

# ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1 3

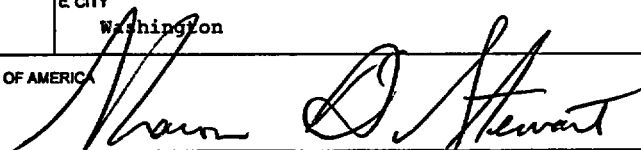
IMPORTANT: Mark all packages and papers with contract and/or order numbers.

BPA NO.

1. DATE OF ORDER <b>SEP 24 2003</b>		2. CONTRACT NO. (If any)		6. SHIP TO:	
3. ORDER NO. DR-02-03-008, MOD. 1		4. REQUISITION/REFERENCE NO. NMS-03-008		a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission ATTN: Edna Knox-Davin	
5. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Division of Contracts ATTN: Michael Turner, T-7-I-2 Contract Management Center No. 1 Washington DC 20555				b. STREET ADDRESS NMSS/DWM/DCB Mail Stop, T-8A23	
				c. CITY Washington	d. STATE DC
				e. ZIP CODE 20555	
7. TO:				f. SHIP VIA	
a. NAME OF CONTRACTOR S. Cohen & Associates				8. TYPE OF ORDER	
b. COMPANY NAME ATTN: Sanford Cohen, President				<input checked="" type="checkbox"/> a. PURCHASE ORDER <input type="checkbox"/> b. DELIVERY/TASK ORDER	
c. STREET ADDRESS 6858 Old Dominion Drive, Suite 301				Reference your _____ Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.	
d. CITY McLean,		e. STATE VA		f. ZIP CODE 22101	
9. ACCOUNTING AND APPROPRIATION DATA Job Code#: J5448 BOC: 252A				10. REQUISITIONING OFFICE NMSS/DWM/DCB	
B&R#: 35015303260 Fund Source#: 31X0200					
11. BUSINESS CLASSIFICATION (Check appropriate box(es))					
<input checked="" type="checkbox"/> a. SMALL <input type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED					
12. F.O.B. POINT Destination		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE As stated	
13. PLACE OF		16. DISCOUNT TERMS Net 30			
a. INSPECTION		b. ACCEPTANCE		FOR INFORMATION CALL: (No collect calls)	
		Michael Turner (301) 415-6535			
17. SCHEDULE (See reverse for Rejections)					

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	<p>Refer to the Basic Award (DR-02-03-008) dated 04/21/03 for services entitled, "Dose Assessment Reviews for Compliance with the Radiological Criteria for License Termination," and and further modify the order to allow for issuance of Task Order No. 1.</p> <p>In accordance with Section A.3, Task Order Procedures of the Basic Award, this action definitizes Task Order No. 1. The work shall be performed in accordance with the attached Statement of Work. The NRC hereby accepts the quotation of S. Cohen &amp; Associates dated July 30, 2003, as amended on August 21, 2003, which is incorporated by reference.</p> <p>Task Order No. 1 shall be in effect from the date of award through 90 days thereafter. The estimated ceiling is \$75,555.00. The amount presently obligated for work performed under this order is \$75,555.00, which is inclusive of the \$20,000.00 obligated under the Basic Award, thus fully funding the order.</p>					

See CONTINUATION Page

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		\$55,555.00	SUBTOTAL
	21. MAIL INVOICE TO:							17(h) TOTAL (Cont. pages)
	a. NAME U.S. Nuclear Regulatory Commission Office of the Chief Financial Officer							17(i) GRAND TOTAL
	b. STREET ADDRESS (or P.O. Box) ATTN: GOV/COM Acctng. Section T-9H4 DR-02-03-008							
	c. CITY Washington	d. STATE DC	e. ZIP CODE 20555				\$55,555.00	
22. UNITED STATES OF AMERICA BY (Signature) 					23. NAME (Typed) Sharon D. Stewart, Contracting Officer TITLE: CONTRACTING/ORDERING OFFICER			

TEMPLATE - ADM001

ADM002 (5/95)

# ORDER FOR SUPPLIES OR SERVICES SCHEDULE - CONTINUATION

PAGE NO.  
2

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER

CONTRACT NO.

ORDER NO.

DR-02-03-008, MOD. 1

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	<p>This task order is to provide NRC with the services described in the attached Statement of Work, at the firm-fixed unit prices reflected below. The Contractor shall comply with the provisions of FAR Clause 52.232-7, Payments under Time-and-Materials and Labor Hour Contracts.</p>					
001	Project Manager (Estimated hours)	150	Hours	152.40	\$22,860.00	
002	Technical Staff/Task Manager (Estimated hours)	450	Hours	96.86	\$43,587.00	
003	Research Assistant (Estimated hours)	100	Hours	64.92	\$6,492.00	
004	<p>Other Direct Costs (ODC) ----- Estimated Not-to-Exceed (ODC includes travel expenses, reproduction, mail services, and all allocable costs necessary for performance of the work described in the Statement of Work.</p> <p>A summary of obligations for this task order is given below:  FY'03 Obligation Amount: \$20,000.00 (Basic Award)  FY'03 Obligation Amount: \$55,555.00 (Modification No. 1)  Cumulative Total of NRC Obligations: \$75,555.00.</p> <p>The issuance of this task order does not amend any terms and conditions of the Basic Award Document.</p> <p>ACCEPTED:</p> <p>Name: _____</p> <p>Title: _____</p> <p>Date: _____</p>	1	Lot	2,616.00	\$2,616.00	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

## ADDITIONAL PURCHASE ORDER TERMS AND CONDITIONS

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### A.1 NOTICE LISTING CLAUSES INCORPORATED BY REFERENCE

The following clauses are hereby incorporated by reference (by Citation Number, Title, and Date) in accordance with the clause at FAR "52.252-2 CLAUSES INCORPORATED BY REFERENCE" contained in this document. FAR 52.252-2 contains the internet address for electronic access to the full text of a clause.

NUMBER

TITLE

DATE

Applicable clauses listed under the Basic Award Document are hereby incorporated by reference.

### A.2 2052.215-70 KEY PERSONNEL (JAN 1993)

(a) The following individuals are considered to be essential to the successful performance of the work hereunder:

John Mauro  
David Back  
Ulrich Behling  
Kathleen Behling

Steven Schaffer  
Janet Schramke  
William Ulincny

The contractor agrees that personnel may not be removed from the contract work or replaced without compliance with paragraphs (b) and (c) of this section.

(b) If one or more of the key personnel, for whatever reason, becomes, or is expected to become, unavailable for work under this contract for a continuous period exceeding 30 work days, or is expected to devote substantially less effort to the work than indicated in the proposal or initially anticipated, the contractor shall immediately notify the contracting officer and shall, subject to the concurrence of the contracting officer, promptly replace the personnel with personnel of at least substantially equal ability and qualifications.

(c) Each request for approval of substitutions must be in writing and contain a detailed explanation of the circumstances necessitating the proposed substitutions. The request must also contain a complete resume for the proposed substitute and other information requested or needed by the contracting officer to evaluate the proposed substitution. The contracting officer and the project officer shall evaluate the contractor's request and the contracting officer shall promptly notify the contractor of his or her decision in writing.

(d) If the contracting officer determines that suitable and timely replacement of key personnel who have been reassigned, terminated, or have otherwise become unavailable for the contract work is not reasonably forthcoming, or that the resultant reduction of productive effort would be so substantial as to impair the successful completion of the contract or the service order, the contract may be terminated by the contracting officer for default or for the convenience of the Government, as appropriate. If the contracting officer finds the contractor at fault for the condition, the contract price or fixed fee may be equitably adjusted downward to compensate the Government for any resultant delay, loss, or damage.

## **TASK ORDER NO. 1**

**TITLE: DOSE ASSESSMENT REVIEWS FOR COMPLIANCE WITH THE  
RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION  
WHITTAKER CORPORATION SDMP SITE**

### **1.0 Background**

On June 27, 1988, the U.S. Nuclear Regulatory Commission (NRC) amended its regulations at 10 CFR Parts 30, 40, 50, 70, and 72 to set forth the technical and financial criteria for decommissioning of licensed nuclear facilities (53 FR 24018). These regulations were further amended on July 26, 1993, to establish additional record-keeping requirements for decommissioning (58 FR 39628); on July 15, 1994, to establish time-frames and schedules for the decommissioning of licensed nuclear facilities (59 FR 36026); and on July 26, 1995, to clarify that financial assurance requirements must be in place during operations and updated when licensed operations cease. The NRC promulgated these amendments to ensure that the decommissioning of all licensed nuclear facilities is performed in a safe and timely manner, and that adequate funds are available to ensure that the decommissioning of licensed facilities can be accomplished.

On July 21, 1997, the NRC published the final rule on "Radiological Criteria for License Termination" (the License Termination Rule) as Subpart E to 10 CFR Part 20 (62 FR 39088). Subpart E establishes criteria for the release of sites for unrestricted use, if the residual radioactivity that is distinguishable from background results in a total effective dose equivalent to an average member of a critical group that does not exceed 0.25 milliSievert per year (mSv/yr) and the residual radioactivity has been reduced to levels that are as low as is reasonably achievable (ALARA). Subpart E also establishes criteria for license termination with restrictions on future land use, as long as specific conditions are met, and criteria for license termination in unusual situations where the site may exceed the 0.25 mSv/yr limit, but would not be permitted to exceed 0.10 mSv/yr or 0.50 mSv/yr, under certain conditions.

Licensees and other individuals decommissioning licensed facilities are required to demonstrate to the NRC that the methods proposed by the licensee or responsible party will ensure that the decommissioning can be conducted safely and that the facility, at the completion of decommissioning activities, will comply with NRC's requirements for license termination. NRC regulations ((30.36(d), 40.42(d), 50.82(a) and (b), 70.38 (d), and 72.54(d) ) require that a licensee submit a decommissioning plan or license termination plan (LTP) to support the decommissioning of its facility when it is required by license condition. If the NRC has not approved the procedures and activities necessary to carry out the decommissioning and procedures, the potential health and safety impacts to the workers or the public could be increased. The regulations also require that decommissioning plans or license termination plans contain: a description of the conditions of the site; the planned decommissioning activities; a description of the methods used to ensure protection of workers and the environment against radiation hazards during decommissioning; a description of the planned final radiation survey; an updated cost estimate; a comparison of the cost estimate with funds set aside for decommissioning; and, a plan for assuring the availability of adequate funds for the completion of decommissioning. The objective of the decommissioning plan is to describe the activities and procedures that the licensee intends to undertake to remove residual radioactive material at the

facility to levels that meet NRC criteria for release of the site and termination of the radioactive materials license.

In March 1998, NRC staff completed development of Draft NUREG-1549, "Decision Methods for Dose Assessment to Comply with Radiological Criteria for License Termination." NUREG-1549 was intended to provide an overall framework for dose assessment and decision-making at sites undergoing decommissioning. On July 8, 1998, the Commission directed the NRC staff to develop a Standard Review Plan (SRP) that incorporates the risk-informed, iterative approach in NUREG-1549, including providing clear guidance on complying with the ALARA provisions in the final License Termination Rule. NUREG-1727 was issued in September 2000. This guidance provides NRC staff with a description of the contents of specific decommissioning plan modules, as well as evaluation and acceptance criteria for use in reviewing decommissioning plans and other information submitted by licensees or responsible party to demonstrate that the facility is suitable for release in accordance with NRC requirements. In addition, the SRP addresses the release from regulatory control of buildings and soil and describes methodologies that could be used to comply with the License Termination Rule requirements in 10 CFR Part 20, Subpart E.

## **2.0 The Whittaker Corporation SDMP Site:**

The Whittaker Corporation Site, hereafter referred to "the site," is one of those sites listed on the Site Decommissioning Management Plan (SDMP). It belongs to Whittaker Corporation of 1955 North Surveyor Avenue, Simi Valley, California (e.g., hereafter referred to the licensee). The site is a waste and slag storage area that is regulated under U.S. Nuclear Regulatory Commission (NRC) Source Material License No. SMA-1018 (Docket No. 040-07455).

The site is located about 5.6 km (3.5 miles) south of Greenville, PA, on the west side of the Shenago River. The site is an irregularly shaped parcel of land of approximately 5.8 acres that has been built up over time through the repeated disposal of foundry slag, scrap metal, building rubble, and general operation debris. The source material consists mainly of licensable quantities of thorium and uranium that were present in the raw materials used for metal processing activities.

## **3.0 Previous Studies and Information About the Site:**

Routine and non-routine maintenance and surveillance activities have been ongoing to monitor and maintain the site. In 1999, the licensee submitted three reports on: "Surveillance, Maintenance, and Control Plan" (NES Document No. 82A9115, Rev. 1); Groundwater Monitoring Plan, (NES Document 82A9103, Rev. 2); and "Soil Erosion Control Plan" (NES Document No. 82A9104, Rev. 2). A site risk assessment was performed by Scientific NES, Inc. (NES) and submitted for review to the NRC in April, 1999 (NES document No. 82A9158, Rev. 0). The radiological data used in this assessment were based on a site characterization performed in 1984 by Oak Ridge and Associated Universities (ORAU). NRC staff requested additional site characterization data to enable a detailed evaluation of the available options for decommissioning of the site. Therefore, more site characterization activities were conducted from March 14, 2000, to May 18, 2000. The results were reported in NES Document No. 82A9354. Subsequently, a revised risk assessment was performed and submitted to the NRC

by Scintech NES, Inc. in September 2000, (Document No. 82A9365). In November 2000, NRC staff conducted a generic review of the September 2000, Whittaker Corporation risk assessment and accepted the conclusions reached in Sections 1, 3, 4, and X1 report. Staff did not conduct an in-depth review of the characterization aspects at the site and requested additional information on source term assumptions and the criteria to be used for decommissioning of certain site sections. In December 2000, the licensee submitted Addenda to the "Groundwater Monitoring Plan" on Installation and Sampling of the Groundwater Monitoring Wells. More recently, in February 2003, the licensee submitted a "Proposed Decommissioning Plan, DP" (SCINTECH Document Number 82A9426) pursuant to 10 CFR 40.42. The DP contains information regarding facility location, history, and description; current and future land uses; status of surface water and groundwater hydrology; environmental monitoring data; and the radiological status of the facility. Based on such information, the licensee conducted dose modeling evaluations for the site.

#### **4.0 Objective**

The objective of this task order is to conduct reviews and perform dose analysis for the site using all relevant information about the Whittaker site. The reviews would include previous information as described above as well as the most current version of the Decommissioning Plan submitted in August 2003. Particularly, the contractor shall review the NES documents and relevant sections of the decommissioning plan as well as relevant updated NRC regulations, guides, and codes for demonstration of compliance with NRC regulations. Information to be reviewed may include, but not limited to, necessary data to establish the appropriate scenario(s), site conceptual model, the source term, and data to support transport models. The contractor shall review and develop the derived concentration guideline levels (DCGLs) for the facility to determine if a suitable basis has been provided to support its release in accordance with NRC requirements. The contractor shall review licensee's risk/dose analysis and conduct its own analysis using probabilistic and/or deterministic methodologies and establish adequate input parameter including parameters distributions. Residual radioactivity present in soil, groundwater, surface water, and subsurface media and its potential transport within the 1000 year performance period shall be evaluated and accounted for in the modeling analysis. The contractor shall produce a report documenting the dose analysis methods, approaches, and results including uncertainty analysis.

#### **5.0 Technical Qualifications Required**

Professional staff proposed for the effort should be thoroughly familiar with performing dose analyses. In addition, the staff should be familiar with the license termination rule (10 CFR 20, Subpart E), pertinent guidance such as NUREGs /CR 6676, 6692, 6697, 6755, and 6565, NUREG 1575, NUREG-1640, NUREG-1727, NUREG-1700, and NUREG-1757 Vols. 1, 2, and 3. Further, the staff should be familiar with using the DandD, RESRAD, MICROSIELD, GEN-II, and HELP computer codes. Specific technical expertise needed for this task order includes health physics, hydro geology, and geochemistry.

## **6.0 Period of Performance**

This task order shall be in effect from the date of award through 90 days thereafter.

## **7.0 Scope of Work**

In review of the decommissioning plan and derivation of the DCGLs, the contractor shall review the suite of radionuclides for which DCGLs have been established by the licensee and determine that DCGLs have been established for a complete set of radionuclides based upon characterization performed at the site and what would be expected based upon the type of operation at the site (e.g., NUREG/CR-3474). For radionuclides where no DCGLs have been proposed, the contractor shall ensure that an adequate basis has been provided for exclusion of the radionuclide. In evaluating the source activity at the site, the contractor shall evaluate the distribution of radioactivity and determine if adequate consideration has been given to its transport and to potential "hot spots" and whether appropriate *Area Factors* have been established. The contractor shall review the source release analysis to ensure that an appropriate basis has been provided. The review should include looking at modeling assumptions and parameter values used in the analysis.

The contractor shall review the set of land-use scenarios considered and determine if the set of scenarios appropriately encompasses potential land-use activities at the site following license termination. In considering the appropriateness of the scenarios, the contractor shall consider the type of media contaminated, the suite of radionuclides present at the site, current land-use activities around the site, and physical features of the site. In reviewing the land-use scenario considered by the licensee or responsible party, the contractor shall determine if appropriate exposure pathways have been considered in the land-use scenarios. Where exposure pathways have been omitted, the contractor shall determine if appropriate justification has been provided for excluding these pathways.

The contractor shall review the approach used to calculate DCGLs. Further, the contractor shall review the use of any screening values to establish DCGLs for soils and standing buildings. In assessing the use of screening values, the contractor shall ensure that the screening values are being appropriately applied considering the type of contaminated media and that the values used are consistent with the screening values established by the NRC.

The contractor shall also evaluate the adequacy of the ALARA analysis for these facilities.

## **8.0 Preliminary Draft Section of the Safety Evaluation Report (SER)**

Based upon review of the decommissioning plan, the contractor shall develop and provide to the NRC a preliminary draft section of the safety evaluation report on compliance with the radiological criteria. The preliminary draft section of the SER should fully document the basis for accepting the proposed DCGLs. The write-up should be sufficiently complete so as to be included in the overall SER. Where there is insufficient information to support statements or conclusions reached in the draft section of the SER, this should be clearly highlighted within the report (e.g., in parentheses). The draft section of the SER should list the DCGLs that will be used in the final status survey and specifically why they are considered acceptable based upon

demonstrating compliance with the license termination requirements. In addition, the draft section of the SER should include findings on the inventory and source term, scenarios, conceptual models, analysis and derivation of the DCGLs, adequacy of the characterization to support the source term determination and to support the derivation of the DCGLs, and the adequacy of the ALARA demonstration.

#### **9.0 Request for Additional Information (RAI)**

Based upon gaps in the draft sections of the SER, the contractor shall develop (if necessary) and provide to the NRC, a set of questions requesting additional information that needs to be provided by the licensee or responsible party. All information included within the list should be clearly linked to (and cited within) the draft section of the SER as instructed by the technical project manager. The list of RAI's should be discussed with the technical project manager and written so that they clearly convey the information that needs to be provide and why the information is needed.

#### **10.0 Review of RAI Responses**

The contractor shall review the responses to the RAIs provided under 6.2 (above) to determine if sufficient information has been provided to finalize the Section of the SER on DCGLs (under 6.1, above). If it is determined that additional information is still needed from the licensee or responsible party to complete the review, the contractor shall develop and provide to the NRC, a set of additional information that needs to be provided. The list of RAIs should be written so that they clearly convey what the licensee or responsible party needs to provide and why the information is needed.

#### **11.0 Meetings and Travel**

One meeting and site visit (3 persons/2 days) at the Whittaker site located near Greenville, PA. Three half-day meetings (3 persons) at NRC headquarters may be needed to discuss issues associated with the reviews and results. All domestic travel related to this task order require prior approval of the NRC Technical Project Manager.

#### **12.0 NRC-Furnished Materials**

NRC will provide copies of relevant sections of the decommissioning plan as well as relevant available information submitted by the licensee.

#### **13.0 Deliverables/Schedule**

The contractor shall prepare the following technical reports for each task order issued. These reports shall be prepared in accordance with NRC Management Directive 11.7, Part III:

Draft Section of the SER	30 days from date of task order.
RAI's	30 days from date of task order.



Additional RAI's (if needed)	45 days from date of the task order.
Final Section of SER	90 days from date of task order or 30 days after receipt of responses to any additional RAI's.

#### **14.0 Technical Direction**

Technical Assistance Project Manager:	Edna Knox-Davin	(301) 415-6577
Technical Project Manager:	Rateb Abu-Eid	(301) 415-5811

The NMSS Technical Assistance Project Manager (TAPM) is the focal point for all contract related activities. All work assignments and program funding actions are initiated by the NMSS TAPM.

The NMSS Technical Project Manager (TPM) is responsible for providing technical guidance to the performing organization regarding staff interpretations of the technical aspects of regulatory requirements, along with copies of relevant documents (e.g. Regulatory Guides) when requested by the performing organization. All work products must be reviewed and approved by the NMSS TPM before they are submitted as final documents. All technical directions given to the performing organization must be consistent with the work scope and schedule. The NMSS TPM is not authorized to unilaterally make changes to the approved work scope or schedule or give the performing organization any direction that would increase costs over approved levels. Any changes to the SOW or negotiated costs will be made through formal modifications to this agreement.

#### **15.0 Financial Reporting (This should be Monthly Letter Status Reports)**

The contractor shall submit a Monthly Letter Status Report (MLSR) in accordance with Management Directive 11.7. The reports are due within 20 calendar days after the end of the report period. The NMSS TPM shall receive two copies of the MLSR and the NMSS TAPM shall receive one copy. Electronic copies as well as hard copies of all reports should be provided. The MLSR should contain cumulative charges for the entire project for the month with the estimated staff effort reported at the task level. The work accomplished and the degree of completeness should also be tracked by task.

In addition, the monthly changes should be broken out separately for each task order, with the MLSR identifying the licensee or responsible party, the docket number, the TAC number and the charge for the month. This information will be used as part of the quarterly billing to the licensee as the work performed under this SOW is fee-recoverable.

#### **16.0 Specific Tasks and Schedule:**

**Task #1:** Review of NRC's regulations, NUREGs, guides, and models and codes relevant to the dose analysis and to compliance criteria for site decommissioning; (to be completed 10 days after the date of the Task Order).

**Task #2:** Review all site data and conduct a site visit and establish an appropriate site

conceptual model; (to be completed 30 days after the date of the Task Order)

**Task #3:** Conduct dose analysis including uncertainty analysis and establish the DCGLs and discuss with NRC staff approaches, issues, and results, and develop RAIs, if necessary; (to be completed within 45 days after the date of the Task Order).

**Task #4:** Submit reports, and final SER supporting site decommissioning; (to be completed within 90 days after the date of the Task Order).