

Oak Ridge Associated Universities Environmental Services | Schedule 899

General Services Administration
Federal Supply Service
Authorized Federal Supply Schedule



FSC Group: 899

Contract Number: GS-10F-0176V

Contract Period: 05/14/2009 – 05/13/2014

Business Size: Large, Non-Profit

Points of Contact:

[For Contractual Information](#)

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Oak Ridge Associated Universities

100 ORAU Way, P.O. Box 117

Oak Ridge, Tennessee 37831-0117

www.orau.org

On-line access to contract ordering information, terms and conditions, up-to-date pricing, and the option to create an electronic delivery order are available through GSA Advantage!®, a menu-driven database system. The internet address for GSA Advantage!® is <http://www.gsaadvantage.gov>. For more information on ordering from Federal Supply Schedules, click on GSA Schedules at <http://www.gsa.gov>

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Customer Information

1. **a. Special Item Numbers (SINs)**
 - 899-1/899-1RC Environmental Planning Services and Documentation
 - 899-3/899-3RC Environmental Occupational Training Services
 - 899-8/899-8RC Remediation Services
- b. Prices**

See Appendices A, B and C for price list
- c. Labor categories**

See Appendix A for a list of Labor Category Descriptions
2. **Maximum order**

\$1,000,000.00
3. **Minimum order**

\$100.00
4. **Geographic coverage (delivery area)**

Domestic only
5. **Point(s) of production (city, county, and State or foreign country)**

ORAU locations in the United States.
6. **Discount from list prices or statement of net price**

Government net prices (discounts already deducted).
7. **Quantity discounts**

None offered
8. **Prompt payment terms**

Net 30 days
9. **a. Government purchase cards accepted at or below micro-purchase threshold**

Yes

b. Government purchase cards accepted above micro-purchase threshold

Will accept over \$3,000
10. **Foreign items**

None

11. a. Time of delivery

Specified on the Task Order

b. Expedited delivery

Contact Contractor

c. Overnight and 2-day delivery

Contact Contractor

d. Urgent requirements

Contact Contractor

12. F.O.B. point(s)

Destination

13. a. Ordering address(es)

Oak Ridge Associated Universities

Attn: Ms. Becky Kennard

PO Box 117, MS-04

Oak Ridge, TN 37831

865-576-8533 (office)

865-241-6718 (fax)

Becky.Kennard@orau.org

b. Ordering process (FAR 8.405-2)

Ordering Procedures for Servicing Requiring a Statement of Work:

- a) General. Ordering activities shall use the procedures in this subsection when ordering services priced at hourly rates as established by the schedule contracts. The applicable services will be identified in the Federal Supply Schedule publications and the contractors' pricelists.
- b) Statement of Work (SOWs). All Statements of Work shall include the work to be performed; location of work; period of performance; deliverable schedule; applicable performance standards; and any special requirements (e.g., security clearances, travel, special knowledge). To the maximum extent practicable, see FAR Subpart 37.6.
- c) Request for Quotation procedures. The ordering activity must provide the Request for Quotation (RFQ), which includes the statement of work and evaluation criteria (e.g., experience and past performance), to schedule contractors that offer services that will meet the agency's needs. The RFQ may be posted to GSA's electronic RFQ system, e-Buy [see FAR 8.402 (d)].
 - 1) Orders at, or below, the micro-purchase threshold. Ordering activities may place orders at, or below, the micro-purchase threshold with any Federal Supply Schedule contractor

that can meet the agency's needs. The ordering activity should attempt to distribute orders among contractors.

- 2) For orders exceeding the micro-purchase threshold, but not exceeding the maximum order threshold.
 - i. The ordering activity shall develop a statement of work in accordance with FAR8.405-2(b).
 - ii. The ordering activity shall provide the RFQ (including the statement of work and evaluation criteria) to at least three schedule contractors that offer services that will meet the agency's needs.
 - iii. The ordering Activity should request that contractors submit firm-fixed prices to perform the services identified in the statement of work.
 - 3) For proposed orders exceeding the maximum order threshold or when establishing a Blanket Purchase Agreement (BPA). In addition to meeting the requirements of FAR 8.405-2(c)(2), the ordering activity shall:
 - i. Provide the RFQ (including the statement of work and evaluation criteria) to additional schedule contractors that offer services that will meet the needs of the ordering activity. When determining the appropriate number of additional schedule contractors, the ordering activity may consider, among other factors, the following:
 - a. The complexity, scope and estimated value of the requirement.
 - b. The market search results.
 - ii. Seek price reductions.
 - 4) The ordering activity shall provide the RFQ (including the statement of work and the evaluation criteria) to any schedule contractor who requests a copy of it.
- d) Evaluation. The ordering activity shall evaluate all responses received using the evaluation criteria provided to the schedule contractors. The ordering activity is responsible for considering the level of effort and the mix of labor proposed to perform a specific task being ordered, and for determining that the total price is reasonable. Place the order, or establish the BPA, with the schedule contractor that represents the best value (see 8.404(d)). After award, ordering activities should provide timely notification to unsuccessful offerors. If an unsuccessful offeror requests information on an award that was based on factors other than price alone, a brief explanation of the basis for the award decision shall be provided.

c. Blanket Purchase Agreement

BPA's between the ordering agency and ORAU may be established pursuant to FAR 8.405-3.

14. Payment address(es)

Oak Ridge Associated Universities, Inc.
PO Box 117, MS-48
Oak Ridge, TN 37831-0117
Attention: Wayne Hamilton
865-241-6541 (office)
865-241-1551 (fax)
Wayne.Hamilton@orau.org

Electronic Funds Transfer

Oak Ridge Associated Universities, Inc.
Sun Trust Bank
1188 Oak Ridge Turnpike
Oak Ridge, TN 37830
Account No. 0005780071
ABA No. 061000104

For credit card payment, fax to 865-241-2652 or email to payment@orau.gov. To assure proper credit, reference invoice number on all remittances.

15. Warranty provision

Standard Commercial Warranty. Customers should contact contractor for a copy of the warranty.

16. Export packing charges, if applicable

Not applicable

17. Terms and conditions of Government purchase card acceptance (any thresholds above the micro-purchase level)

Contact Contractor

18. Terms and conditions of rental, maintenance, and repair

Not applicable

19. Terms and conditions of installation

Not applicable

20. Terms and conditions of repair parts indicating date of parts price lists and any discounts from list prices

Not applicable

21. List of services and distribution points

Not applicable

22. List of participating dealers

Not applicable

23. Preventive maintenance

Not applicable

24. a. Special attributes such as environmental attributes (e.g., recycled content, energy efficiency, and/or reduced pollutants)

Not applicable

b. If applicable, indicate that Section 508 compliance information is available on Electronic and Information Technology (EIT) supplies and services and show where details can be found.

Not applicable

25. Data Universal Number System (DUNS) number

04-1152224

26. Notification regarding registration in Central Contractor Registration (CCR) Database

ORAU is registered.

About ORAU

Oak Ridge Associated Universities (ORAU) is a 501(c)(3) non-profit corporation. In this role, ORAU operates the Oak Ridge Institute for Science and Education (ORISE) as a federal contractor for the U.S. Department of Energy (DOE). For more than 25 years, ORAU has worked to build an exceptional reputation in the field of environmental assessments and health physics.

ORAU is a pre-qualified contractor for various services through the SIN-899 Federal Supply Schedule of the U.S. General Services Administration. This easy-to-use task order contract is available to all federal agencies, the District of Columbia, and government-owned corporations. This catalog describes ORAU services available through the contract mechanism and the service ordering process.

As a leader in environmental assessments and health physics, ORAU focuses its expertise in these areas:



Independent Verification

ORAU rigorously evaluates and verifies that previously contaminated areas meet regulatory compliance criteria for D&D.



Characterization Surveys

We partner with cleanup agencies to provide objective, independent characterization surveys to define the extent of radiological contamination at a designated site.



Health Physics Services

We offer health physics solutions in a number of technical areas for the U.S. Department of Energy and the U.S. Nuclear Regulatory Commission (NRC), as well as other federal and state agencies.



Health Physics Training

We offer hands-on, laboratory-based training through our Professional Training Programs (PTP), including our noteworthy 5-week Applied Health Physics course, and multiple 1-week offerings.



Radiochemical Analyses

Our state-of-the-art radiochemistry laboratory performs independent analysis of environmental samples collected at survey sites. As the only laboratory performing work for the NRC, our strengths and capabilities have positioned us as a leader in the field of radiochemical analysis.



Atmospheric Turbulence and Diffusion Division (ATDD)

ORAU also partners with the National Oceanic and Atmospheric Administration (NOAA) to provide support to its Atmospheric Turbulence and Diffusion Division, which is devoted to performing air quality and climate-related research.



Toxicological and Human Health Risk Assessments

ORAU provides scientific and management support to the U.S. Environmental Protection Agency (EPA) Integrated Risk Information System (IRIS). Finalized IRIS documents (1) present Agency consensus positions on the potential population and human health impacts of exposure to environmentally and occupationally important chemicals and (2) make available compound-specific quantitative toxicity values to risk assessors and other environmental professionals.

Placing an Order

About GSA Schedule 899

GSA has improved efforts to make buying commercial services easier for Federal customers by awarding GSA Schedule Contracts. Under the Federal Supply Schedule Program, GSA enters into government-wide contracts with commercial firms to provide products and services, at stated prices, for given periods of time. This streamlined procurement vehicle significantly reduces the time required to obtain services because GSA has reviewed vendors' capabilities, negotiated rates, and prequalified vendors to provide services and products. Therefore, Federal customers can place orders directly with schedule contractors without seeking further competition, synopsising requirements, making determinations of fair and reasonable pricing, or considering small business set-asides.

Advantage of Using the GSA Schedule 899

The GSA Federal Supply Schedule offers Federal agencies a streamlined procurement vehicle for obtaining services to plan, develop and implement highly specialized programs critical to national security. Advantages of using the GSA Schedule 899 include:

Significant reduction in lead time to obtain services and products;

- Delivery Order awards are based on Best Value. CBS Synopsis is NOT required;
- Competitive requirements have been met;
- Prices have been determined to be fair and reasonable;
- All applicable laws and regulations have been applied (including small business set-asides);
- Can be used by all Federal agencies and the District of Columbia;
- Contractor/Customer direct relationship – no transfer of funds to GSA; and
- Blanket Purchase Agreements can be established to negotiate even better pricing.

Authorized Users

Authorized users of the GSA Schedule 899 include:

- All Federal agencies and activities in the executive, legislative, and judicial branches;
- Government contractors authorized in writing by a Federal agency pursuant to CFR51.1;

- Mixed ownership government corporations as defined in the Government Corporation Control Act;
- The government of the District of Columbia; and
- Other activities and organizations authorized by statute or regulation to use the GSA as a source of supply.

Placing an Order

GSA's streamlined ordering procedures have reduced the ordering process to a few simple steps. GSA has accomplished this by pre-qualifying vendors to perform a wide range of services. GSA has reviewed vendor qualifications, capabilities, and cost schedules in advance of the need for services, and identified these vendors, by type of service, on its GSA Advantage®! Website. This approval is valid for all organizations in the federal government and other government agencies, and the entire process can be completed in as little as a few weeks.

To obtain GSA Schedule 899 services and products, Federal agencies work directly with approved GSA contractors such as ORAU. For delivery orders under \$2,500, agencies can order services simply by placing an order directly with their contractor of choice. For delivery orders over \$2,500, agencies use the following simplified procedure for placing an order:

Step 1

Customer prepares the Performance-Based Statement of Work (SOW) that addresses work to be accomplished, deliverables, period of performance, and other applicable requirements;

Step 2

Customer issues a Request for Quote (RFQ) to three approved GSA Schedule 899 vendors. The vendors submit their proposals, or a "no bid" response to the customer's contracting organization;

Step 3

Customer conducts a review and selects the best value contractor; and

Step 4

Customer places a delivery order directly with the selected contractor.

If desired, GSA Regional Offices are available to assist the agency during the procurement process under a fee-for-service arrangement, but GSA is not required to be involved in any of the steps outlined above.

Blanket Purchase Agreements

Ordering activities may establish blanket purchase agreements under any GSA schedule contract. A GSA schedule blanket purchase agreement simplifies the filling of recurring needs for supplies or services,

while leveraging a customer's buying power by taking advantage of quantity discounts, thus saving administrative time and reducing paperwork.

Blanket purchase agreements are established in accordance with the procedures in Federal Acquisition Regulation Part 8.405-3. An ordering activity may request a price reduction based on the total estimated volume of the blanket purchase agreement, regardless of the size of individual orders. Blanket purchase agreements may be established with one or more scheduled contractors at the discretion of the ordering activity. When establishing multiple blanket purchase agreements, the ordering activity must specify the procedures for placing orders under the blanket purchase agreements. A GSA schedule blanket purchase agreement should not exceed five years in length, but may do so to meet program requirements. A blanket purchase agreement may extend beyond the current term of its GSA schedule contract, so long as there are option periods in the GSA schedule contract that, if exercised, will cover the blanket purchase agreement's period of performance.

General Information and Ordering Contacts

For General and Technical Information at ORAU

Ms. Sarah Roberts
899 Coordinator
Oak Ridge Associated Universities
P.O. Box 117, MS-19
Oak Ridge, TN 37831-0117
865-241-8893 (office)
Sarah.Roberts@orau.org

For Ordering and Billing Information at ORAU

Ms. Becky Kennard
Contract Representative
Oak Ridge Associated Universities
P.O. Box 117, MS-04
Oak Ridge, TN 37831-0117
865-576-8533 (office)
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becky.kennard@orau.org

Awarded Services

SIN 899-1/899-1RC, Environmental Planning Services and Documentation



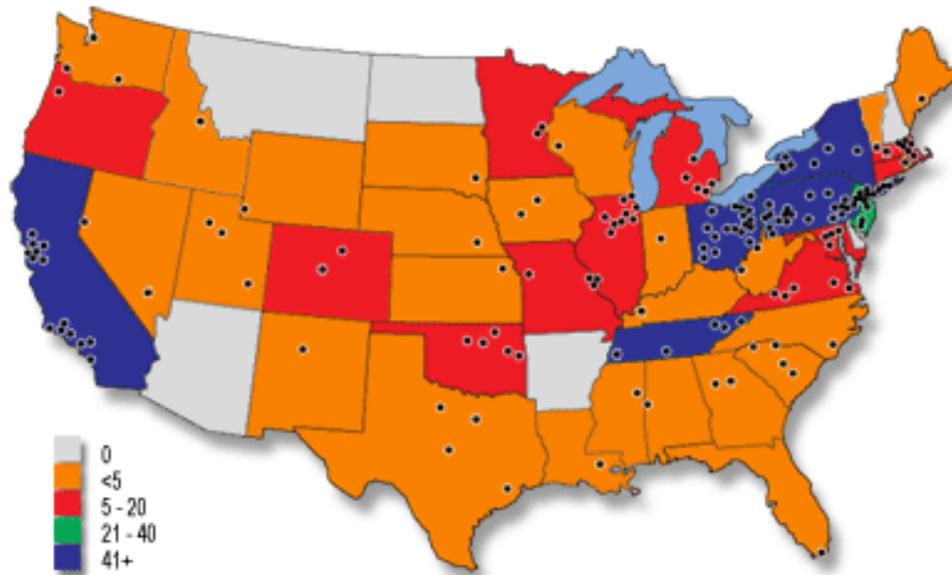
We don't do cleanup—we make it better. Oak Ridge Associated Universities (ORAU) is the leading group that verifies the efforts of decontamination and decommissioning (D&D) contractors at radiologically contaminated sites across the United States. A variety of customers, including Federal, State, and Local governmental agencies, have come to rely on ORAU's experience and independence to increase public confidence in cleanup efforts and regulator decisions.

ORAU has more than 10 years of experience in providing environmental services and documentation for a variety of federal customers, including the US Department of Energy (DOE) Y-12 National Security Complex Chronic Beryllium Disease Prevention Program (CBDPP). ORAU staff performed detailed technical reviews of documents supporting the CBDPP to assess compliance with 10 CFR 850.

ORAU Success Story:

For the Defense Logistics Agency, ORAU conducted historical site assessments, followed by radiological scoping surveys and characterization surveys at the Curtis Bay and Hammond depots to determine if any residual contamination remained from stored radioactive materials. ORAU personnel examined site hydrogeology, soil characteristics, and contaminant properties to develop detailed models of site conditions; identified and considered all exposure pathways; used automated tools to model doses to future site inhabitants; developed site-specific derived concentration guideline levels for soil and surface contamination; and conducted sensitivity and uncertainty analyses to ensure all parameters were appropriately considered and modeled.

For EPA, ORAU has researched and written IRIS toxicological reviews and summaries and provided quality reviews of draft submissions prepared by our subcontractors. The IRIS process begins with comprehensive electronic searches of the biomedical and toxicological literature, with subsequent scientific analysis, documentation of all findings, and transparent peer review. ORAU scientific and management support to this program has expedited the finalization of new postings and facilitated the updating of older records.



ORAU Projects across the United States

SIN 899-3/899-3RC, Environmental Occupational Training Services



Since 1948, ORAU has provided a wide range of training in radiation sciences, health physics, and radiation protection topical areas, including “Air Sampling for Radioactive Materials,” “Environmental Monitoring for Radioactivity,” and Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM). See Appendix C for a complete listing of training courses offered. Courses are offered at the ORAU training facility and include classroom lectures followed by field and laboratory exercises; first the students learn, then they do. This hands-on approach has

earned ORAU an exemplary reputation in training, and with new course offerings always in the works, ORAU will continue to be one of the preeminent providers of training in the radiological sciences.

ORAU Success Story:

In December 1997, a committee made up of DOE, the Nuclear Regulatory Commission (NRC), the Department of Defense, and EPA successfully consolidated the final status survey guidance from four federal agencies by producing a guidance document known as the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) for controlling radioactive materials. MARSSIM is used with statutory programs such as Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Formerly Utilized Sites Remedial Action Program (FUSRAP), Base Realignment and Closure (BRAC), and state programs. ORAU was heavily involved in developing MARSSIM and trains regulators and contractors on the theory and implementation of the manual. The course has been presented more than 70 times.

SIN 899-8/899-8RC, Remediation Services



ORAU's expertise in remediation services has been demonstrated at over 500 radiologically and chemically contaminated sites throughout the United States. Services offered include historical site assessments, scoping surveys, characterization, in-process inspections, decommissioning plan authoring and/or review, and verification surveys. These activities are supported by an experienced staff, many of whom are Certified Health Physicists (CHPs), and by ORAU's own radiochemistry laboratory.

ORAU Success Story:

ORAU has performed verification surveys to facilitate the closure of three major DOE sites in the State of Ohio: Ashtabula, Fernald, and Miamisburg. As part of the final release process, the verification projects required performing survey activities over hundreds of acres of open-land areas. The objectives of the surveys were to confirm that remedial actions were effective in meeting established release criteria and that the documentation accurately and adequately described the final radiological conditions of the sites.

ORAU was also contracted to conduct historical site assessments at the Curtis Bay Depot site in Maryland and at the Hammond Depot in Indiana, followed by radiological scoping surveys and characterization surveys to determine if any residual contamination remained from stored radioactive materials that may have leaked from containers into numerous buildings and surrounding land areas.

Appendix A – On-Site/Off-Site Labor Categories and Hourly Rates

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
ADMINISTRATIVE	\$36.40	\$41.86	At a minimum, possesses personal computer skills, has ability to operate and adjust copier equipment to produce printed materials, and maintains files; follows methods either developed by self or others under close supervision, makes choices from knowledge of accepted methods, and makes decisions within the scope of own assignments.	High school degree or equivalent with a minimum of 1 year of experience.
ADMINISTRATIVE MANAGER 1	\$100.87	\$116.00	Position requires extensive knowledge of a particular field of specialization and applicable laws, codes, principles, and practices. Work requires resourcefulness and initiative in developing solutions to a wide range of complex and difficult problems. Applies a working knowledge of related fields, and requires the application of judgment in interpreting policies and procedures.	Bachelor's degree and a minimum of 10 years of relevant experience. Experience may be substituted for the Bachelor's degree by adding 4 years experience to the minimum of 10.
ADMINISTRATIVE MANAGER 2	\$113.24	\$130.23	Comprehensive knowledge of the applicable laws, codes, principles, and practices of a professional or administrative specialty and demonstrated management skills and abilities. Develops solutions to difficult and complex problems not covered by established methods. Work requires considerable judgment and ingenuity in developing new methods, criteria, and applications to specific areas or responsibility; applies a working knowledge of related fields; and requires the continuous exercise of judgment in applying and interpreting policies and procedures.	Master's degree and a minimum of 15 years of relevant experience. Experience may be substituted for the Master's degree by adding 2 years experience to the minimum of 15.
ADMINISTRATIVE MANAGER 3	\$147.51	\$169.64	Mastery of the applicable laws, principles, and practices of a professional or administrative field and demonstrated skills and abilities in planning, organizing, and managing. Work requires the development and administration of programs within prescribed policies, based on the appraisal of facts, trends, and the evaluation of anticipated results and their relation to overall departmental and organizational objectives.	Master's degree and a minimum of 20 years of relevant experience. Experience may be substituted for the Master's degree by adding 2 years experience to the minimum of 20.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
ENGINEER 1	\$95.83	\$110.21	Applies and interprets standard engineering theories, concepts, and techniques in an engineering specialty. Applies a working knowledge of related disciplines. Works on a wide range of problems requiring the use of creative and imaginative thinking. Gaining recognition from peers and clients for expertise in a selected technical field. May write articles published in peer-reviewed journals. Initiates and carries out appropriate self-development activities.	Master's degree or higher in Environmental or Nuclear Engineering and a minimum of 1 year of relevant experience. Two years of additional experience may be substituted for the Master's degree.
ENGINEER 2	\$111.65	\$128.40	On a broad basis, applies principles, theories, and concepts to a field of engineering specialty. Applies a working knowledge of related disciplines. Works on a wide range of problems requiring the use of creative and imaginative thinking. Has gained recognition from peers and clients for technical expertise. Initiates and carries out appropriate self-development efforts.	Master's degree or higher in Environmental or Nuclear Engineering and a minimum of 5 years of relevant experience. Two years of additional experience may be substituted for the Master's degree.
ENGINEER 3	\$117.53	\$135.16	Applies advanced engineering principles, theories, and concepts in developing original research programs. Develops or directs the development of solutions to complex research problems for which little or no precedent exists and innovation is required. Recognized both internally and externally as being an authority in a research specialty. Writes articles published in peer-reviewed journals. Initiates and carries out appropriate self-development efforts.	Master's degree or higher in Environmental or Nuclear Engineering and a minimum of 10 years of relevant experience. Two years of additional experience may be substituted for the Master's degree.
ENGINEER 4	\$163.55	\$188.08	Applies advanced engineering principles, theories, and concepts in developing original research programs. Develops or directs the development of solutions to complex research problems for which little or no precedent exists and innovation is required. Recognized as a national authority in a research specialty. Writes articles published in peer-reviewed journals. Initiates and carries out appropriate self-development efforts.	Master's degree or higher in Environmental or Nuclear Engineering and a minimum of 15 years of relevant experience. Two years of additional experience may be substituted for the Master's degree.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
HEALTH EDUCATION 1	\$57.46	\$66.08	Designs, develops, and conducts needs/ problem assessments for developing plans and educational activities. Defines goals, objectives, and audiences to support development of media campaigns. Identifies target audiences. Conducts formative research activities. Develops project plans, including setting goals and objectives and developing evaluation plans to measure the success of program activities. Designs, develops, and delivers health education programs. Provides technical assistance in developing and implementing health education materials. Analyzes evaluation data and writes evaluation reports.	Master's degree and a minimum of 1 year of relevant experience. Two years of additional experience may be substituted for the Master's degree.
HEALTH EDUCATION 2	\$69.94	\$80.44	Designs, develops, and implements health education, health communication, and public health preparedness projects for federal, state, and local clients. Provides technical expertise to design and develop assessments and communication strategies. Plans and creates health preparedness plans. Serves as project lead for tasks as needed. Performs needs/problem assessments. Defines goals, objectives, and audiences to support development of project plans and evaluation activities. Identifies and reviews available data and conducts primary research activities (e.g., focus groups, surveys, interviews, etc.). Develops project plans (e.g., communication; health marketing; training; health preparedness; and process, program, and outcome evaluation plans). Develops evaluation tools. Evaluates health education, communication, preparedness programs, outreach and dissemination activities, and training courses. Acts as a technical reviewer for materials and products. Analyzes results and writes evaluation or after-action reports. Serves as a project task lead for training or public health preparedness projects as assigned. Provides coordination, logistics, and management support for meetings, workshops, training programs, and exercises.	Master's degree and a minimum of 5 years of relevant experience. Two years of additional experience may be substituted for the Master's degree.
HEALTH EDUCATION 3	\$75.87	\$87.25	Designs, develops, implements, and delivers health education and health communication research, marketing, and evaluation projects for federal agencies. Serves as lead staff and/or provides support to project teams in designing and developing research protocols, social marketing and dissemination plans, and evaluation activities. Designs, develops, and implements health education and health communication research, marketing, and evaluation projects for federal agencies. Designs effective research and evaluation plans. Conducts health education/health communication research. Develops research protocols and conducts/reports research and evaluation activities. Evaluates the effectiveness of health education	Master's degree and a minimum of 10 years of relevant experience. Two years of additional experience may be substituted for the Master's degree.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
			programs. Designs and implements social marketing activities. Plans and evaluates product dissemination and impacts. Designs and conducts program evaluations. Serves as project lead/manager for health education/health communication research, marketing, and evaluation projects. Provides assistance with marketing and strategic planning activities.	
HEALTH PHYSICIST 1	\$77.49	\$89.11	Works under general direction. Work is reviewed for adequacy in meeting objectives and for soundness of technical judgment. Uses technical discretion within well-defined practices and policies in selecting methods and techniques for obtaining solutions. Works on problems of diverse scope and complexity for which analyses of data require evaluation of identification factors. Responsible for developing, implementing, and evaluating research, training, and monitoring programs to protect plant and lab personnel from radiation hazards. Responsible for recommending and developing policies and procurements and for modifying health physics equipment. Participates in monitoring the organization's radiation protection standards in accordance with federal, state, and industry programs to ensure As Low As Reasonably Achievable (ALARA) standards are met. Performs personnel and plant radiation exposure measurement, radiation equipment testing and radioactive materials and waste measurements. Evaluates and interprets current regulations and assists in compliance. Makes recommendations for changes in the work environment based on interpretations and principles and professional practices. Provides technical assistance and guidance on basic radiological control problems. May act as lead or technical advisor on small to medium projects.	Master's degree in Health Physics and a minimum of 1 year of relevant experience. Two years of additional experience may be substituted for the Master's degree.
HEALTH PHYSICIST 2	\$102.95	\$118.39	Works under consultative direction toward predetermined goals and objectives. Assignments are usually self-initiated. Determines and pursues courses of action necessary to obtain desired results. Works on complex problems for which analysis of data or situations requires an in-depth evaluation of various factors. Exercises technical discretion within broadly defined practices and policies in selecting methods, techniques, and evaluation criterion for obtaining results. Responsible for testing and monitoring equipment and for recording radiation exposure data for personnel and plant area. Develops, procures, and modifies health physics equipment. Monitors and controls the organization's radiation protection standards in accordance with federal, state, and industry programs to ensure ALARA standards are met. Maintains professional knowledge of existing and proposed changes in	Master's degree in Radiological Health Physics and minimum of 5 years of relevant experience. Two years of additional experience may be substituted for the Master's degree.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
			radiation protection requirements. Provides expert knowledge of diverse radioactive materials and hazards. Makes recommendations and presentations to government, industry, and management based on interpretations and principles of professional practices. Provides expert assistance and guidance on complex radiological control problems. Provides leadership to less experienced physicists and to technicians via work assignments, monitoring schedules, and resolving problems. May act as lead or technical advisor on medium to large projects.	
HEALTH PHYSICIST 3	\$115.48	\$132.80	Plans, directs, and manages health physics programs and procedures under senior management direction. Manages all activities associated with subcontracting of vendor services. Recommends, designs, implements, and evaluates radiation research, training, and monitoring programs, inspection standards, safe-work methods, decontamination procedures, and radiological emergency procedures. Reviews and incorporates government and industry radiation protection standards and requirements into the facility's programs to ensure ALARA standards are met. Ensures radiation levels are in compliance with permissible standards. Remains fully informed of all existing and proposed federal, state, and industry changes in radiation protection regulations. Prepares required reports to management, industry, and the federal agencies. Responsible for making recommendations and presentations to senior managers. Evaluates Health Physicist personnel at the facility and provides career development training as required. Manages the activities and provides leadership direction to the management, professional, technical, and support personnel within the organization.	Master's degree in Health Physics and a minimum of 10 years of relevant experience. Two years of additional experience may be substituted for the Master's degree.
HEALTH PHYSICIST 4	\$145.43	\$167.24	Plans, directs, and manages the health physics programs and procedures under senior management direction based on predetermined goals and objectives. Manages all activities associated with subcontracting of vendors for radiation equipment and services. Recommends, designs, implements, and evaluates radiation research, training and monitoring programs, inspection standards, safe-work methods, decontamination procedures, and radiological emergency procedures. Reviews and incorporates, as appropriate, government and industry radiation protection standards and requirements into the operating unit's programs to ensure ALARA standards are met. Ensures radiation levels are in compliance with permissible standards. Remains fully informed on all existing and proposed federal, state, and industry changes in radiation protection regulations. Maintains and	Master's degree in Environmental Health Physics and a minimum of 15 years of relevant experience. Two years of additional experience may be substituted for the Master's degree.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
			controls the financial budget related to health physics activities. Prepares required reports to management, industry, and the federal agencies. Responsible for making recommendations and presentations to senior managers. Responsible for assuring effective utilization of personnel and provides leadership direction to project personnel. Serves as subject matter expert to customer.	
HEALTH PHYSICS TECHNICIAN 2	\$68.43	\$78.70	Measures radiation, collects samples and other investigative tasks. Produces accurate graphics of survey site data. Performs data reduction and tabulation, sample log-in, assistance in utilization and application of survey data to determine site status. Performs sample preparation. Operates specific analytical equipment, including gamma spectrometry and alpha spectrometry, and performs wet chemistry analytical procedures. Does instrument calibration and check-out, maintenance and "trouble-shooting" of radiation detection instruments. Maintains an up-to-date equipment and instrumentation inventory log. Loads and transports equipment to and from survey sites, performs site preparation, and photographs and/or prepares site drawings.	Associate's degree and a minimum of 2 years of relevant experience.
MULTIMEDIA DEVELOPER 1	\$47.45	\$54.57	Develops Web-based applications using software tools such as Adobe and Microsoft products. Programs instructional content, assessment activities (online quizzes and learning activities with feedback), animation, and screen design. Creates and executes graphical interfaces for online multimedia Web sites. Designs screens, navigation, and structure of Web- and computer-based training programs. Programs complex interactivity, including animation and screen designs for online training courses. Performs the duties of multimedia programmer on multiple projects. Optimizes learning modules for Web deployment.	Associate's degree and a minimum of 1 year of relevant experience. Two years of additional experience may be substituted for the Associate's degree.
MULTIMEDIA DEVELOPER 2	\$64.77	\$74.48	Designs and develops computer- and Web-based applications using software tools (e.g., Adobe and Microsoft products) and scripting languages, markup languages, Web browsers, and server-side technologies to support training and other online content. Analyzes platform and technical specifications, reviews team-developed application scripts and code, and leverages technological capabilities to develop dynamic and interactive instructional activities or job aids. Analyzes target platform and technical specifications; develops prototypes; develops application scripts and code. Designs and sets the parameters for programming complex interactivity, including animation and screen designs in development of online training courses. Leads other multimedia developers/programmers on multiple projects. Creates and	Associate's degree and a minimum of 2-4 years of relevant experience. Two years of additional experience may be substituted for the Associate's degree.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
			executes graphical interfaces for online multimedia Web sites. Ensures learning modules are optimized for Web deployment.	
RADIOCHEMIST 3	\$121.74	\$140.00	Performs and ensures completion of radiological sample analyses with accompanying data reduction. Ensures Quality Control (QC) of radiochemistry analyses. Prepares required reports for management, industry, and the federal agencies. Provides radiochemistry technical assistance to internal and external customers. Develops and updates laboratory procedures. Provides training of new laboratory employees in radiochemistry and QC procedures. Dispositions accumulated radiological waste.	Master's degree in Chemistry and a minimum of 10 years of relevant experience.
RADIOLOGICAL LABORATORY MANAGER	\$139.13	\$160.00	Manages all activities associated with radiochemistry laboratory operations. Recommends, designs, and implements new and innovative radioanalytical methods. Responsible for receiving and maintaining performance testing accreditations. Directs activities of laboratory staff. Ensures Quality Control (QC) of radiochemistry analyses. Prepares required reports for management, industry, and federal agencies. Leads technical audits. Coordinates and tracks project activities, workloads, and budgets. Provides technical expertise to internal staff and state and federal agencies.	Ph.D. in Chemistry and a minimum of 6 years relevant experience, or Master's degree in Chemistry and a minimum of 10 years relevant experience, or Bachelor's in Chemistry with a minimum of 15 years relevant experience.
RADIOLOGICAL LABORATORY PROGRAMMER/ ANALYST 3	\$100.00	\$115.00	Designs and develops a wide range of difficult database applications for radioanalytical laboratory data reduction applications. Performs full system requirements gathering and analysis requiring a complete understanding of difficult and complex applications of technical solutions. Plans, conducts, and coordinates the development of complex and/or diverse scientific computer programs, associated documentation, block diagrams and logic flow charts. Conceptualizes, develops, and implements complex scientific program designs. Analyzes and improves existing programs. Corrects program errors by reviewing instructions or altering sequence of operations. Defines test schedules and test data requirements to verify logic of new or modified programs. Prepares cost estimates and justifications for programming projects.	Master's or other graduate degree in computer science, physics, engineering, or related scientific discipline and minimum 6 years relevant experience.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
SCIENTIST 1	\$57.00	\$65.55	Applies and interprets standard methods to assigned problems. Determines own approach to problem and devises solutions when task is within scope of own ability. Initiates and carries out appropriate self-development efforts.	Bachelor's degree and a minimum of 5 years of relevant experience. Experience may be substituted for the Bachelor's degree by adding 4 years experience to the minimum of 5.
SCIENTIST 2	\$95.65	\$110.00	Applies advanced scientific principles, theories, and concepts in developing original research programs. Develops or directs the development of solutions to complex research problems where little or no precedent exists and innovation is required. Recognized both internally and externally as being an authority in a research specialty. Writes and publishes in peer-reviewed journals. Initiates and carries out appropriate self-development efforts.	Master's degree and a minimum of 10 years of relevant experience. Experience may be substituted for the Master's degree by adding 2 years experience to the minimum of 10.
SCIENTIST 3	\$123.66	\$142.21	Applies advanced scientific principles, theories, and concepts in developing original research programs. Develops or directs the development of solutions to complex research problems for which little or no precedent exists, innovation is required, and the boundaries of existing knowledge may need to be extended. Recognized as an authority in a research specialty. Writes and publishes in peer-reviewed journals. Initiates and carries out appropriate self-development efforts.	Master's degree and a minimum of 15 years of relevant experience or Ph.D. with a minimum of 10 years experience. Experience may be substituted for the Master's degree by adding 2 years of experience to the minimum of 15 and for the Ph.D. by adding 2 years to the minimum of 10.
SCIENTIST 4	\$154.30	\$177.44	Applies advanced scientific principles, theories, and concepts in developing original research programs. Develops or directs the development of solutions to complex research problems where little or no precedent exists, innovation is required, and which may extend the boundaries of existing knowledge. Is recognized as an authority in a research specialty. Authors and publishes in peer-reviewed journals. Initiates and carries out appropriate self-development efforts.	Ph.D. with 20+ years experience or equivalent combination of education, training, and experience.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
SPECIALIST 1	\$46.11	\$53.03	Provides support to project teams in the design and development of health education and public health preparedness programs and materials (e.g., materials, manuals, briefings, presentations, Web pages, reports) for local, state, and federal agency meetings, training sessions, seminars, workshops, drills, and exercises. Writes and edits content for internal and external publications, as well as the Internet, (e.g., brochures, after-action reports, evaluation summaries, meeting summaries, news releases, Web sites, etc.). Researches, writes, and organizes information; coordinates production (photography, design, and printing); and supports activities involved with health education and communication outreach, health marketing and promotional materials, message development and testing, PR and media relations, and event coordination. Conducts interviews, gathers information, and writes articles to promote products and programs. Assists in writing, developing, coordinating, and implementing studies and reports. Writes and edits content for newsletters. Writes scripts for video production.	Bachelor's degree and a minimum of 1 year of relevant experience. Two years of additional experience may be substituted for the Bachelor's degree.
SPECIALIST 2	\$59.61	\$68.55	Requires an extensive knowledge of the theories, principles and practices within at least one professional or scientific field, as well as a working knowledge of the general issues involving related departments or functional areas. Assists program manager with planning and developing effective programs and systems. Serves as lead individual for assigned tasks or projects and provides subject expertise to other project teams as required. Provides project management support and direction for specific projects involving a team of internal and external subject matter experts, as well as other internal staff. Analyzes client needs and conducts research, writes reports, or develops other products. Communicates and coordinates with clients regarding task status, milestone achievement, planning, and other administrative matters. Extensive experience in designing strategies for and conducting literature searches in Internet and commercial databases for government agencies; obtaining hard-to-locate published and unpublished documents using vendors, personal contacts, and interlibrary loan; and creating, maintaining, and exporting bibliographic databases in a variety of formats using bibliographic software (e.g., Reference Manager, EndNote).	Bachelor's degree and a minimum of 5 years of relevant experience. Two years of additional experience may be substituted for the Bachelor's degree.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
SPECIALIST 3	\$75.31	\$86.61	Generates financial reports, project estimates, and monitors project costs. Assists with the administration of project accounts and budgets. Works with project managers and staff to improve budgeting and cost tracking mechanisms. Works with clients on issues related to financial matters.	Bachelor's degree and a minimum of 10 years of relevant experience. Two years of additional experience may be substituted for the Bachelor's degree.
SPECIALIST 4	\$82.14	\$94.46	Provides graphic design and layout expertise for instructional interface design and content. Provides visual and audio resources for training tools, including graphic design, layout, and production; audio recording and voiceover talent procurement; product packaging and duplication coordination. Manages virtual studio environment for animation production.	Bachelor's degree and a minimum of 15 years of relevant experience. Two years of additional experience may be substituted for the Bachelor's degree.
SPECIALIST 5	\$91.25	\$104.94	Provides technical and program management support for finance, procurement, facility, transportation, travel, property, and human resources. Develops/monitors overall budget, including numerous subcontractors with short/long-term obligations. Prepares monthly technical/financial reports analyzing/forecasting labor, travel, and other direct/indirect cost. Uses federally approved procurement system to purchase equipment, supplies, and services. Executes lease agreements for facilities, equipment, and maintenance. Ensures that all personnel practices, labor relations, and equal opportunity employment practices are in accordance with current state/federal laws. Reports project performance to client and internal managers. Develops and monitors overall project budget encompassing numerous subcontractors. As required by contract, maintains inventory control of all non-capital and non-capital sensitive property.	Master's degree and a minimum of 15 years of relevant experience. Two years of additional experience may be substituted for the Master's degree.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
SPECIALIST 6	\$109.23	\$125.62	Acts as senior Technical Specialist/Project Manager. Begins and implements program and performance evaluation strategies and tools. Analyzes, designs, implements, and evaluates performance technologies and instructional system designs. Coordinates and directs activities of assigned project personnel. Analyzes client needs, designs new instructional and performance support systems, and develops training products (training courses, training plans, videos, manuals, etc.). Communicates and coordinates with clients regarding project status, milestone achievement, planning, and other administrative matters. Coordinates project activities, assigns tasks to project staff, and mentors project staff. Evaluates instructional and performance support systems. Prepares, develops, and maintains project budgets.	Ph.D. or Ed.D. degree and a minimum of 20 years of relevant experience. Four years of additional experience may be substituted for the doctoral degree.
TRAINING 1	\$54.96	\$63.20	Performs basic job/task analysis, designs procedural or instructional content, develops procedural or instructional materials, delivers training programs, and evaluates training. Determines content of training programs and training support materials. Designs procedural or instructional content format based on the results of the needs/job/task analysis. Develops procedural or instructional materials in a variety of media facets. Delivers training programs, including beginning, advanced/refreshers, and train-the-trainer courses. Evaluates training programs, courses, and materials and provides feedback. Coordinates logistical support for training events.	Bachelor's degree and a minimum of 1 year of relevant experience. Two years of additional experience may be substituted for the Bachelor's degree.
TRAINING 2	\$64.90	\$74.64	Performs basic job/task analysis, designs procedural or instructional content, develops procedural or instructional materials, delivers training programs, and evaluates training. Serves as project lead for instructional design and implementation projects. Implements training programs, including beginning, advanced/refreshers, and train-the-trainer courses. Performs advanced needs/job/task analysis to determine content of training programs and training support materials. Designs procedural or instructional content format based on the results of the needs/job/task analysis. Develops procedural or instructional materials in a variety of media formats. Evaluates training programs, courses, and materials and provides feedback. Interacts with clients to develop training program plans and related activities.	Bachelor's degree and a minimum of 3 years of relevant experience. Two years of additional experience may be substituted for the Bachelor's degree.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
TRAINING 3	\$75.80	\$87.17	Analyzes, designs, implements, and evaluates performance technologies and instructional system designs. Coordinates and directs activities of assigned project personnel. Analyzes client needs, designs new instructional and performance support systems, and develops training products (training courses, training plans, videos, manuals, etc.). Communicates and coordinates with clients regarding project status, milestone achievement, planning, and other administrative matters. Coordinates project activities, assigns tasks to project staff, and mentors project staff. Evaluates instructional and performance support systems. Prepares, develops, and maintains project budgets.	Bachelor's degree and a minimum of 10 years of relevant experience. Two years of additional experience may be substituted for the Bachelor's degree.
TRAINING 4	\$92.99	\$106.94	Advises and assists management in planning program goals, monitoring developments and trends, and formulating business development strategies. Acts as a subject matter expert to provide technical support in planning and implementing training activities. Ensures the technical quality of deliverables. Serves as the technical contact with clients and potential clients. Analyzes and interprets requirements (e.g., statutes and directives) and their impact on clients. Advises management in matters related to training and development issues. Guides and coordinates training and development projects. Meets with clients to identify project goals and strategies, determines staffing and other resource needs, and refines budget and project management plans. Serves as primary point of contact with client. Manages project activities and staff, monitors schedule and budget, and reports to clients.	Bachelor's degree and a minimum of 15 years of relevant experience. Two years of additional experience may be substituted for the Bachelor's degree.
TRAINING RESEARCH ASSOCIATE 1	\$36.33	\$41.79	Communicates with and acts as liaison between client representatives and ORAU staff. Produces training reports. Conducts related research. Maintains program databases, libraries, and filing systems.	Bachelor's degree and a minimum of 1 year of relevant experience. Two years of additional experience may be substituted for the Bachelor's degree.

LABOR CATEGORY	RATES		DESCRIPTION	EXPERIENCE AND EDUCATION
	ON-SITE	OFF-SITE		
TRAINING RESEARCH ASSOCIATE 2	\$51.45	\$59.17	Serves as lead researcher for projects involving a wide range of content. Assists in planning and program development. Leads projects and provides support as a member of project teams. Conducts studies and trend analyses to improve program activities. Evaluates audit findings, appraisals, and reviews to determine training needs. Assists in writing, developing, coordinating, and implementing studies and reports. Provides guidance and assistance on interpreting policies, defining assumptions, and analyzing program requirements. Prepares project plans and coordinates completion of the project. Provides subject matter input to managers, support staff, contractors, and federal personnel concerning project activities.	Master's degree and a minimum of 2 years of relevant experience. Two years of additional experience may be substituted for the Bachelor's degree.

Appendix B – On-site Training Courses (Customer Facility)

Course Title	Course Description	Cost/Participant
Certified Health Physicist (CHP) Part I Review	This one-week course will cover much of the subject material necessary to take and pass Part I of the American Board of Health Physics certification examination. It can be considered both a review and shakedown that will assess a participant's readiness to successfully pass the exam. At the same time, it will identify those subject areas that need further study. Approximately 25% of the time will be spent taking and reviewing typical test questions. The remainder of the time will be devoted to lectures. The American Academy of Health Physics will grant 32 Continuing Education Credits for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training, books, and instructional materials, as well as PTP Electronic Library DVD.
Certified Health Physicist (CHP) Part II Review	This one-week course will cover much of the subject material necessary to take and pass Part II of the American Board of Health Physics certification examination. It can be considered both a review and shakedown that will assess a participant's readiness to successfully complete the exam. At the same time, it will help the candidate identify areas that need further study. Approximately 75% of the time will be spent working and reviewing typical Part II exam problems, while 25% will be brief reviews of problem-solving methods for the various areas of health physics covered by the exam. Continuing Education Credits (CECs) will be requested from the American Academy of Health Physics for completion of this course by any certified HPs who choose to attend for a refresher.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training, books, and instructional materials, as well as PTP Electronic Library DVD.
Introduction to Radiation Safety	This 5-day course is an introduction to the basic science behind radiation safety and to common applications of radiation safety principles. Lectures include a description of common radiation sources, interaction of radiation with matter, biological effects, detection, and measurement. Laboratory exercises emphasize radiation detection and measurement techniques using both fixed and portable instrumentation. The American Academy of Health Physics grants 32 Continuing Education Credits, and the American Board of Industrial Hygiene grants 5.0 Certification Maintenance Points to CIHs, for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training, books, and instructional materials, as well as PTP Electronic Library DVD.

Course Title	Course Description	Cost/Participant
Medical Radiation Safety Officer Training	This 5-day course introduces course participants to current issues and technologies in the medical application of radiation. The issues and technologies are discussed in the context of improving and developing the institution's radiation safety program. Topics addressed include regulations and requirements, radiation safety officer responsibilities, monitoring and survey instruments, and others. The American Academy of Health Physics grants 32 Continuing Education Credits for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training, books, and instructional materials, as well as PTP Electronic Library DVD.
Multi-Agency Radiation Survey & Site Investigation Manual (MARSSIM)	This 5-day course emphasizes the decision-making processes involved in the design and implementation of a decommissioning survey based on MARSSIM (the Multi-Agency Radiation Survey and Site Investigation Manual). Topics include an overview of radiological survey types, the data quality objectives process, selection and application of DCGLs, background reference area selection, survey instrument detection sensitivity, area classification, statistical design of surveys, measurement uncertainty, and performing statistical tests. The American Academy of Health Physics grants 32 Continuing Education Credits for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 30. Cost includes training a, books, and instructional materials, as well as PTP Electronic Library DVD.
Multi-Agency Radiation Survey and Assessment of Materials and Equipment (MARSAME)	This four-day training course focuses on the methodology and practical application of the Multi-Agency Radiation Survey and Assessment of Materials and Equipment (MARSAME) standard. This standard supplements the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) that has become the basis for real property Final Status Surveys. The objective of the course is to provide attendees with a solid understanding of the MARSAME standard, practice through exercises, and provide practical information related to its implementation. The American Academy of Health Physics will grant 24 Continuing Education Credits for completion of this course.	\$1,595 per person (commercial price) .75% GSA discount \$1,583 (GSA discounted price, excluding IFF) \$1,595 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training, books, and instructional materials, as well as PTP Electronic Library DVD.
Radiation Safety Officer Training	This 5-day lecture/laboratory course introduces course participants to relevant issues that influence the effectiveness of a radiation safety program. The course emphasizes administrative and technical issues that a radiation safety officer has to address. Topics include: instruments, regulations, record keeping and inventory control, waste handling and storage, emergency planning, and others. The American Academy of Health Physics grants 32 Continuing Education Credits, and the American Board of Industrial Hygiene grants 5.0 Certification Maintenance Points to CIHs, for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training, books, and instructional materials, as well as PTP

Course Title	Course Description	Cost/Participant
Occupational Internal Dosimetry	This 4.5 day course is designed to provide course participants with a thorough understanding of current methods for determining radiation doses resulting from intakes of radioactive materials by workers. The course covers the basic concepts and principles of internal dose assessments, and describes the International Commission on Radiological Protection (ICRP) internal dosimetry systems and models currently in use in the U.S. and internationally. Bioassay methods (both direct and indirect) are reviewed and bioassay interpretation is discussed in detail. Regulations and regulatory guidance is discussed, including the design of bioassay programs and methods for demonstrating regulatory compliance. Finally, quality assurance and methods for program evaluation are covered. Throughout the course, students work detailed example problems covering all aspects of internal dose assessment. The American Academy of Health Physics will grant 32 Continuing Education Credits for completion of this course.	Electronic Library DVD. \$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training, books, and instructional materials, as well as PTP Electronic Library DVD.
Site Characterization in Support of Decommissioning: Planning, Implementation, and Evaluation	This 4.5 day course emphasizes site evaluation, data planning, survey implementation and tools, data interpretation, and decision making processes involved in the historical site assessment, scoping survey, and characterization survey phase of decommissioning. Much of the course involves planning sessions and individual and class exercises. Topics include: site assessment, surveys for radiological and chemical contaminants, data quality objectives and assessments, safety evaluations, planning, and budgeting.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training, books, and instructional materials, as well as PTP Electronic Library DVD.
TOXNET and Beyond: Using The National Library of Medicine's Environmental Health and Toxicology Portal	This 1 day course conveys the fundamentals of searching the NLM's TOXNET system of databases in chemistry, toxicology, environmental health, and related fields. In addition to TOXNET, the course will highlight various resources available through the Environmental Health and Toxicology Portal.	Cost for course delivery is \$12,000 (\$11,910 excluding IFF, \$12,000 including IFF). Can train up to 25 participants. Cost includes instructional materials and various reference materials.

Course Title	Course Description	Cost/Participant
The National Library of Medicine Web Resources for Environmental Health and Biomedical Research	<p>This 1 day course is designed to meet the needs of environmental and biomedical scientists, researchers, and policy makers who need information on health issues related to exposure to hazardous substances in the environment—including those that are naturally-occurring—and environmental agents known to induce illnesses, including cancer and health disparities.</p> <p>The course provides participants with training in how to access NLM's online environmental health and toxicology information. Participants will receive hands-on practice with selected NLM resources, and demonstrations of other valuable resources will be provided.</p> <p>The workbook is designed to be used as a reference following the course. It contains exercises using realistic scenarios for the resources covered in the class.</p>	<p>Cost for course delivery is \$12,000 (\$11,910 excluding IFF, \$12,000 including IFF). Can train up to 25 participants. Cost includes instructional materials, and various reference materials.</p>

Appendix C – Off-Site Training Courses (ORAU Facility)

Course Title	Course Description	Cost/Participant
Applied Health Physics	This intensive, 5-week program of lectures and laboratory exercises provides most of the basic science training hours necessary to obtain licensure in the medical uses of by-product material. Approximately 40% of course time is spent performing laboratory exercises using radiation detection and measurement equipment. Laboratory exercises complement the health physics principles learned in the lectures. Beginning with fundamental principles, each topic progresses to an advanced level. Topics addressed include: radiation detectors, radiation shielding, dosimetry, radiation biology, and others. The American Academy of Health Physics grants 32 Continuing Education Credits for completion of this course.	\$9,995 per person (commercial price) .75% GSA discount \$9,920 (GSA discounted price, excluding IFF) \$9,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum = 24 Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.
Air Sampling for Radioactive Materials	This 5-day course introduces participants to the basic theories and mechanics of air sampling for radionuclides. Approximately 40% of the course is spent collecting and analyzing air samples; the remainder is spent in lectures. Topics addressed include: calibration of air sampling instruments, air sampling in the workplace, air sampling in the environment, and radon measurements. The American Academy of Health Physics grants 32 Continuing Education Credits, and the American Board of Industrial Hygiene grants 5.0 Certification Maintenance Points to CIHs, for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.
Certified Health Physicist (CHP) Part I Review	This one-week course will cover much of the subject material necessary to take and pass Part I of the American Board of Health Physics certification examination. It can be considered both a review and shakedown that will assess a participant's readiness to successfully pass the exam. At the same time, it will identify those subject areas that need further study. Approximately 25% of the time will be spent taking and reviewing typical test questions. The remainder of the time will be devoted to lectures. The American Academy of Health Physics will grant 32 Continuing Education Credits for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.
Certified Health Physicist (CHP) Part II Review	This one-week course will cover much of the subject material necessary to take and pass Part II of the American Board of Health Physics certification examination. It can be considered both a review and shakedown that will assess a participant's readiness to successfully complete the exam. At the same time, it will help the candidate identify areas that need further study. Approximately 75% of the time will be spent working and	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10;

Course Title	Course Description	Cost/Participant
	reviewing typical Part II exam problems, while 25% will be brief reviews of problem-solving methods for the various areas of health physics covered by the exam. Continuing Education Credits (CECs) will be requested from the American Academy of Health Physics for completion of this course by any certified HPs who choose to attend for a refresher.	maximum number of participants = 24. Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.
Environmental Monitoring	This 5-day course introduces participants to the basic theories and mechanics of environmental monitoring for radioactivity. Approximately 50% of the course is spent collecting and analyzing samples; the remaining time will be devoted to lectures. Topics include: pathways analysis, regulations and standards, air sampling, soil sampling, water sampling, characterizing sites for remedial action, and others. The American Academy of Health Physics grants 32 Continuing Education Credits, and the American Board of Industrial Hygiene grants 5.0 Certification Maintenance Points to CIHs, for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.
Gamma Spectroscopy	This 5-day, laboratory-oriented course covers the basics of radionuclide identification and quantification by gamma spectroscopy. Approximately 50% of the course is spent in the laboratory. The American Academy of Health Physics grants 32 Continuing Education Credits for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.
Introduction to Radiation Safety	This 5-day course is an introduction to the basic science behind radiation safety and to common applications of radiation safety principles. Lectures include a description of common radiation sources, interaction of radiation with matter, biological effects, detection, and measurement. Laboratory exercises emphasize radiation detection and measurement techniques using both fixed and portable instrumentation. The American Academy of Health Physics grants 32 Continuing Education Credits, and the American Board of Industrial Hygiene grants 5.0 Certification Maintenance Points to CIHs, for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.

Course Title	Course Description	Cost/Participant
Medical Radiation Safety Officer Training	This 5-day course introduces course participants to current issues and technologies in the medical application of radiation. The issues and technologies are discussed in the context of improving and developing the institution's radiation safety program. Topics addressed include regulations and requirements, radiation safety officer responsibilities, monitoring and survey instruments, and others. The American Academy of Health Physics grants 32 Continuing Education Credits for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.
MARSSIM	This 5-day course emphasizes the decision-making processes involved in the design and implementation of a decommissioning survey based on MARSSIM (the Multi-Agency Radiation Survey and Site Investigation Manual). Topics include an overview of radiological survey types, the data quality objectives process, selection and application of DCGLs, background reference area selection, survey instrument detection sensitivity, area classification, statistical design of surveys, measurement uncertainty, and performing statistical tests. The American Academy of Health Physics grants 32 Continuing Education Credits for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 30. Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.
Multi-Agency Radiation Survey and Assessment of Materials and Equipment (MARSAME)	This four-day training course focuses on the methodology and practical application of the Multi-Agency Radiation Survey and Assessment of Materials and Equipment (MARSAME) standard. This standard supplements the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) that has become the basis for real property Final Status Surveys. The objective of the course is to provide attendees with a solid understanding of the MARSAME standard, practice through exercises, and provide practical information related to its implementation. The American Academy of Health Physics will grant 24 Continuing Education Credits for completion of this course.	\$1,595 per person (commercial price) .75% GSA discount \$1,583 (GSA discounted price, excluding IFF) \$1,595 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.
Occupational Internal Dosimetry	This 4.5 day course is designed to provide course participants with a thorough understanding of current methods for determining radiation doses resulting from intakes of radioactive materials by workers. The course covers the basic concepts and principles of internal dose assessments, and describes the International Commission on Radiological Protection (ICRP) internal dosimetry systems and models currently in use in the U.S. and internationally. Bioassay methods (both direct and indirect) are reviewed and bioassay interpretation is discussed in detail. Regulations and regulatory guidance is discussed, including the design of bioassay programs and methods for demonstrating regulatory	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training at ORAU site, books, and instructional materials, as well as PTP

Course Title	Course Description	Cost/Participant
	compliance. Finally, quality assurance and methods for program evaluation are covered. Throughout the course, students work detailed example problems covering all aspects of internal dose assessment. The American Academy of Health Physics will grant 32 Continuing Education Credits for completion of this course.	Electronic Library DVD.
Radiation Safety Officer Training	This 5-day lecture/laboratory course introduces course participants to relevant issues that influence the effectiveness of a radiation safety program. The course emphasizes administrative and technical issues that a radiation safety officer has to address. Topics include: instruments, regulations, record keeping and inventory control, waste handling and storage, emergency planning, and others. The American Academy of Health Physics grants 32 Continuing Education Credits, and the American Board of Industrial Hygiene grants 5.0 Certification Maintenance Points to CIHs, for completion of this course.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.
Site Characterization in Support of Decommissioning: Planning, Implementation, and Evaluation	This 4.5 day course emphasizes site evaluation, data planning, survey implementation and tools, data interpretation, and decision making processes involved in the historical site assessment, scoping survey, and characterization survey phase of decommissioning. Much of the course involves planning sessions and individual and class exercises. Topics include: site assessment, surveys for radiological and chemical contaminants, data quality objectives and assessments, safety evaluations, planning, and budgeting.	\$1,995 per person (commercial price) .75% GSA discount \$1,980 (GSA discounted price, excluding IFF) \$1,995 (GSA discounted price, including IFF) Minimum number of participants = 10; maximum number of participants = 24. Cost includes training at ORAU site, books, and instructional materials, as well as PTP Electronic Library DVD.
TOXNET and Beyond: Using The National Library of Medicine's Environmental Health and Toxicology Portal	This 1 day course conveys the fundamentals of searching the NLM's TOXNET system of databases in chemistry, toxicology, environmental health, and related fields. In addition to TOXNET, the course will highlight various resources available through the Environmental Health and Toxicology Portal.	Cost for course delivery is \$12,000 (\$11,910 excluding IFF, \$12,000 including IFF). Can train up to 25 participants. Cost includes training at ORAU, instructional materials, and various reference materials.

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The National Library of Medicine Web Resources for Environmental Health and Biomedical Research	<p>This 1 day course is designed to meet the needs of environmental and biomedical scientists, researchers, and policy makers who need information on health issues related to exposure to hazardous substances in the environment—including those that are naturally-occurring—and environmental agents known to induce illnesses, including cancer and health disparities.</p> <p>The course provides participants with training in how to access NLM's online environmental health and toxicology information. Participants will receive hands-on practice with selected NLM resources, and demonstrations of other valuable resources will be provided.</p> <p>The workbook is designed to be used as a reference following the course. It contains exercises using realistic scenarios for the resources covered in the class.</p>	<p>Cost for course delivery is \$12,000 (\$11,910 excluding IFF, \$12,000 including IFF). Can train up to 25 participants. Cost includes training at ORAU, instructional materials, and various reference materials.</p>