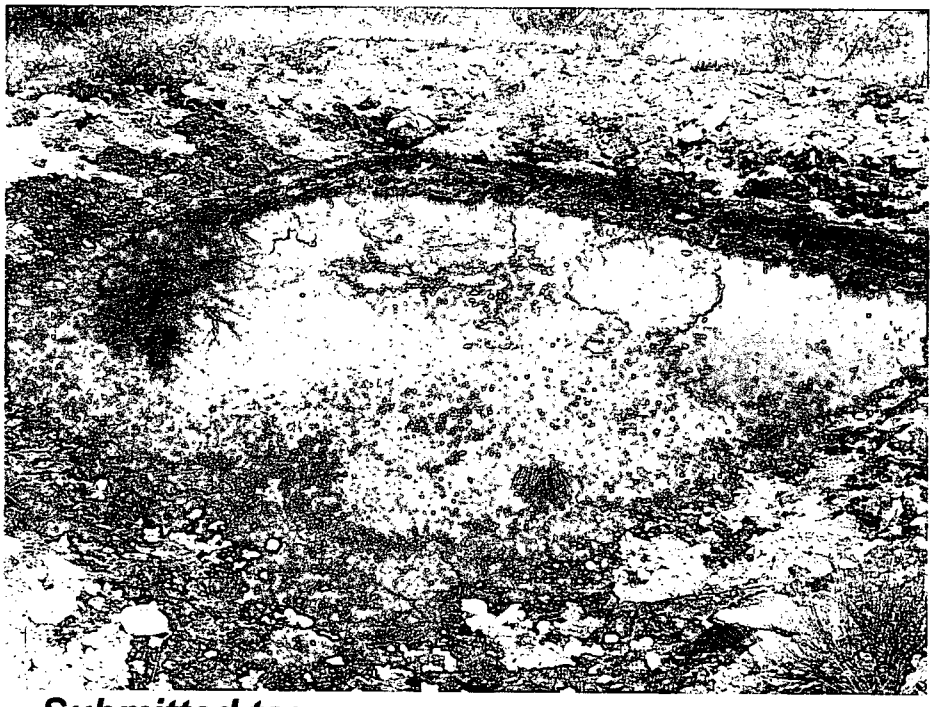
Scope of Work and Cost Proposal

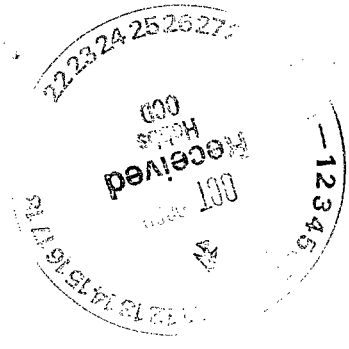
SITE REMEDIATION

Cockburn State Lease, Buckeye Area, New Mexico



Submitted to:

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



Submitted by:

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October 9, 2006

TABLE OF CONTENTS

Section **Page**

1.0 INTRODUCTION **1**

2.0 SCOPE OF WORK **1**

2.1 Task 1: Project Development and Coordination 1
2.2 Task 2: Performance of a "One-Call" and a NORM Survey 2
2.3 Task 3: Field Investigation 2
2.4 Task 4: Preparation of Final Summary Report 3

3.0 SCHEDULE **3**

4.0 COST PROPOSAL **3**

5.0 PERSONNEL **5**

Attachment 1 – Cost Estimate

1.0 INTRODUCTION

This scope of work (SOW) and cost estimate are being submitted for remediation activities at the Cockburn State Lease (Site) located in Lea County, New Mexico. The cleanup is to include removal of miscellaneous debris, pit fluids and solids containing petroleum-hydrocarbons, fencing, and approximately 650 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 include fencing, t-posts, and miscellaneous trash items located within the pit;
- Remove visual soil contamination as appropriate up to a maximum of 650 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 Cockburn State Lease Pit Site is located southwest of Lovington in Lea County, New Mexico. The unlined pit is 60 feet x 60 feet x 5 feet deep, surrounded by berms and contains petroleum hydrocarbons, water, and petroleum-contaminated soil. The pit is surrounded by wire fencing secured to T-posts.

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 pit. 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 pit soil materials. 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 pit material for waste disposal characterization.
- An INTERA licensed subcontractor will conduct the removal of the miscellaneous debris located at the Site, if any. The perimeter fencing located around the pit will also be removed. INTERA will document the volume/weight of the miscellaneous debris removed as well as the disposal/recycling company used to accept the 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 unlined pit is 60 feet x 60 feet x 5 feet deep, surrounded by berms and contains petroleum hydrocarbons, water, and petroleum-contaminated soil. The petroleum contaminated material will be mixed as needed with surrounding 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 four (4) 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 pit, Site boundaries, and sampling locations;
- NORM survey results (if applicable);
- The volume of material removed from the pit 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 3 to 5 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 material at the Site as mix soil for the pit 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 3 to 5 days;
- The fencing around the perimeter of the facility 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
Cockburn State Lease, Buckeye Area, Lea County, New Mexico, October 6, 2006

Task 1. Project Preparation and Coordination					Cockburn State Lease
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	16	$912.00
Subtotal Professional Labor					**$4,352.00**
SUBTOTAL TASK 1:					**$4,352.00**
NMGRT @ 6.75%					**$293.76**
GRAND TOTAL TASK 1:					**$4,645.76**
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	16	$1,280.00
Field Technician II (foreman)(Intera and Subcontractor)	0005	$57.00	hour	80	$4,560.00
Project Manager (Supervisor)	0003	$70.00	hour	40	$2,800.00
Field Technician II - Foreman	0005	$57.00	hour	40	$2,280.00
Field Technician I - Equipment Operator	0006	$47.00	hour	40	$1,880.00
Subtotal Professional Labor					**$12,800.00**
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	4	$628.00
D5 dozer	"At Cost"	$400.00	day	4	$1,600.00
Per Diem	0043	$65.00	day	16	$1,040.00
Pick-Up Truck	0053	$70.00	day	5	$350.00
950 Front End Loader	"At Cost"	$440.00	day	4	$1,760.00
Fuel for Equipment/Trucks - Env. Services Contractor	"At Cost"	$4.14	gallon	270	$1,117.80
Disposal of Contaminated Solids/Soils	"At Cost"	$18.33	yard	650	$11,914.50
Transportation of Contaminated Soils	"At Cost"	$23.33	yard	650	$15,164.50
Clean Soil for Backfill	"At Cost"	$8.33	yard	900	$7,497.00
Hand-Held GPS Unit	"At Cost"	$5.00	day	4	$20.00
Photoionization Detector (PID)	0021	$10.00	day	4	$40.00
Subtotal Expenses					**$46,864.80**
SUBTOTAL TASK 3:					**$59,664.80**
NMGRT @ 6.75%					**$4,027.37**
GRAND TOTAL TASK 3:					**$63,692.17**
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	16	$912.00
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					**$5,512.00**
SUBTOTAL TASK 4:					**$5,512.00**
NMGRT @ 6.75%					**$372.06**
GRAND TOTAL TASK 4:					**$5,884.06**

PROJECT GRAND TOTAL (Tasks 1, 2, 3, and 4 plus NMGRT):	**$75,818.97**

State of New Mexico
Purchase Order

PO Number to be on all Invoices and Correspondence

Dispatch via Print

Purchase Order	Date	Revision	Page
52100-0000004620	03/14/2007		1
Payment Terms	**Freight Terms**		**Ship Via**
Pay Now	FOB Destination		Best Way
Buyer	**Phone**		
FRAN A. CHAVEZ	505/476-3477		

Energy, Minerals & Resources
1220 South St. Francis Drive
Santa Fe NM 87505
United States

Vendor: 0000043982
INTERA INCORPORATED
6000 UPTOWN BLVD NE STE 100
ALBUQUERQUE NM 87110

Ship To: 1220 South St. Francis Drive
Room 346
Santa Fe NM 87501
United States

Bill To: 1220 South St. Francis Drive
Room 346
Santa Fe NM 87501
United States

Origin: **ENC** **Exc\Excl #:**

Line-Sch	Item/Description	Mfg ID	Quantity UOM	PO Price	Extended Amt	Due Date
1- 1	Remediation of old production pit at the Cockburn State 'B' well site.		1.00 EA	78,000.00	78,000.00	03/14/2007
	52100-31100-0710000000-535200- -0750- - -107-60000					

Schedule Total 78,000.00

Item Total 78,000.00

61-805-09-18553 Exp 06/30/2007
SITE MAINTENANCE & MONITORING, PIGGY BACK FROM DOT
FRAN CHAVEZ 476-3477

Total PO Amount 78,000.00

Agency Approval - I certify that the proposed purchase represented by this document is authorized by and is made in accordance with all State (and if applicable Federal) legislation rules and regulation. I further certify *that adequate unencumbered cash and budget expenditure authority exists for this proposed purchase and all other* outstanding purchase commitments and accounts payable.

Authorized Signature