



## Department of Energy

Oak Ridge Office of Environmental Management  
P.O. Box 2001  
Oak Ridge, Tennessee 37831

December 5, 2017

Mr. Kenneth J. Rueter  
President and Project Manager  
URS | CH2M Oak Ridge LLC  
Post Office 4699  
Oak Ridge, Tennessee 37831-4699

Dear Mr. Rueter:

### URS | CH2M OAK RIDGE LLC CONTRACT NUMBER DE-SC0004645, AWARD FEE DETERMINATION FOR PERIOD 12

The U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management (OREM) Award Fee Board has completed its evaluation of the URS | CH2M Oak Ridge LLC (UCOR) performance for Award Fee Period 12 (April 1, 2017 through September 30, 2017). In its deliberations, the Board considered the Award Fee Evaluation Report and your self-assessment. As the Fee Determination Official, I have determined that UCOR has earned the following Award Fee for Period 12: \$1,602,529 for the Project Management Incentive, and \$1,685,777 for the Cost and Schedule Incentive. The total Award Fee is \$3,288,306 against an available Award Fee of \$3,784,011, for Period 12. The ratings are as follows:

Objective Number	Performance Description	Performance Weight	Available Award Fee Pool	Performance Score	Award Fee Earned	Adjectival Rating
A.	<b>Project Management Incentive</b>					
A.1	Project Management and Business Systems	25%	\$520,301.50	91%	\$473,474	Excellent
A.2	Work Planning and Control; and Worker Safety, Health, and Quality Management	50%	\$1,040,603	63%	\$655,580	Good
A.3	Environmental Protection	25%	\$520,301.50	91%	\$473,475	Excellent
<b>Project Management Incentive Total</b>		100%	\$2,081,206	77%	\$1,602,529	Very Good
B.	<b>Cost and Schedule Incentive</b>	100%	\$1,702,805	99%	\$1,685,777	High-Confidence

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During the six-month performance rating period, UCOR has continued to execute the scope under the East Tennessee Technology Park contract very well and is advancing multiple projects in support of OREM Vision 2020 for the site.

UCOR has performed 72 percent of their contract baseline with a cumulative Schedule Performance Index of 1.00, a Cost Performance Index of 1.08, Complete Performance Index based upon Estimate at Completion of .97, and a favorable Variance at Completion against the Performance Measurement Baseline of \$120 million. These indicators reflect a contract that is performing well against the cost and schedule plan, and the Estimate at Completion is realistic and reasonable.

UCOR achieved criticality incredibility in the K-25/K-27 areas. This will result in significant cost savings by eliminating required quarterly surveillance and ongoing maintenance of the Radioactive Criticality Accident Alarm System and reduce required support personnel during unplanned power outages. The criticality incredible status also allows portions of the Radioactive Critically Accident Alarm System to be removed from power poles that the City of Oak Ridge would otherwise not accept.

UCOR provided excellent support for the Independent Cost Estimate review of the Outfall 200 Mercury Treatment Facility Critical Decision (CD)-3A, Early Site Preparation. UCOR was diligent in providing draft CD-3A baseline documentation, including cost, schedule, and risk information, participating in weekly conference calls, and responding to questions from the Independent Cost Estimate team. The efforts of the Integrated Project Team were integral to obtaining the recommendation from the Project Management Risk Committee to the DOE Office of Environmental Management for approval of CD-3A.

UCOR initiated piezometer drilling at the Environmental Management Waste Management Facility after overcoming several problems that were encountered with the drilling subcontractor and their equipment. This is an important activity to address regulator concerns at the disposal facility.

UCOR continues to be proactive in searching for the source of strontium detected in White Oak Creek. UCOR installed 10 piezometers along a storm drain line leading north from the creek. These piezometers have been used to collect groundwater samples for analysis and are part of a systematic approach to locate the source of the strontium. UCOR also increased monitoring frequencies to track trends of strontium at outfalls and bridges.

UCOR established a dedicated team to evaluate pumping systems as part of the effort to evaluate increased maintenance needs for pumping systems associated with the Liquid and Gaseous Waste Operations (LGWO). The evaluation resulted in 59 completed actions and 176 recommendations. Critical actions that were accomplished include: the resolution of the Moyno pump reliability issues at the Building 7966 pump station, the development of a plan for addressing the Moyno pumps at the 2537 Tank Farm, and the completion of an engineering evaluation to confirm that Moyno pumps are the best option for the LGWO sludge pumping operations. This effort should be a valuable management tool for increasing the reliability and reducing risks of failure in the LGWO pumping systems.



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UCOR has operated 30 months without a letter of non-compliance (e.g., Notice of Violation) from an outside regulatory agency and 69 months without a spill or release reportable to outside agencies (e.g., reportable to the National Response Center). In addition, Tennessee Department of Environment and Conservation (TDEC) and U.S. Environmental Protection Agency personnel have conducted over 300 visits to and inspections of UCOR projects in Oak Ridge with no violations identified during this fiscal year. This is a significant achievement given the UCOR management of approximately 30 environmental permits and agreements and the submittal or preparation of nearly 120 required reports, documents, and fees – all of which were delivered on schedule and did not result in any regulator-identified deficiencies.

UCOR was instrumental in negotiating several regulatory agreements, facility closures, and permit requirements that reduced regulatory vulnerability and cost to DOE. For example, a variance was approved by the U.S. Environmental Protection Agency to use a fixed stack flow rate to assess radionuclide emissions at the 3039 central ventilation system, resulting in a cost avoidance of \$1.5 million. Approval was also given by TDEC to include 66 sodium and lithium shields in the Oak Ridge Reservation Site Treatment Plan. This significantly reduces Resource Conservation and Recovery Act compliance vulnerability for DOE by allowing storage of the material greater than one year while meeting environmentally protective storage requirements in lieu of costly and time-consuming relocation to permitted storage facilities.

In addition to the significant accomplishments over the past six months, there are some opportunities for improvement that require continued attention. DOE identified several issues with work planning and control, utilization of human capital resources, crane operations, hazard awareness, transportation safety, and inadequate recognition of changing conditions. These concerns, combined with the opportunities for improvement identified in the Work Planning and Control and Worker Safety, Health, and Quality Management Performance Measure are indicative of a decline in the effective implementation of the systems of control covered under the UCOR Contractor Assurance System (e.g., Integrated Safety Management and Work Planning and Control).

UCOR experienced two instances at the East Tennessee Technology Park of heavy equipment making unexpected contact with tie lines. Both instances were attributed to a lack of qualified spotters. The corrective actions developed to address the company-wide problem was not deployed uniformly and led to difficulty in determining whether the prescribed solution had been applied across various UCOR projects. UCOR should ensure that its corrective action process to address company-wide problems is applied in a more uniform, readily verifiable manner.

UCOR continued to have crane operational difficulties. The cable of the 110-ton crane sustained unexplained damage and had to be replaced. Additionally, the 50-ton crane computer continued to be plagued with functionality issues. UCOR should take steps to improve its crane operations.

UCOR failed to conduct the required preventive maintenance on White Oak Dam resulting in the dam gates being inoperable for an extended period of time. Documentation submitted to OREM to justify not conducting preventative maintenance was based on draft documents and lacked a defensible technical basis.



Mr. Kenneth J. Rueter

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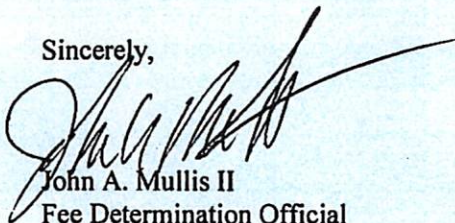
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The UCOR failure to execute existing procedures, follow established protocol, and interpret analytical data resulted in the disposition of a potentially Resource Conservation and Recovery Act regulated waste in Industrial Landfill V and the need to repeat the sampling and analytical effort. A review of the analytical data for an asbestos waste stream generated at Building 7500 (Homogeneous Reactor Experiment) by OREM revealed that the waste potentially fails the Toxic Characteristic Leaching Procedure for mercury, lead, and chromium. This led to a more extensive review of the project and the conclusion that UCOR did not establish Data Quality Objectives, prepare a Sampling and Analysis Plan, follow the Quality Assurance Plan, or develop the required Special Waste Request to ship waste to the Industrial Landfill or Environmental Management Waste Management Facility. As a result, UCOR will be required to initiate a second sampling campaign beginning with the development of the planning documents. This will significantly increase the cost, extend the schedule of the project, and could result in fines and/or penalties from TDEC.

This Award Fee Determination provides reasonable assurance that UCOR fairly executed the Performance Evaluation Management Plan for Period 12.

Please express our sincere thanks to your entire team for their continuing support of the DOE mission. If you have questions or if we can be of any further assistance, please contact me at 576-0742 or David Adler at 576-4094.

Sincerely,



John A. Mullis II  
Fee Determination Official

**Enclosure:**

Award Fee Evaluation Report of the Performance Evaluation Board,  
East Tennessee Technology Park, Contract Number DE-SC0004645

**cc w/enclosure:**

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