# 1R - 241

# WORKPLANS

# DATE:
# 2006

IRP-241

# *Scope of Work and Cost Proposal*

# *SITE REMEDIATION*

## *Northeast Caprock Queen, New Mexico*

***Submitted to:***

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

***Submitted by:***

*INTERA Incorporated*
*6000 Uptown Boulevard NE, Suite 100*
*Albuquerque, New Mexico 87110*

*October 9, 2006*

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# 1.0 INTRODUCTION

This scope of work (SOW) and cost estimate are being submitted for remediation activities at the Northeast Caprock Queen (Site) located in Lea County, New Mexico. The cleanup is to include removal of miscellaneous debris and solids containing petroleum-hydrocarbons, fencing, and approximately 11,666 cubic yards of petroleum-contaminated soil. This submittal is in response to verbal request from Mr. E.L. Gonzales of the New Mexico Oil Conservation Division (NMOCD) District I Office to Joseph Tracy of INTERA Inc. (INTERA) on September 27, 2006.

Basing our assumptions on the SOW, INTERA has identified the following activities that will be performed during the Site investigation and remediation:

- Sample petroleum contaminated soil to obtain waste profile prior to soil disposal;
- Remove the miscellaneous debris located at the Site. Visually observed miscellaneous debris items at the Site including a concrete foundation, fencing, t-posts, and miscellaneous items;
- Remove visual soil contamination as appropriate up to a maximum of 11,666 cubic yards. For purposes of this cost estimate, INTERA assumes that the pit will be excavated to a depth of approximately 5 feet below the current grade surface. INTERA also assumes that mix material is available for use at the Site;
- Backfill all excavated areas to the surface grade observed prior to contaminated soil excavation activities to a compaction of at least 90%;
- Clean soil will be transported to the Site to backfill the excavation;
- Propose any additional soil remediation techniques if necessary; and
- Prepare a final report.

The scope of work is divided into four tasks as shown on the attached spreadsheet.

**Background Information**

The Northeast Caprock Queen Site is located approximately 8 miles south of Caprock, New Mexico and is accessible via County Road 182. The site is 150 feet x 300 feet, is surrounded by a barbed wire fence, and contains buried pits with petroleum-contaminated soil.

# 2.0 SCOPE OF WORK

INTERA has developed the project SOW by dividing the activities into four distinct tasks. Task 1 will include project development and coordination. Task 2 will consist of contacting One-Call (map any underground utilities) and conducting a NORM survey at the Site. Task 3 will incorporate the field activities of removal of the contaminated soil located within the Site area. Task 4 will involve the preparation and transmittal of a summary report to the NMOCD.

## 2.1 Task 1: Project Development and Coordination

This project requires adequate preparation and coordination. Task 1 will include the development of a project schedule, project budget tracking, preparation of a Site-specific health and safety plan, and the preparation of an internal work plan. Task 1 will also include project management tasks and coordination with the NMOCD.

## 2.2 Task 2: Performance of a "One-Call" and a NORM Survey

INTERA will perform a New Mexico-required "One-Call" prior to the performance of any Site work. The "One-Call" service should provide the locations of all known underground buried utilities at the Site.

INTERA will subcontract to perform a NORM survey. INTERA has contacted the New Mexico Environment Department Radiation Control Bureau and obtained a list of qualified NORM surveyors. INTERA will use a NORM surveyor located nearest the Site to reduce mobilization/transportation/per diem costs. The NORM survey will determine if there are any radioactive materials present within the Site. A complete copy of the NORM survey results will be included in the final report.

## 2.3 Task 3: Field Investigation

The field investigation will include the following activities described as follows:

- An INTERA field representative will collect a sample of the petroleum-contaminated material for waste disposal characterization.
- An INTERA licensed subcontractor will conduct the removal of the fencing and concrete material located around and on the Site. INTERA will document the volume/weight of the concrete removed as well as the disposal/recycling company used to accept the concrete waste material.
- All testing necessary (which has been assumed to be limited to the NORM survey) will be conducted prior to disposal.
- An INTERA subcontractor will perform the pit removal activities. The Site is 150 feet x 300 feet and will be excavated to a depth of 5 feet below grade. The petroleum contaminated material will be mixed as needed with surrounding soil material (available onsite). The petroleum-contaminated material will be mixed as necessary to allow for solid transport of the material for disposal. The soil will be disposed of at the Gandy Marley facility located on US Highway 380 (Sections 4, 5, 8, and 9, Township 11 South, Range 31 East, Chaves County). Clean soil to be used for backfill will be transported to the Site from the Gandy Marley facility.
- Grab soil samples will be retrieved from the base of the excavation and analyzed using a photoionization detector using New Mexico Petroleum Storage Tank Bureau headspace screening methods. The photoionization detector readings will be recorded in the field log book. Approximately eight (8) soil samples will be selected for laboratory analysis and will be submitted to an NMOCD-approved laboratory, Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico. Each soil sample submitted will be analyzed for total petroleum hydrocarbons, benzene, toluene, ethyl benzene, and total xylenes, and chloride.
- All sample locations will be documented using a hand-held GPS receiver and will be provided in the coordinate system specified by the NMOCD Project Manager. The GPS locations will be used to document sampling locations on the final site figures.

- INTERA recommends that quality control/quality assurance (QA/QC) samples (split samples, duplicates, etc.) be collected. The frequency and number of QA/QC samples will be dictated by the NMOCD, and therefore have not been budgeted at this time.

### 2.4 Task 4: Preparation of Final Summary Report

Upon the culmination of the field investigation, INTERA will complete a final summary report documenting results of the investigation and summarizing the collected data. The report will include at a minimum:

- A site map showing the location of the Site, Site boundaries, and sampling locations;
- NORM survey results (if applicable);
- The volume of material removed and the disposal/reclamation company used. Waste manifests will be included as an attachment to the final report;
- Volume/weight of miscellaneous debris removed and the disposal/recycling company used;
- Results of all soil sample analytical data;
- Conclusions and recommendations for additional work (if necessary).

## 3.0 SCHEDULE

INTERA will submit two invoices for services – at the completion of the field activities and upon transmittal of the final report. Terms of payment will be in accordance with INTERA's New Mexico General Services Department Contract (Contract No. 408050918283).

INTERA will begin scheduling and project coordination as soon as possible after the NMOCD has issued a purchase document for the remediation. The work is estimated to be completed in 40 to 45 working days.

The final report will be transmitted to the NMOCD within 60 days of completion of the field sampling activities.

## 4.0 COST PROPOSAL

The cost estimate is provided in the attached spreadsheet. INTERA's services will be provided on a time and materials basis. INTERA will not exceed these costs without first requesting and then obtaining approval for an amendment to this budget. Assumptions used in developing these costs are provided below.

- The NORM Survey results will be below regulatory limits and the pit soil can be disposed of as OCD exempt waste;
- The NMOCD will provide written permission to use the necessary quantity of soil material at the Site as mix soil for the material removal activities;
- The NMOCD will grant access to the property and INTERA need not obtain or generate any access agreements;

- INTERA will complete the fieldwork for the site remediation/site characterization within a period of 45 days;
- The fencing around the perimeter of the facility and concrete pad will be removed as solid waste;
- Soil samples will be sent to HEAL (a NMOCD contract laboratory). Because the contract laboratory will be reimbursed directly through the State of New Mexico, costs for laboratory analyses are not included in the attached estimate. The selected laboratory will provide all sample bottles, coolers, etc. and will be responsible for any cost incurred by INTERA for sample shipping.
- Laboratory analytical data will be forwarded to INTERA within 14 calendar days of submittal of samples to the laboratory.

## 5.0 PERSONNEL

The key personnel who will be responsible for completion of the project are listed below along with their areas of responsibility.

| | |
|---|---|
| Ms. Cynthia Ardito - Principal | Client interface, oversight of project management, and technical review of work plan and report documents. |
| Mr. Joseph J. Tracy, PG – Project Geologist | Project management, contaminant investigation activities, and development of work plan, health and safety plan, and final report. |
| Ms. Amy Andrews – Staff Engineer | Background research, site investigation activities, and development of work plan, and final report. |
| Mr. Konrad Clark – Field Technician II | Coordination, scheduling, and lead technician on field activities. Completion of field forms and final report development. |

# ATTACHMENT 1
# COST ESTIMATE

# State of New Mexico
# Oil Conservation Division
# Remediation
# Northeast Caprock Queen, Lea County, New Mexico, October 6, 2006

| Task 1. Project Preparation and Coordination | | | | | Northeast Caprock Queen |
|---|---|---|---|---|---|
| **Professional Services** | **Contract Line Item** | **Rate** | **Unit** | **# of Units** | **Total** |
| Principal | 0001 | $100.00 | hour | 4 | $400.00 |
| Senior Scientist/Engineer | 0002 | $80.00 | hour | 32 | $2,560.00 |
| Staff Scientist/Engineer | 0004 | $60.00 | hour | 8 | $480.00 |
| Field Technician II | 0005 | $57.00 | hour | 24 | $1,368.00 |
| **Subtotal Professional Labor** | | | | | **$4,808.00** |
| **SUBTOTAL TASK 1:** | | | | | **$4,808.00** |
| **NMGRT @ 6.75%** | | | | | **$324.54** |
| **GRAND TOTAL TASK 1:** | | | | | **$5,132.54** |
| **Task 2. Contact Utilities (1-Call) and Perform Naturally Occurring Radioactive Materials (NORM) Survey** | | | | | |
| **Professional Services** | **Contract Line Item** | **Rate** | **Unit** | **# of Units** | **Total** |
| Staff Scientist/Engineer | 0004 | $60.00 | hour | 4 | $240.00 |
| Field Technician II | 0005 | $57.00 | hour | 8 | $456.00 |
| **Subtotal Professional Labor** | | | | | **$696.00** |
| **Expenses** | **Contract Line Item** | **Rate** | **Unit** | **# of Units** | **Total** |
| NORM Survey | "At Cost" | $800.00 | each | 1 | $800.00 |
| **Subtotal Expenses** | | | | | **$800.00** |
| **SUBTOTAL TASK 2:** | | | | | **$1,496.00** |
| **NMGRT @ 6.75%** | | | | | **$100.98** |
| **GRAND TOTAL TASK 2:** | | | | | **$1,596.98** |
| **Task 3. Field Investigation: Pit Material and Miscellaneous Debris Removal/Disposal** | | | | | |
| **Professional Services** | **Contract Line Item** | **Rate** | **Unit** | **# of Units** | **Total** |
| Senior Scientist/Engineer | 0002 | $80.00 | hour | 24 | $1,920.00 |
| Field Technician II (foreman)(Intera and Subcontractor) | 0005 | $57.00 | hour | 900 | $51,300.00 |
| Project Manager (Superviser) | 0003 | $70.00 | hour | 450 | $31,500.00 |
| Field Technician II - Foreman | 0005 | $57.00 | hour | 450 | $25,650.00 |
| Field Technician I - Equipment Operator | 0006 | $47.00 | hour | 450 | $21,150.00 |
| **Subtotal Professional Labor** | | | | | **$131,520.00** |
| **Expenses** | **Contract Line Item** | **Rate** | **Unit** | **# of Units** | **Total** |
| Mobilization of Equipment | 0047 | $3.50 | mile | 1,638 | $5,733.00 |
| Backhoe - Medium Duty | 0030 | $157.00 | day | 45 | $7,065.00 |
| D5 dozer | "At Cost" | $400.00 | day | 45 | $18,000.00 |
| Per Diem | 0043 | $65.00 | day | 45 | $2,925.00 |
| Pick-Up Truck | 0053 | $70.00 | day | 5 | $350.00 |
| 950 Front End Loader | "At Cost" | $440.00 | day | 45 | $19,800.00 |
| Fuel for Equipment/Trucks - Env. Services Contractor | "At Cost" | $4.14 | gallon | 3600 | $14,904.00 |
| Disposal of Contaminated Solids/Soils | "At Cost" | $17.93 | yard | 11666 | $209,171.38 |
| Transportation of Contaminated Soils | "At Cost" | $22.93 | yard | 11666 | $267,501.38 |
| Clean Soil for Backfill | "At Cost" | $7.93 | yard | 11666 | $92,511.38 |
| Hand-Held GPS Unit | "At Cost" | $5.00 | day | 5 | $25.00 |
| Photoionization Detector (PID) | 0021 | $10.00 | day | 20 | $200.00 |
| **Subtotal Expenses** | | | | | **$638,186.14** |
| **SUBTOTAL TASK 3:** | | | | | **$769,706.14** |
| **NMGRT @ 6.75%** | | | | | **$51,955.16** |
| **GRAND TOTAL TASK 3:** | | | | | **$821,661.30** |
| **Task 4. Preparation of an Final Report** | | | | | |
| **Professional Services** | **Contract Line Item** | **Rate** | **Unit** | **# of Units** | **Total** |
| Principal | 0001 | $115.00 | hour | 8 | $920.00 |
| Senior Scientist/Engineer | 0002 | $80.00 | hour | 24 | $1,920.00 |
| Field Technician II | 0005 | $57.00 | hour | 32 | $1,824.00 |
| Draftsperson II (Figures, Cross Sections) | 0007 | $55.00 | hour | 24 | $1,320.00 |
| Administrator (Technical Editor) | 0009 | $55.00 | hour | 8 | $440.00 |
| **Subtotal Professional Labor** | | | | | **$6,424.00** |
| **SUBTOTAL TASK 4:** | | | | | **$6,424.00** |
| **NMGRT @ 6.75%** | | | | | **$433.62** |
| **GRAND TOTAL TASK 4:** | | | | | **$6,857.62** |

| | |
|---|---|
| **PROJECT GRAND TOTAL (Tasks 1, 2, 3, and 4 plus NMGRT):** | **$835,248.44** |