center.
Full Rollout of Microsoft SQL Server 2008 R2	Supports Strategic Goals #1, #2, #4	Necessary for continued support of the EMNRD database applications.	Database applications running on an unsupported version of SQL Server.	Porting of remaining agency SQL Server 2005 database applications. May require purchase of additional storage capacity.	Porting of remaining agency SQL Server 2005 database applications.	Previous purchase of SQL licenses and availability of staff.
OCD GIS Data	Supports Strategic Goals #1, #2	OCD GIS data is contained within outmoded proprietary system; OCD employees, the public and industry need easily-accessible GIS data; more transparency	OCD will lag behind the times, and will not provide useful spatial oil & gas data to industry and the public	Develop fundamental OCD GIS datasets (wells, pools, etc.) based upon in-house data, but with input from other affected agencies	This is an on-going project, but at least two statewide basic datasets will be completed	OCD personnel trained in GIS work; buy-in from outside agencies like SLO and PRRC; input from industry.
ArcGIS Server	Supports Strategic Goals #1, #2, #3	Improved decision-making support for management and staff, better ability to plan (e.g.,	Decreased decision-making support, fewer useful planning tools, less	Contractor support in finalizing the development of web map templates based upon one or more	Basic web map template completed, and AGS system configured in a secure fashion, designed to perform	Interaction between ITO GIS staff and contractor; selection of AGS API, ability to extend template as needed. From system

Major Initiative	Relationship of this initiative to the Strategic Goals of section 1.6 …	Impact to the Agency if Accomplished. What Business requirement or business problem is to be addressed?	Impact to the Agency if not Accomplished – what risks are associated with this effort?	What the agency proposes to buy, build or update	If this is a multi-year project what will be accomplished in FY13.	Describe the critical success factors for this Initiative:
		Parks facilities management); greater accountability and transparency provided to public & citizens, outmoded technology is replaced with more efficient tools.	transparency and accountability, potential for current web-mapping technology to become obsolete and unsupported with current O/S.	of the Esri APIs (Silverlight, FLEX, Javascript). Templates will contain all core functions and be extensible. AGS system configuration, security, and implementation will also be assessed by contractor.	adequately under expected loads and usage patterns.	perspective, whether the current configuration is sufficient for planned use.
EMNRD External Internet Application Re-Skinning	Supports Strategic Goal #2	Consistency in branding and look & feel between our static website and dynamic applications will and maintained. Improvements in user experience will be introduced as needed.	The web experience for the department's external users will be disjointed and inconsistent.	(1) Creation with a vendor of an agency wide .NET master page based external application template that is consistent with our new website (2) Creation with a vendor of updated design standards for common web components. (3) Internal implementation using (1) and (2) for our externally facing EMNRD web applications.	N/A	A successful engagement with a vendor who can provide the necessary design recommendations and guidance.
Enterprise Geodatabases	Supports Strategic Goals #1, #3	Consolidated & centralized data stores are easier to maintain and provide more consistent access and availability to clients.	Agency is hampered by needless data duplication with associated higher storage costs and increased maintenance issues; users are less efficient due to limited data availability, and inconsistent procedures to access data.	Build division-level geodatabases to contain division-level data. Maintain and expand enterprise geodatabase, using existing SQL Server / ArcSDE tools.	Enterprise geodatabases will be updated and expanded as situation merits. Division-level geodatabases will be developed, dependent upon division GIS Leads skills, available time, and commitment to process. In-House training will be provided to divisions.	Division-level commitment and allocation of resources is critical, as the divisions know their data best. Some divisions possess the skills needed but have not made this a priority. Other division GIS Leads need training. Most divisions have not developed a core group of datasets, but instead tend to use shape files housed on individual PCs.
ArcGIS Desktop & Server v10 maintenance and upkeep	Supports Strategic Goals #1, #3	Desktop & Server GIS software kept up-to-date, to take advantage of improvements in new version; compatibility with EMNRD's server-based systems and with those of other agencies & partners.	Potential incompatibility issues between technologies and between business partners and clients; decreased user efficiency due to outmoded version.	EMNRD will keep software maintenance agreements in place (barring unforeseen developments), and keep the various software versions up-to-date (migrating to new releases as resources permit), and synchronized (all users and all	On-going; migration to ArcGIS v10.1 (barring unforeseen circumstances)	Appropriate licensing agreements with major vendors such as Esri; difficulty in completing migration within a short time window for all ~ 100 users at 13 locations around the state; ability to use tools such as SCCM to "push out" updates and automate requisite "uninstall / new install" procedures

Major Initiative	Relationship of this initiative to the Strategic Goals of section 1.6 …	Impact to the Agency if Accomplished. What Business requirement or business problem is to be addressed?	Impact to the Agency if not Accomplished – what risks are associated with this effort?	What the agency proposes to buy, build or update	If this is a multi-year project what will be accomplished in FY13.	Describe the critical success factors for this Initiative:
				server software on same version)		
Field office GIS Data	Supports Strategic Goals #1, #2	EMNRD offices in remote locations have reduced-speed access to GIS datasets, which frustrates users	Field office users will continue to experience significant limitations in using typical GIS data (especially imagery)	Continue to provide portable geodata to field offices and upgrade network connections. Wider adoption of cloud-based base map layers.	On-going; field offices have been supplied with data; network connections will continue to be improved	The quality of remote site network connections.
Mobile GIS	Strategic Goals #1, #2, #3	Current mobile GIS technology (ArcPad) is outdated and difficult to learn; versions owned by EMNRD are outdated; GIS data portability is severely limited	Mobile GIS users will continue to experience difficulty in using GIS in the field to locate and map items of interest, devices will be underutilized; current software will become obsolete	ArcGIS Mobile software will be installed for a test group of users, some of which may be used to ArcPad. Alternatives will also be tested.	On-going; initial allocation of ArcGIS Mobile licenses will be deployed as conditions merit.	User acceptance of new technology.
EMNRD GIS & GPS Training	Supports Strategic Goals #1, #2	Use of both GIS and GPS is expanding rapidly as users become more familiar with it and as tools become more readily available ("commoditized"). Demand for training to take advantage of the tools is also increasing, but the need for training must be addressed in an efficient and consistent manner.	Training will continue to be only available to those employees who are aware of various options.	Develop GIS training guide which informs users of training options, costs, etc. Advanced GIS training for ITO staff as needed and available.	On-going; training guide completed and subsequently expanded as new opportunities become available. If needed and funds allow, advanced training for ITO staff.	A variety of training options is preferable to the "one-size fits all" approach. Dependent upon division training budgets and priorities, as well as ITO funding.
Upgrade of Avamar Enterprise Backup System	Supports Strategic Goals #1, #3, #4	Upgrade backup data storage capacity of department enterprise backup system.	Must continue to use tape to backup some data sets. Inability to backup end-user systems. Limited retention time of backups. Cannot backup laptop and desktop data	Additional Avamar Backup Storage Capacity	N/A	Ability to backup larger quantities of department and user data.
Relocate Avamar Replication Node To Remote Office	Supports Strategic Goals #1, #4	Increased redundancy of department systems and data backups.	No redundancy of backup system.	N/A	N/A	Redundancy of department systems and data backups will be achieved.
VMware Expansion	Supports Strategic Goals #1, #3, #4	Improved and managed deployment of applications (thinapp). Ability for users to access IT resources' from	Continue with less secure access.	Additional VMware software	N/A	Improved administration and deployment of applications. Secure remote access.

Major Initiative	Relationship of this initiative to the Strategic Goals of section 1.6 …	Impact to the Agency if Accomplished. What Business requirement or business problem is to be addressed?	Impact to the Agency if not Accomplished – what risks are associated with this effort?	What the agency proposes to buy, build or update	If this is a multi-year project what will be accomplished in FY13.	Describe the critical success factors for this Initiative:
		virtually any location or device.				
Implement Read Only Domain Controllers (RODC) in larger field offices	Supports Strategic Goals #1, #4	Increase in reliability and responsiveness of network access and authentication for field office users.	Department will continue to have limited connectivity to main office domain controllers.	3-5 Additional Servers	N/A	Improved authentication/network access for field office users on slow WAN connections.
Checkpoint mobile blade and VPN	Supports Strategic Goals #1, #3, #4	Ability for users to access IT resources' from virtually any location or device. Provide remote access to user network from mobile and traditional devices	Users will not be able to access IT resources from home or remote locations	VPN licenses for current security equipment	N/A	Proper system and client configuration setup and user training.
OCD Imaging Site Redesign	Supports Strategic Goals #1, #2.	The most heavily used OCD public application will have an improved user experience and be consistently branded.	The OCD Imaging site is not currently branded or consistent with the remainder of the OCD site. This issue would continue.	(1) Creation with a vendor of a redesigned user interface for the OCD Imaging web application. (2) Internal implementation of this redesigned user interface throughout the web application.	N/A	A successful engagement with a vendor who can provide an improved user interface design.
OCD Permitting System Enhancements	Supports Strategic Goals #1, #2.	Improved user interface, data validation, and audit capabilities.	Users will have to continue to use existing, unmodified application.	The current OCD Permitting web application will be enhanced.	N/A	Successfully eliciting requirements for the enhancements.
Vehicle / Fleet Management Application	Supports Strategic Goals #1, #4	Better tracking of compliance with the State of New Mexico vehicle use policy; and reduced time spent to do so.	Increased cost of tracking of compliance with the State of New Mexico vehicle use policy.	A Fleet Management software system will be purchased or created.	N/A	Successfully eliciting requirements to inform the decision to buy or build.
Revamp the Forestry OARS Web Application	Supports Strategic Goals #1, #3.	The NM Forestry division will spend less time accounting for their grants and more time on accomplishing their core missions.	The current Forestry OARS application does not support relating grants, projects and their related accomplishments as well as needed. If this effort is not completed there will no savings in user time.	The current Forestry OARS application will be rethought and simplified to better support the business processes and workflows relating grants, projects and their related accomplishments.	N/A	Successfully eliciting requirements and re-designing the system to better support the business processes and workflows.
MMD Application	Supports	Improved user interface, data	Users will have to	The current MMD Shell smart	N/A	Successfully eliciting requirements for the

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Major Initiative	Relationship of this initiative to the Strategic Goals of section 1.6 …	Impact to the Agency if Accomplished. What Business requirement or business problem is to be addressed?	Impact to the Agency if not Accomplished – what risks are associated with this effort?	What the agency proposes to buy, build or update	If this is a multi-year project what will be accomplished in FY13.	Describe the critical success factors for this Initiative:
Enhancements	Strategic Goals #1, #2.	validation, and audit capabilities.	continue to use existing, unmodified application.	client application modules will be enhanced.		enhancements.
Implementation of SQL Reporting Services	Supports Strategic Goals #1, #2, #3.	A new centralized reporting facility will be created that will allow quick and professional creation of almost any required report.	We will continue to use less efficient and proprietary methods of creating reports.	Implementation of a SQL Reporting Services Server; Initial Implementation of highest priority reports.	N/A	Determining the reports to be created; verifying the created reports are correct.
Implement XML file based Hydraulic Fluid Fracturing File Upload	Supports Strategic Goals #1, #2.	Improved ability for operators to quickly and correctly submit their Hydraulic Fracturing Fluid Disclosure forms. Support time will be reduced.	The agency will need to continue to support the existing Excel based upload. Additional support time needed will continue.	Create a new Hydraulic Fracturing Fluid Disclosure XML upload for processing operator provided XML files.	N/A	It is critical that a national level organization (FracFocus.org or Federal Government) creates a broadly accepted XML format.

3.3.2 List Current Year IT Projects > $100,000

Project Name	Appropriation History ($/Source)	Current Certification Phase	Amount expended as of this Plan
EMNRD does not have any current or proposed projects greater than $100.0.			

3.4 Agency Major IT Initiatives FY14
3.4.1 Major FY14 Initiative List
Provide a brief description of the agency's FY14 IT initiatives, appropriations, and expenditures. Include what the agency proposes to buy, build or update with regard to IT projects, and what progress will be made on major projects.
 Provide projected spending levels and describe how these expenditures will assist the agency in achieving its overall mission, goals, and objectives.

Major Initiative	Relationship of this Major initiative to the Strategic goals of section 1.6 …	Impact to the Agency if Accomplished. What Business requirement or business problem is to be addressed?	Impact to the Agency if not Accomplished – what risks are associated with this effort?	What the agency proposes to buy, build or update	If this is a multi-year project what will be accomplished in FY14.	Describe the critical success factors for this initiative:
ArcGIS Server	Supports Strategic Goals #1,#2, #5	Improved decision-making support for management and staff, better ability to plan (e.g., Parks facilities management); greater accountability and transparency provided to public & citizens, outmoded technology is replaced with more efficient tools.	Decreased decision-making support, fewer useful planning tools, less transparency and accountability, potential for current web-mapping technology to become obsolete and unsupported with current O/S.	Migration of web-mapping technology from MapGuide v6.5 to ESRI ArcGIS Server will be complete, for both existing web maps and any subsequent applications. Outside contractor(s) will be engaged to assist in any final migration issues, and completion of core group of EMNRD web maps. MapGuide will be discontinued.	All current applications will be fully ported to AGS; new applications will be solely developed using this system.	Learning new software & methodologies ; optimizing for suitable performance across networks & web; taking advantage of available services; meeting security needs while providing sufficient utility; upper management support from all Divisions.
Cloud-based Web maps	Supports Strategic Goals #1,#2, #5	Allows more EMNRD employees to take advantage of GIS tools while keeping costs down; in addition, EMNRD geospatial data more available to public	Decreased decision-making support, fewer useful planning tools, less transparency and accountability, potential for current web-mapping technology to become obsolete and unsupported with current O/S; increasing costs to satisfy user GIS needs.	Set up cloud-based ArcGIS Server applications as required, as well as business-process-specific web maps using ArcGIS.com / ArcGIS Explorer Online tools and publically-available EMNRD GIS datasets	Evaluation of cloud-based ArcGIS Server; pilot projects using ArcGIS Explorer Online; publication of select EMNRD GIS datasets on EMNRD website and through NM RGIS Clearinghouse (as appropriate).	Cost to evaluate and implement (funds, time and personnel) cloud-based ArcGIS Server; training; performance of cloud-based versus more traditional methods; creation of procedures to identify, compile and publish key datasets
Migration to Spatial Data Engine (SDE) Based Geo-databases	Supports Strategic Goals #1, #2	Consolidated & centralized data stores are easier to maintain and provide more consistent access and availability to clients.	Centralized division-level geodatabases, through a progression from data analysis, design planning, data development and conversion		All EMNRD Divisions will have either provided plans for eventual migration to geodatabase method of geospatial data, or implemented said plans. Plans for dealing with versioning and replication for field offices will be tested.	Properly configuring secure data access while maintaining acceptable response times and level of transparency to user; division success depends on largely on their level of commitment and degree of business process analysis and planning; success in dealing with replication issues; availability of broadband access.
Mobile GIS	Strategic Goals #1, #2, #3	Current mobile GIS technology (ArcPad) is	Mobile GIS users will continue to experience	Take advantage of available ArcGIS Mobile licenses (tied	If ArcGIS Mobile proves suitable in FY13, EMNRD will migrate to	Ability of ArcGIS Mobile to adequate data extractions for use in remote field locations

Major Initiative	Relationship of this Major initiative to the Strategic goals of section 1.6 …	Impact to the Agency if Accomplished. What Business requirement or business problem is to be addressed?	Impact to the Agency if not Accomplished – what risks are associated with this effort?	What the agency proposes to buy, build or update	If this is a multi-year project what will be accomplished in FY14.	Describe the critical success factors for this initiative:
		outdated and difficult to learn; versions owned by EMNRD are outdated; GIS data portability is severely limited	difficulty in using GIS in the field to locate and map items of interest, devices will be underutilized; current software will become obsolete	to current ownership of desktop software), as well as purchasing additional copies if needed; develop mobile datasets and a map applications to address specific division business needs	ArcGIS Mobile (away from ArcPad, as funding permits); all divisions will have data and maps available	(no wireless services are available over much of state, often in the exact areas where the data is needed); ability of users to learn ArcGIS Mobile as they migrate from ArcPad
Generalized Web Map Tool for EMNRD	Supports Strategic Goals #2	Tool for geodata viewing, and light interaction and analyses: EMNRD currently has a number of internal web maps which could be coalesced into a single integrated site offering more functionality to users while being easier to maintain. The tools can be extended to field or district offices.	EMNRD users will continue to use multiple web maps, each of which tends to be single-purpose and must be maintained separately. Current maps are limited in the functions they can provide to the user for interaction and analysis. Disparity between Santa Fe-based employees and field or district office employees continues.	Build (using ArcGIS Server) a generalized web map, combining "Get-A-Map", "View-A-Map", and "Make-A-Map" type functions.	The integrated web map will be tested in EMNRD development environment by end of FY14.	User acceptance of integrated approach; the ability to incorporate certain geoprocessing and analytical functions into the map, as well as geodata downloading option; balancing of user needs with development time (given limited resources).
VMware Expansion	Supports Strategic Goals #1, #3, #4	Deployment of storage redundancy, site redundancy	Delayed recovery in the event of a significant problem at primary site.	Additional VMware host servers and storage	N/A	Additional storage/site reliability.
Investigate improved field office connections and network services	Supports Strategic Goal #1	Increased productivity at field offices.	Internet access is critical for field staff to complete their job responsibilities.	Improved connectivity and network services at field offices.	N/A	Cost, funding and availability of services.
Research redundant network infrastructure	Supports Strategic Goals #2, #4	Provide business continuity in support of the Department's Business operations.	Remain at risk of loss of critical Department network services and data. Delayed recovery in the event of a significant problem at primary site.	N/A`	N/A	Completed and feasible engineering design of secure redundant IT services.
Continue to expand deployment of public wireless internet access to	Supports Strategic Goal #2	Increase in visitor revenue at Parks by providing wireless internet access to the public which may encourage visitors	Continue to lose Park visitors to other wireless equipped camp locations.	N/A	N/A	Locate low-cost Internet Service Providers (ISP) that State Parks can utilize to provide internet services to Park visitors.

Major Initiative	Relationship of this Major initiative to the Strategic goals of section 1.6 …	Impact to the Agency if Accomplished. What Business requirement or business problem is to be addressed?	Impact to the Agency if not Accomplished – what risks are associated with this effort?	What the agency proposes to buy, build or update	If this is a multi-year project what will be accomplished in FY14.	Describe the critical success factors for this initiative:
additional State Parks		to visit Parks more frequently and for longer periods of time; high public demand				
OCD ONGARD UI Replacement Project	Supports Strategic Goals #1, #2, #3	Increased quality and ease of use for OCD, reduced mainframe charges and user training complexity.	Difficulties in having to make synchronized data changes in two different applications. Increased training complexity and higher mainframe costs.	Build the Well Edit functionality that will enable data changes to be made at EMNRD, avoiding the need for users to make coordinated data edits across multiple organizations' systems.	Full rollout throughout the agency for all functionality.	Efficient coordination between EMNRD and the ONGARD service center.
OCD Application Multi-Lateral Well Support	Supports Strategic Goals #1, #2.	System will be adapted to important changes in the industry.	System will not be adapted to meet these important industry changes.	All OCD Applications will be adapted to support the capture and processing of the additional data relevant to well multilaterals and synchronize this new data appropriately with the ONGARD system.	N/A	Concurrent ONGARD implementation of multi-lateral well requirements.
OCD Permitting Form C-144	Supports Strategic Goals #1, #2, #3	Reduced hard copy paperwork, faster submittal times, reduced scanning time, and reduced time it would take the operator to see an approved sundry. Reduced wear on the scanning stations.	An operator will only be able to submit hard copies to the OCD.	Create a comment and signature/approval page in the OCD electronic permitting system which would electronically attach to submissions, allowing the approval of these types of applications online.	N/A	Successful technical approaches in handling diverse operator submitted electronic documents.
Accept electronic submissions of APDs and Sundries from the BLM	Supports Strategic Goals #1, #2, #3	Currently around 50% of APDs for Oil & Gas wells are first processed by the BLM, and these APDs have to be printed out and entered directly into the ONGARD system by OCD staff. Automating the transfer of approved BLM APD permits would reduce permit processing duration, save staff time, and improve accuracy.	The processing time for BLM APDs and Sundries would not be reduced; additional OCD staff time would be consumed; and data accuracy would suffer due to the need to double key.	Correlate the OCD's online permitting system with the BLM's electronic systems. This intent would be to allow the OCD to receive the approved sundry or APD as soon as the BLM approves and releases them. These BLM permits would then be reviewed by the OCD in a purely electronic format.	N/A	Cooperation of the BLM. Determination of a reliable and secure process for exchanging the permit data.

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Major Initiative	Relationship of this Major initiative to the Strategic goals of section 1.6 …	Impact to the Agency if Accomplished. What Business requirement or business problem is to be addressed?	Impact to the Agency if not Accomplished – what risks are associated with this effort?	What the agency proposes to buy, build or update	If this is a multi-year project what will be accomplished in FY14.	Describe the critical success factors for this initiative:
MMD Mine Registration and Permitting Web Portal	Supports Strategic Goals #1, #2	This would benefit the department by lowering cost and time required to collect and maintain permit and registration information.	Current manual processes would need to continue, consuming additional time and personnel resources.	Develop a web-enabled mine registration, permit submission and annual statistical report capture application that will be integrated with the MMD mine registration and permitting databases. The system would allow mine operators to register, view and change their registration, as well as file annual reports.	N/A	Availability of development resources.

Integration with existing MMD applications and databases. |
| MMD Electronic Record Archiving | Supports Strategic Goals #1, #2, #3 | This would benefit the department by lowering cost and time required to meet document storage requirements and well as to satisfy requests for public info. | Current manual processes would need to continue. Storage needs would continue and loss of documents more likely. | Development of an e-records records storage and retrieval system for MMD documents. Would include imaging of paper records currently categorized as archival for MARP, the Mine Registration, reporting and Safety Program (MRRS) and the Abandoned Mined Lands Program (AMLP). | N/A | Availability of a SharePoint 2010 production environment.
Funding for scanning of archival source documents.

Development resources for the project. |

3.4.2 FY14 Projects > $100,000

3.4.2.1 List proposed FY14 Projects including multi-year projects that will extend beyond FY14:

Project Name	Project Purpose	Stakeholders	Funding Amount (Include proposed source: Base, CSEF, Spec., Supp., Grant, etc. as well as GF,FF, or OSF)
EMNRD does not have any current or proposed projects greater than $100.0.			

3.4.2.2 Compliance Spreadsheets

EMNRD does not have any current or proposed projects greater than $100.0.

3.5 Identification of joint funding opportunities

List below any possible joint funding opportunities that the agency might be or wish to be planning with other agencies or other funding sources that could be working on a more enterprise level:

Potential Application, Services or Process	Potential partners
ESRI ArcGIS Desktop Concurrent Use licensing could be provided through a single State Enterprise agreement negotiated with the vendor.	All State Agencies; possibly local government
Enterprise and other statewide licensing agreements in order to reduce costs. (E.g. Adobe, VMware, EMC, Symantec, TrendMicro, etc.)	All State Agencies
IT Asset/Software Management.	All State Agencies

4. Agency Applications, Legacy and New
This section will not be part of the FY14 Agency IT Plan. The information previously included in this section will be gathered through a reporting and/or survey function. DoIT will follow-up with agency staff at a future date.

5. Management of IT Infrastructure and IT Assets

This section will not be part of the FY14 Agency IT Plan. The information previously included in this section will be gathered through a reporting and/or survey function. DoIT will follow-up with agency staff at a future date.
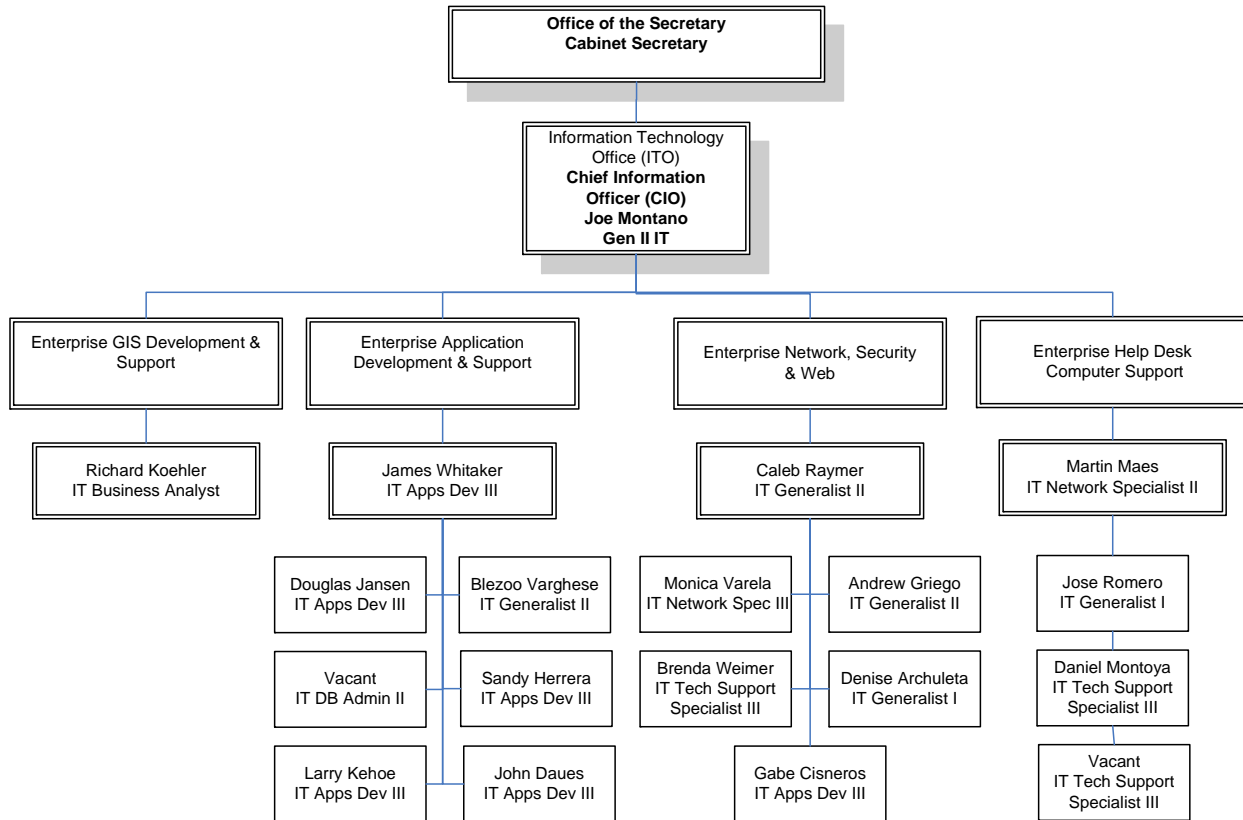
6. IT Human Capital Management

6.1 Agency IT staff makeup

Information Technology Office (ITO)

Organization Chart

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                        ┌─────────────────────────┐
                        │  Office of the Secretary │
                        │    Cabinet Secretary     │
                        └─────────────────────────┘
                                    │
                        ┌─────────────────────────┐
                        │  Information Technology  │
                        │        Office (ITO)      │
                        │   Chief Information       │
                        │     Officer (CIO)         │
                        │      Joe Montano          │
                        │       Gen II IT           │
                        └─────────────────────────┘
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Enterprise GIS Development & Support	Enterprise Application Development & Support	Enterprise Network, Security & Web	Enterprise Help Desk Computer Support
Richard Koehler IT Business Analyst	James Whitaker IT Apps Dev III	Caleb Raymer IT Generalist II	Martin Maes IT Network Specialist II

Douglas Jansen IT Apps Dev III	Blezoo Varghese IT Generalist II	Monica Varela IT Network Spec III	Andrew Griego IT Generalist II	Jose Romero IT Generalist I	
Vacant IT DB Admin II	Sandy Herrera IT Apps Dev III	Brenda Weimer IT Tech Support Specialist III	Denise Archuleta IT Generalist I	Daniel Montoya IT Tech Support Specialist III	
Larry Kehoe IT Apps Dev III	John Daues IT Apps Dev III	Gabe Cisneros IT Apps Dev III		Vacant IT Tech Support Specialist III	

6.1.1 Embedded HR Inventory spreadsheet

Complete the embedded HR Inventory spreadsheet, and re-embed the completed spreadsheet under this item 6.1.1 Consider saving spreadsheet separately as well.

HR Inventory.xls

6.2 Staffing Gaps and recruitment – Specific skills related to gaps and hiring issues?

Identify specific skill sets that represent staffing gaps and recruitment issues

Specific Skill Set	Gap Impacts	Mitigation Steps if any
Skilled and Experienced Application and Database Development Staff (.NET, MSSQL)	Cannot complete as many software development projects. Multiple rounds of recruitment have been required with every recent position filled.	Staff development activities post hire. Wider advertisement.

6.3 Agency IT Staff Training Plans

DoIT has a Training Center that offers excellence in IT education and has provided several courses to agencies at an efficient cost and effective manner. In the effort to assist agencies with their training requirements, DoIT is requesting agencies to define specific training needs by completing the training table below.

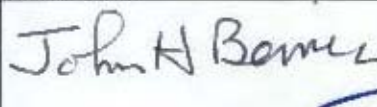| IT Training Area	Typical IT Training Provider	Number of Staff to be Trained	Typical Individual Cost of Training
Intro to GIS – ESRI Instructor lead, 2-day	ESRI-Certified at local sites	50+	$1000
Intro to GIS – Instructor lead, 2-day	Northern New Mexico College	40+	$125
Intro to GIS – self-paced web-based	ESRI Virtual Campus	50+	$150
Intermediate GIS, ESRI Instructor lead	ESRI-Certified at local sites	10	$1000-$1500
Intermediate GIS, self-paced web-based	ESRI Virtual Campus	10	$150
Advanced GIS	ESRI-Certified at local sites	3-5	$1000-$1500
Intro to GPS (Topcon, Trimble)	Local vendors	10-20	$600
Intro to GPS (Garmin)	EMNRD internal	50+	Free
ESRI GIS Infrastructure Administration	ESRI-Certified at local sites	2	$1500
ESRI GIS-related App Development	ESRI-Certified at local sites	2-3	$1000
ERDAS Remote Sensing / Imagery Analysis	Leica facilities out-of-state, typically Denver	2-3	$1000
MS Office	New Horizons and others	535	$50-$150
MS Windows	New Horizons and others	535	$50-$150
MCSE	New Horizons and others	6	$3000
A+	New Horizons and others	4	$200
Network+	New Horizons and others	4	$250
SharePoint	New Horizons and others	2	$1500
VMware	New Horizons and others	3	$2000-$5000
Advanced Enterprise Ghost	Out-source (Symantec)	1-2	$5000

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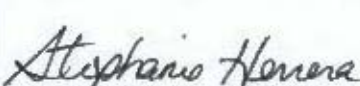| IT Training Area	Typical IT Training Provider	Number of Staff to be Trained	Typical Individual Cost of Training
OS imaging training.			
CompTIA A+ certification	New Horizons and others	1-2	$5000
Microsoft SCCM administration	New Horizons and others	1-4	$3000
Windows 7 MCTS	New Horizons and others	3	$2500
Adobe Acrobat	New Horizons and others	100	$250
Visual Studio 2010: Windows Communication Foundation	Interface Technical Training and others	5	$2000
Advanced ASP.NET 4.0 using Visual Studio 2010	Interface Technical Training and others	5	$3000
C# Design and Application Patterns	Interface Technical Training and others	5	$3000
Advanced C# using Visual Studio 2010	Interface Technical Training and others	3	$3000
Maintaining a Microsoft SQL Server 2008 R2 Database	Interface Technical Training and others	3	$3000
Business Analysis for the IT Professional	Interface Technical Training and others	1-2	$2500
Project Management Fundamentals & Professional Certification	Interface Technical Training and others	1	$3000

7. IT Business Management Areas

This section will not be part of the FY14 Agency IT Plan. The information previously included in this section will be gathered through a reporting and/or survey function. DoIT will follow-up with agency staff at a future date.

8. IT Fiscal and Budget Management
8.1 C1Form

Information Technology

**Information Technology
Base Operating Budget
Informational Purposes Only**

Agency Name:	Energy, Minerals and Natural Resources Department	Agency Code:	52100
Appropriation Funding Type:	Base Request Operational Support of IT *Please check one of the options below:* Flat Budget ☒ or Expansion from previous year ☐		

Revenue IT Base Budget (dollars in thousands)

	FY11 & Prior	FY12 Actual	FY13 OpBud	FY14 Request	FY15 Estimate
General Fund	2,043.2	1,916.0	2,102.2	2,130.3	2,130.3
Other State Funds	680.1	661.1	725.3	740.3	740.3
ISF/IAT	122.3	397.2	435.8	460.3	460.3
Federal Funds	603.7	683.8	750.2	765.8	765.8
Total	$ 3,449.3	$3,658.1	$4,013.5	$4,096.7	$4,096.7

Expenditure Categories (dollars in thousands)

Category or Account Description	FY11 & Prior Actual	FY12 Actual	FY13 OpBud	FY14 Request	FY15 Estimate
Personal Services & Employee Benefits	1,310.1	1,428.2	1,780.0	1,843.3	1,843.3
Contractual & Professional Services	190.8	337.3	245.7	306.6	306.6
IT Other Services	1,948.4	1,892.6	1,987.8	1,946.8	1,946.8
Other Financing Uses	0.0				
Total	$ 3,449.3	$ 3,658.1	$ 4,013.5	$4,096.7	$4,096.7

	Agency Cabinet Secretary/Director (mandatory)	CIO or IT Lead (mandatory)	Budget Director (mandatory)
Print Name	John Bemis	Joe Montaño	Stephanie Herrera
Signature	*John H Bemis*	*(signature)*	*Stephanie Herrera*
Date	8.28.12	8/28/2012	8/28/12
Phone	(505) 476-3200	(505) 476-3280	(505) 476-2193
Email address	john.bemis@state.nm.us	joe.montano@state.nm.us	stephanie.herrera@state.nm.us

Date			
Phone	(505) 476-3200	(505) 476-3280	(505) 476-2193
Email	john.bemis@state.nm.us	joe.montano@state.nm.us	stephanie.herrera@state.nm.us

address			

8.2 Projected IT Projects: Capital, Special, Supplemental Form

EMNRD does not have any current or proposed IT projects greater than $100.0.

8.3 Request for Reauthorization of General Appropriations Act

EMNRD does not have any current or proposed IT projects greater than $100.00.

9. Enterprise Alignment - Agency IT planning related to State of New Mexico IT Strategic Plan

This section will not be part of the FY14 Agency IT Plan. The information previously included in this section will be gathered through a reporting and/or survey function. DoIT will follow-up with agency staff at a future date.

Appendix A: FY13 Project Base Budget Compliance Spreadsheets

EMNRD does not have any current or proposed IT projects greater than $100.0.

Appendix B: Current Agency Projects Not in Compliance

EMNRD does not have any current or proposed IT projects greater than $100.0.

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Appendix C: EMNRD FY13 IT Purchase Requests by Division
EMNRD Infrastructure (IT)

Request	Quantity	New, Refresh, Upgrade, Renewal	Justification
Servers	8	Refresh	Servers critical to the department business functions.
Maintenance	Multiple	Renewal	Renew maintenance on existing equipment & software
Local (LAN) & Wide Area Network (WAN) expansions	Multiple	New/Upgrade	Expand and improve the department's telecommunications infrastructure in central and field offices
Routers and Switches	Multiple	Refresh	Replace out of date and unsupported equipment
Purchase Software required to enhance and/or maintain the agency's operations	Multiple	New Purchase Refresh Upgrade Renewal	Enhance and/or maintain the agency's operations
Purchase Hardware required to enhance and/or maintain the agency's operations	Multiple	New Refresh Upgrade Renewal	Enhance and/or maintain the agency's operations
Upgrade Web Mapping Software from ESRI ArcGIS Server Standard to ArcGIS Server Advanced	1 for 4 cores	Upgrade	ArcGIS Server Standard does not provide mobile GIS capabilities to dynamically query and update the server remotely, or provide mobile application development tools. The Advanced version also includes the Spatial Analyst, 3D Analyst, Network Analyst, & Geostatistical Analyst Extensions.
Purchase Manifold GIS software, Enterprise-level	1	New	Evaluate alternative to ESRI ArcGIS to provide GIS analytical capabilities to EMNRD
Purchase ESRI Spatial Analyst Extension for ArcGIS Server Standard	1	New	Provide spatial analytical capabilities for web map applications requested by EMNRD Divisions (on-the-fly processing of location-related queries, etc.)
Purchase Cloud-based ArcGIS Server installation	1	New	Deliver EMNRD information to the public and industry via web maps in a more cost-effective and efficient manner

** Additional infrastructure items not listed above may be purchased if monies are available at the end of the year **

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Program Support (PS)

Request	Quantity	New, Refresh, Upgrade, Renewal	Justification
25% refresh – Desktops	15	Refresh	Replace oldest 25%
25% refresh – Laptops	5	Refresh	Replace oldest 25%
25% refresh – Printers	10	Refresh	Replace oldest 25%
IT Training	Multiple	New/Renewal	Insure IT staff is able to operate efficiently
Scanners	3	Refresh and New	Replace or purchase as needed
Printer Maintenance	Multiple	Renewal	Renew maintenance on existing equipment & software
Hardware/Software Maintenance	Multiple	Renewal	Renew maintenance on existing equipment & software
Network Monitoring Utilities	4	Upgrade	Maintain existing equipment & software

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Waste Isolation Pilot Plant (WIPP)

Request	Quantity	New, Refresh, Upgrade, Renewal	Justification
25% refresh – Desktops	1	Refresh	Replace oldest 25%
25% refresh – Laptops	1	Refresh	Replace oldest 25%
25% refresh – Printers	1	Refresh	Replace oldest 25%
Printer Maintenance	Multiple	Renewal	Renew maintenance on existing equipment & software
Hardware/Software Maintenance	Multiple	Renewal	Renew maintenance on existing equipment & software
Digital Cameras	3	Refresh and New	Replace or purchase as needed
USB Flash Drives	3	Refresh and New	Replace or purchase as needed
Scanners	2	Refresh and New	Replace or purchase as needed

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Youth Conservation Corp (YCC)

Request	Quantity	New, Refresh, Upgrade, Renewal	Justification
25% refresh – Desktops	1	Refresh	Replace oldest 25%
25% refresh – Laptops	1	Refresh	Replace oldest 25%
25% refresh – Printers	1	Refresh	Replace oldest 25%
Printer Maintenance	Multiple	Renewal	Renew maintenance on existing equipment & software
Hardware/Software Maintenance	Multiple	Renewal	Renew maintenance on existing equipment & software
Digital Cameras	3	Refresh and New	Replace or purchase as needed
USB	3	Refresh and New	Replace or purchase as needed
Scanners	2	Refresh and New	Replace or purchase as needed

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Energy Conservation and Management Division (ECMD)

Request	Quantity	New, Refresh, Upgrade, Renewal	Justification
25% refresh – Desktops	2	Refresh	Replace oldest 25%
25% refresh – Laptops	3	Refresh	Replace oldest 25%
25% refresh – Printers/Fax Copier	2	Refresh	Replace oldest 25%
QuickBase.com System – User Licenses	9	Purchase	Required to collect data from 60+ subrecipient organizations outside of the state.nm.us network, track project progress, aggregate data subsets & report 100+ data elements on time to US DOE.
Application software updates & new training software (e.g. renewable energy and energy efficiency related software)	9	Purchase	Needed for new program areas and staff
Upgrade - Solar and Geothermal Analysis Software	1	Upgrade	Need to keep software current
ESRI ArcGIS Software plus extensions	1	Renewal	Maintenance agreements - to keep software current
ESRI ArcGIS ArcView plus extensions	1	New Purchase	Single use license for use on laptop
Energy Tracking Software	1	Upgrade / Purchase	Required to keep technical staff software updated
Energy 10 Building Analysis Software	1	Upgrade / Purchase	Needed to keep technical staff software updated
TRACE Software	1	Upgrade / Purchase	Needed to keep technical staff software updated
Computer Hardware (e.g. Digitizer Board, Mouse, etc)	5	Purchase	Needed for staff use when required

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Forestry Division (FD)

Request	Quantity	New, Refresh, Upgrade, Renewal	Justification
25% refresh - Desktops	10	Refresh	Replace oldest 25%
25% refresh - Laptops	7	Refresh	Replace oldest 25%
25% refresh - Printers	9	Refresh	Replace oldest 25%
Obtaining and maintaining increased bandwidth	1	Purchase/Refresh	Via grant funding
ESRI ArcGIS v10 plus extensions; ArcPad	12	Renewal	Maintain current software.
ESRI ArcView v10 concurrent use licenses plus extensions	4	Purchase	Needed for additional staff.
External Drives for GIS capability	7	Purchase	Needed for GIS capability
Purchase Cloud-based ArcGIS Server installation	1	Purchase	Deliver Forestry fire and timber spatial information to the public and industry via web maps in a more cost-effective and efficient manner
Flat panel monitor replacements	2	Refresh	Replace outdated equipment
Scanner	1	Refresh	Replace outdated equipment
Radio replacements	4	Refresh	Replace outdated equipment
Digital cameras and related supplies	1	Refresh	Replace outdated equipment
Projector (Proxima)	1	Refresh	Replace outdated equipment
UPS replacements	4	Refresh	Replace outdated equipment
Smartphones or equivalent for staff	3	Refresh	Replace outdated equipment

Mining and Minerals Division (MMD)

Request	Quantity	New, Refresh, Upgrade, Renewal	Justification
25% refresh – Desktops (more if not done in FY12)	15 (assuming none are purchased in FY13)	Refresh	Replace oldest 25% all CPUs 5 years and older will need to be replaced
25% refresh - Laptops	3	Refresh	Replace oldest 25%
25% refresh - Printers	3	Refresh	Replace oldest 25%

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Monitors	8	Purchase	For employees working on mapping or database work
Increase Network Area Storage (NAS) capacity	3-6 TB	Upgrade	Needed for imaging, database and expanded electronic permitting storage requirements. Conversion of paper to digital format.
GPS-enabled devices/smartphones that are Bluetooth compatible	4	Purchase	For use in field inventories and GPS and GIS mapping
Smartphones for viewing ArcGIS information	6	Purchase	ArcGIS online now how the ability to share various shape files onto the internet. Certain applications allow for the viewing of these shape files where there is phone reception.
USB flash drives	15	Purchase	To move data from one computer to another
Upgrade/Refresh GPS Receivers	8	Refresh/ Purchase	Used for field inventory and project planning, permitting and inspections by AML, MARP and Mine Registration
Digital camera (GPS-linked or other)	8	Purchase	For use in field inventories
High resolution flatbed scanner with auto sheet feed (11x17 capable)	2	Refresh	E-correspondence and E-filing has increased the need to scan documents sent to operators and the public, as well digital filing. Also, needed for field inspections
Large Format Plotters	2	Refresh	Needed for map production and display materials
ESRI ArcGIS ArcView concurrent use license, w/ extensions as needed	8	Purchase/ Renewal	Needed for integral business processes related to electronic permitting, permit review, field mapping
ESRI Lidar Analyst	2	Purchase	Needed to increase remote sensing capabilities for permitting and AML project development and legacy uranium mining evaluation
Geostatistical Analyst extension for ArcGIS.	1	Renewal	Needed to increase spatial analysis and reporting capabilities
ERDAS Imagine Professional with ER Mapper and ERDAS Objective modules and MrSid Compression Module. Updates on future Modules.	2	Purchase	Needed to increase remote sensing capabilities for MMD programs – project development, permitting and monitoring

Upgrades or Extensions to ESRI ArcGIS Server Standard Enterprise	2	Purchase	Needed for integral business processes related to electronic permitting, permit review, field mapping
Google Earth Professional bundle	5	Purchase	For better public accessibility to mine reclamation data provided through EMNRD websites
TerraSync or other GIS field software for mapping-grade GPS receivers	2	Purchase	Needed for integral business processes related to electronic permitting, permit review, field mapping
ESRI ArcPad and ArcPad Studio	12	Upgrade	Transition to newest version of ArcPad for existing copies, for field mapping and inspections
Adobe Acrobat Upgrades	15	Upgrade	Needed for electronic permitting, and web page development
Adobe Contribute Upgrades	5	Upgrade	Used for WEB page development and maintenance
Adobe Captivate Upgrades	1	Upgrade	Used for Web development and tutorial creation
Techsmith Camtasia	1	Purchase	Used for tutorial and video production
Adobe CS Photoshop, Illustrator, etc.	2	Purchase	Needed for public outreach
Adobe Photoshop	2	Upgrade	Needed for public outreach
Maintenance of Trimble GPS Receivers	4	Renewal	Used for field inventory and project planning , permitting and inspections by AML, MARP and Mine Registration
Maintenance for AutoCAD Map VIP Subscriptions	5	Renewal	Needed for electronic permitting, and GIS project development
Trimble Pathfinder Office Maintenance	5	Renewal	Needed for electronic permitting, and GIS project development
ESRI ArcGIS Maintenance (desktop plus extensions)	8	Renewal	Needed for integral business processes related to electronic permitting, permit review, field mapping
Application software training (e.g. AutoCAD)	12	Purchase	Training is necessary to ensure employees are able to perform their work tasks using e-permitting and GIS
Training: ESRI Virtual Campus Courses for ArcGIS 10.1 and extensions	12	Purchase	Training is necessary to ensure employees are able to perform their work tasks using e-permitting and GIS

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Real-Time Kinematic GPS equipment (base & rover & necessary accessories)	1	Purchase	For accurate mapping and modeling of earth's surface as needed by AML projects (gob piles, drainages, cut and fills, etc.)
TerraGo Tech. GeoPDF software (Publisher for ArcGIS/ArcGIS Server)	2	Purchase	To increase information exchange between MMD program staff / management and businesses / public /partnering agencies: conversion of GIS layers into web compatible .pdf files
TerraGo Technologies Publisher for ArcGIS (GeoPDF authoring software): Maintenance license.	1	Renewal	Needed to facilitate information exchange within office and for conversion of GIS layers for web compatible .pdf files for public use
3rd Party services contract	3	Purchase	Needed to provide labor for paper scanning and verification, map georeferencing, and some aspects of SharePoint application development if additional FTE is not available, as well as field studies and GIS development services.

Oil Conservation Division (OCD)

Request	Quantity	New, Refresh, Upgrade, Renewal	Justification
25% refresh - Laptops	10	Refresh	Replace oldest 25%
25% refresh – Desktop	10	Refresh	Replace oldest 25%
25% refresh - Printers	7	Refresh	Replace oldest 25%
Digital Cameras	15	Refresh	Replace or purchase as needed
USB Flash Drives	20	Refresh and New	Replace or purchase as needed
Scanners	10	Refresh and New	Replace or purchase as needed
Vehicle PC Adapters	10	Refresh	Allows charging of laptops in the field
Garmin Automotive Grade GPS units	5	New	Need topographic dataset as well as street maps
Garmin eTrex GPS Receivers	8	Refresh	All inspectors use these, need to refresh regularly
ESRI ArcView plus extensions, maintenance	3	Renewal	GIS mapping and analysis
ESRI ArcGIS ArcView plus extensions	4	New	Increased staff usage of ESRI software for GIS mapping and analysis
High Volume Document Scanners	5	Refresh	Replace oldest 25%
Neuralog Scanners	3	Refresh	Replace oldest every other year
Terrain Navigator	25	Renewal	Used for field inspections
Maintenance for Contribute	6	Renewal	Used for web maintenance
Maintenance for Scanners	5	Renewal	Used in each office to scan permits and supporting documents
Maintenance for Neuralog Scanners	4	Renewal	Used in three districts and the Santa Fe office to scan well logs
Maintenance for Infomatic Driver	65	Renewal	Used to view .tif files
Hardware/Software Maintenance	Multiple	Renewal	Renew maintenance on existing equipment & software
Printer Maintenance	Multiple	Renewal	Renew maintenance on existing equipment & software
Increase Network Area Storage (NAS) capacity	3-6 TB	Upgrade	Needed for imaging, database and expanded electronic permitting storage requirements. Conversion of microfilm and microfiche to digital format.

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Network Switches	6	Refresh	Replace outdated equipment.
Wide Format Scanner	1	Refresh	Replace failed equipment.

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State Parks Division (SPD)

Request	Quantity	New, Refresh, Upgrade, Renewal	Justification
25% refresh - Desktops	45	Refresh	Replace oldest 25%
25% refresh - Laptops	20	Refresh	Replace oldest 25%
25% refresh - Printers	20	Refresh	Replace oldest 25%
Provide cost effective and efficient connectivity to all field offices for accessibility and transmission of requisite data for personnel and park management	15	Purchase / Upgrade	Improved connectivity will allow each facility to fully access reservation applications for better management of visitor information as well as other programs (i.e. timesheets, revenue, procurement, accounts payable and program reporting, etc.) and continue to assist in promoting and enhancing the Division.
Equipment and monthly recurring costs associated with improved connectivity	34	Purchase / Upgrade	Monthly costs for improved connectivity, e.g. T1 lines, DSL, satellite service, microwave.
Install video-conferencing capabilities at sites throughout the park system	8	Purchase	To enable staff to gather for training, meetings, etc. effectively reducing transportation, per diem costs, time away from the park as well as offering opportunity to enhance the law enforcement and boating programs.
Explore possibilities for e-commerce and point-of-sale technology	1	Purchase	In order to establish on-line stores for park merchandise for educational and promotional purposes and facilitate the sale of park permits and passes to credit/debit card customers.
Experimental equipment to test "bar-coded" or "chip embedded" technology for park passes, permits and payments	1	Purchase	Need to collect visitor data, park use, vacancy rates, and other statistical data

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Printer Maintenance	Multiple	Renewal	Renew maintenance on existing equipment & software
Hardware/Software Maintenance	Multiple	Renewal	Renew maintenance on existing equipment & software
Digital Cameras	15	Refresh and New	Replace or purchase as needed
USB Flash Drives	20	Refresh and New	Replace or purchase as needed
Scanners	10	Refresh and New	Replace or purchase as needed
Provide cost effective and efficient connectivity to all field offices for accessibility and transmission of requisite data for personnel and park management	15	Purchase / Upgrade	Improved connectivity will allow each facility to fully access reservation applications for better management of visitor information as well as other programs (i.e. timesheets, revenue, procurement, accounts payable and program reporting, etc) and continue to assist in promoting and enhancing the Division
Equipment and monthly recurring costs associated with improved connectivity	34	Purchase / Upgrade	Monthly costs for improved connectivity, e.g. T1 lines, DSL, satellite service, microwave
Install video-conferencing capabilities at sites throughout the park system	8	Purchase	To enable staff to gather for training, meetings, etc. effectively reducing transportation, per diem costs, time away from the park as well as offering opportunity to enhance the law enforcement and boating programs
Explore possibilities for e-commerce and point-of-sale technology	1	Purchase	In order to establish on-line stores for park merchandise for educational and promotional purposes and facilitate the sale of park permits and passes to credit/debit card customers

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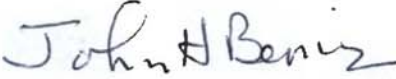|			
Experimental equipment to test "bar-coded" or "chip embedded" technology for park passes, permits and payments	1	Purchase	Need to collect visitor data, park use, vacancy rates, and other statistical data
Upgrade and install new radio equipment in the field to replace outdated equipment or install new equipment	20	Purchase / Upgrade	To ensure that parks can maintain adequate radio communication locally, regionally and statewide
Upgrade and purchase new GPS equipment, software and training	10	Purchase / Upgrade	To gather data for planning projects, tracking data and implementation into GIS systems
ESRI ArcGIS and extensions, concurrent & single use licenses	2	Renewal	Maintain current software
Upgrade and install new equipment in the field to replace outdated equipment or install previously non-existing equipment	50	Purchase / Upgrade	To comply with department network applications and processes. This will allow field offices to fully comply with on-line reporting requirements as well as allowing the Division to continue to maintain the protection and management of our state's natural, cultural and recreational resources, and expand state park interpretation program.
Contract consultant services	1	Purchase	To analyze division programs and make recommendations for future technology applications to ensure continuance of movement toward a paperless environment, improving time managing of employees, enhancing customer service and public outreach educational programs, etc.

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Upgrade and install new database software and applications programs	5	Purchase/ Upgrade	To replace current databases and manual data collection processes that will improve current collection and reporting systems.
Scanners	5	Purchase/ Upgrade	Every park should have a scanner.
Adobe Acrobat Upgrades	10	Upgrade	Needed for electronic permitting, and web page development

State of New Mexico

Appendix D: IT Plan Acknowledgement Signatures

I agree that this document represents the history and planned information technology-related activities for our agency. The elements of this plan, delivered through information technology services, support the agency strategic plan and the State IT Strategic Plan.

Agency Name: Energy, Minerals and Natural Resources Department
Agency Code: 521

Agency Head: _John H Bemis_   Date: 8.28.12
John H. Bemis, Cabinet Secretary

Agency IT Lead: _(signature)_   Date: 8/28/2012
Joe Montaño, Chief Information Officer

Agency Financial Lead: _(signature)_   Date: 8/28/12
Alexis Lotero, ASD Director