EXHIBIT A

STATEMENT OF WORK

WATER ACTIVITY NAME - Red Mesa Dam & Reservoir – Spillway Alternatives Analysis

GRANT RECIPIENT – Red Mesa Reservoir & Ditch Company

FUNDING SOURCE – Southwest Basins Roundtable WSRA Basin Grant

INTRODUCTION AND BACKGROUND

The Colorado State Engineer has identified the spillway at Red Mesa Dam as seriously deficient in flood routing capacity and has directed the owners to bring the spillway into compliance with the dam safety requirements for a high hazard dam, or face significant storage restrictions or a possible breach order. A time frame of approximately three years has been established to achieve compliance.

The purpose of the proposed project is to develop a rational basis on which to determine the most cost-effective method for achieving compliance with the State Engineer's requirements. URS Corp., the Company's engineer, will evaluate several scenarios for achieving compliance, ranging from dam breaching and decommissioning to modifying the existing dam and spillway at the current reservoir storage level to allow it to pass the required spillway design flood. In addition, two scenarios for enlarging the dam and increasing normal reservoir storage capacity will be evaluated to determine the value of the increased storage in helping to offset spillway dam modification construction costs.

OBJECTIVES

The objectives of the proposed activity are as follows:

1. Develop conceptual designs for each evaluated alternative
2. Develop conceptual-level cost estimates for each alternative based on the conceptual designs and other anticipated costs, on which decisions concerning the best course of action can be based
3. Develop a recommended course of action

TASKS

Task 1 – Alternatives Development

Description of Task

Evaluate alternatives at a conceptual level to develop a cost effective solution to modify the existing spillway and dam without constructing a new dam.

Method/Procedure

The alternatives analysis will focus on the following strategies:

- Breaching the dam and draining the reservoir (essentially the "Do Nothing" Alternative)
- Spillway design based on optimizing the required spillway crest length at the existing spillway crest elevation, along with raising the dam crest to provide additional flood routing freeboard
- Providing flood overtopping protection consisting of roller-compacted concrete for the existing embankment, in concert with an enlarged spillway of appropriate size
- Two dam and reservoir enlargement alternatives coupled with spillway size optimization, as above, consisting of
    - Raising the normal storage level by 4 feet (approximately 250 acre-feet)
    - Raising the normal storage level by 8 feet (approximately 550 acre-feet)

URS will perform conceptual engineering analyses to enable the development of alternatives and concept figures.

Deliverable

Conceptual-level designs and figures for each of the evaluated alternatives, developed based on State Engineers Office (SEO) criteria and industry standards.

Task 2 – Cost Estimate

Description of Task

Develop conceptual cost estimates for each of the alternatives based on the conceptual design figures.

Method/Procedure

The cost estimates will be based on quantity takeoffs estimated from the figures developed in Task 1. Pricing will be based on URS's database for material costs, previous dam construction projects in Colorado and New Mexico, prevailing wage rates, RS Means, and published unit rates from Colorado Department of Transportation. Contingencies will be applied, based on the conceptual level of design. The cost estimate for each alternative will be conceptual level and based on conceptual figures for the sole purpose of comparing alternatives.

Deliverable

Conceptual level cost estimates for each of the evaluated alternatives, for the purpose of comparing the alternatives.

Task 3 – Preparation of Technical Memorandum

Description of Task

A technical memorandum will be prepared which documents the activities and processes of the first two tasks and discusses recommendations for moving forward.

Method/Procedure

The technical memorandum will include design criteria, constraints, assumptions, quantities, cost estimates and potential construction risks and challenges for the alternatives.

Deliverable

Final technical memorandum, as described above, which will recommend a preferred alternative.

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

BUDGET

Total Costs				
	Labor	Other Direct Costs	Matching Funds (If Applicable)	Total Project Costs
Task 1 – Alternatives Development	$9117.00	$252.44		$9369.44
Task 2 – Cost Estimate	$3764.00	$104.22		$3868.22
Task 3 – Preparation of Technical Memorandum	$5899.00	$263.34		$6162.34
Total Costs:	$18,780.00	$620.00		$19,400.00

Labor								
Project Personnel:	Consultant 2	Consultant 3	Project Engineer 4	Project Engineer 1	CADD Technician	Staff		Total Costs
Hourly Rate:	$185.00	$201.00	$155.00	$124.00	$82.00	$77.00		
Task 1 – Alternatives Development	9	2	6	31	24	4		$9117.00
Task 2 – Cost Estimate	2	1	3	22				$3764.00
Task 3 – Preparation of Technical Memorandum	5	1	5	31		2		$5899.00
Total Hours:	16	4	14	84	24	6		
Cost:	$2960.00	$804.00	$2170.00	$10,416.00	$1968.00	$462.00		$19,400.00

Other Direct Costs						
Item:	Communication	Reproduction / Shipping				Total
Task 1 – Alternatives Development	$252.44					$252.44
Task 2 – Cost Estimate	$104.22					$104.22
Task 3 – Preparation of Technical Memorandum	$163.34	$100.00				$263.34
Total Cost:	$520.00					$620.00

SCHEDULE

Task	Start Date	Finish Date
1 – Alt. Dvlpmt.	NTP + 30 days	NTP + 75 days
2 – Cost Est.	NTP + 75 days	NTP + 95 days
3 – Tech. Memo.	NTP + 90 days	NTP + 120 days

NTP = Notice to Proceed

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.