



## SANITARIAN/ENVIRONMENTAL SPECIALIST DUTY/TASK LIST

### DUTY A: PROMOTE GENERAL ENVIRONMENTAL HEALTH

•Task 1— Plan and conduct sampling and chemical, biochemical, biological or radiochemical analysis of various samples and consumer products ( regulatory purposes, standardized laboratory procedures, standardized field sampling procedures, water, soil, air, milk, industrial waste or wastewater and/or food for bacterial and chemical analysis, chain of custody). •Task 2— Review and interpret plans and specifications of proposed facilities. •Task 3— Perform technical reviews of plans, specifications and permit applications for proposed facilities such as (water and waste water treatment plants, sanitary landfills and hazardous waste sites, food establishments). •Task 4— Perform inspections and evaluate data relating to public health and the environment. •Task 5— Participate in epidemiological investigations. •Task 6— Investigate and resolve program complaints. •Task 7— Apply research methodologies. •Task 8— Understand obligations, both legal and ethical, to all parties involved in inspection activity. •Task 9— Know how to recognize and prioritize environmental health problems at the site, including the identification of deficiencies and violations. •Task 10— Understand basic tests and sampling procedures associated with routine activity and associated interview activities. •Task 11— Know the proper approach to analyze inspection findings, including documentation and consultation with colleagues. •Task 12— Understand options available and limitations of enforcement and corrective measures. •Task 13— Know equipment operation principles. •Task 14— Perform accurate measurements and calculations including Oklahoma legal descriptions. •Task 15— Represent the profession of environmental health favorably to the public.

### DUTY B: DEMONSTRATE KNOWLEDGE OF STATUTES AND REGULATIONS

•Task 1— Investigate complaints, prepare reports, initiate abatement procedures and maintain records of environmental quality or environmental/public health program inspections and investigations. •Task 2— Assist in preparing testimony and exhibits for court activities (provide expert testimony at hearings). •Task 3— Interpret statutes and codes to local officials, private citizens, environmental health officials, consulting engineers, industry representatives and appropriate agencies. •Task 4— Perform highly technical surveys and inspections in environmental specialty area to determine extent of compliance with environmental statutes, codes and regulations. •Task 5— Advise facilities such as water treatment plants and water pollution control facilities of proper methods to upgrade operations or correct deficiencies to meet required standards. •Task 6— Interpret state and federal laws pertaining to environmental health. •Task 7— Interpret state rules and regulations for Sanitarian/Environmental Specialist.

### DUTY C: ENSURE FOOD PROTECTION

•Task 1— Perform surveys and plan and direct inspections and investigations of food manufacturing, milk production, processing plants, service establishments, temporary events and mobile food service. •Task 2— Demonstrate knowledge of food safety principles, protection, quality, storage and transportation. •Task 3— Know examples of this major biological, chemical, and physical hazards and their methods of transmission. •Task 4— Understand the basis for HACCP implementation. •Task 5— Understand the definition of the danger zone and its significance in prevention of food-borne illnesses. •Task 6— Know the proposed

temperature controls for food equipment, according to the adopted Model Food Code. •Task 7— Apply correct food sampling procedures and perform appropriate tests of food. •Task 8— Know how to prevent transmission of pathogens through improved employee hygiene. •Task 9— Understand the proper methods of cleaning and sanitizing equipment and establishments. •Task 10— Inspect equipment. •Task 11— Know the proper food storage techniques. •Task 12— Identify food source, labeling and evaluate purity. •Task 13— Understand that cleanliness is the best method of pest control. •Task 14— Know that controlled pesticides must be applied by a registered pesticide applicator. •Task 15— Know the proper temperature of food products during receiving, preparing, holding, transporting, and final service. •Task 16— Perform surveys and inspections/investigations of temporary mass gathering sites (concerts/fairs). •Task 17— Know the causes for exclusion or restriction from food handling. •Task 18— Know and understand foods that contain or promote food allergens.

### DUTY D: ENSURE POTABLE WATER

•Task 1— Promote and solicit cooperation for environmental and water quality practices. •Task 2— Conduct water-quality studies and investigations (prepare reports, perform follow up studies and investigations). •Task 3— Make recommendations for remedial actions to correct water quality deficiencies. •Task 4— Perform surveys and inspections/investigations of private and public water supplies. •Task 5— Assist in making recommendations concerning remedial actions to correct environmental or water problems. •Task 6— Perform stream and ground water pollution studies in accordance with federal and state laws. •Task 7— Demonstrate knowledge of diseases associated with contaminated water. •Task 8— Understand water cycle and its relation to geology. •Task 9— Understand accurate sampling of water, testing, and interpretation of water analysis results. •Task 10— Understand chemical, physical, biological, and radiological contaminants associated with water. •Task 11— Understand effects of actual and potential sources of pollution in water supplies. •Task 12— Understand water treatment and distribution systems design. •Task 13— Understand land use issues related to the development of water systems. •Task 14— Understand water conservation and reclamation methods. •Task 15— Understand the health effects associated with potential waterborne disease-causing organisms. •Task 16— Know and understand disinfectant terminology. •Task 17— Know the different types of water treatment processes to produce safe potable water. •Task 18— Know basic plumbing requirements to prevent cross contamination of water supplies.

### DUTY E: VERIFY CORRECT DISPOSAL OF WASTEWATER

•Task 1— Perform surveys and inspections/investigations of industrial wastewater retention, industrial wastewater treatment facilities, private and public wastewater and land use. •Task 2— Demonstrate knowledge of soil characteristics and analysis methods. •Task 3— Demonstrate knowledge of disease-causing organisms associated with wastewater. •Task 4— Protect potable water sources from untreated wastewater discharges and waterborne disease. •Task 5— Protect humans, animals, and food from wastewater contamination and waterborne disease (fecal/oral route of transmission with water as the mode of transmission). •Task 6— Prevent wastewater-related nuisances. •Task 7— Protect



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recreational fishing, bathing, and swimming areas from wastewater pollution. •Task 8— Understand common wastewater terminology. •Task 9— Understand the causes of water pollution and its characteristics. •Task 10— Understand stream pollution, degradation and recovery, and the manner in which various pollutants inhibit stream recovery. •Task 11— Understand water quality classification and monitoring. •Task 12— Understand the process of eutrophication. •Task 13— Know the role of soil and microorganisms in the treatment of sewage effluent from small subsurface sewage treatment systems. •Task 14— Understand how soil permeability is determined and the significance of various permeability rates to the size of the absorption system required for treatment of sewage effluent from a septic tank. •Task 15— Understand how soil profiles, soil histories, soil textures, and percolation tests may be used to determine the rate of soil permeability. •Task 16— Know the important points of septic tank construction. •Task 17— Understand small sewage treatment systems, such as operation and maintenance of septic tanks. •Task 18— Understand prefabricated wastewater systems. •Task 19— Understand each step in the basic municipal wastewater treatment process and the reason a particular process is used. •Task 20— Nutrient removal: understand the nitrogen cycle and the importance of treating to reduce nutrients.

### DUTY F: VERIFY CORRECT DISPOSAL OF SOLID AND HAZARDOUS WASTE

•Task 1— Perform surveys and inspections/investigations of collection, transportation and disposal services. •Task 2— demonstrate knowledge of waste management systems (waste classifications, landfill methods, hazardous waste disposal methods). •Task 3— Demonstrate knowledge of health risks associated with poor waste management. •Task 4— Understand and have knowledge of the different types of waste. •Task 5— Be familiar with RCRA and CERCLA. •Task 6— Understand and have knowledge of integrated waste management. •Task 7— Know the difference and benefits of the various solid waste reduction methods. •Task 8— Understand hazardous waste management methods and processes. •Task 9— Understand hazardous waste storage and transportation principles (manifest). •Task 10— Know the designs and technologies used in state-of-the-art landfills. •Task 11— Understand the health risks associated with improper handling of hazardous and solid waste. •Task 12— Understand risk perception and risk management techniques and procedures. •Task 13— Understand solid and hazardous waste issues and effectively communicate this knowledge to the public.

### DUTY G: SAFEGUARD HAZARDOUS MATERIALS

•Task 1— Demonstrate knowledge of self-protection procedures, types of hazardous materials, and the associated general health risks. •Task 2— Understand chemical and physical data and their use in the classification of materials for regulatory and practical purposes. •Task 3— Understand basic definitions relating to toxicology and its sub-disciplines. •Task 4— Understand the three general fate pathways for toxic substances within the human body. •Task 5— Understand and interpret dose-response terminology. •Task 6— Understand how to select proper respiratory protection and chemical protective clothing. •Task 7— Understand the general requirements for the four levels of protection. •Task 8— Know the units of government responsible for the regulation of hazardous material transportation. •Task 9— Understand the requirements that the shipper of hazardous material must fulfill. •Task 10— Understand and apply the basic elements of the emergency management process.

### DUTY H: VERIFY CONTROL OF VECTORS, PESTS AND WEEDS

•Task 1— Demonstrate knowledge of control methods for vectors, pests and weeds (life cycle, types, conditions favorable to growth). •Task 2— Demonstrate knowledge of diseases and organisms associated with specifically identified vectors, pests and weeds. •Task 3— Know the natural and source reduction methods of control. •Task 4— Understand methods of the importance of prior disaster planning and the basic elements of an emergency response plan. •Task 5— Determine nature and scope of field problems.

### DUTY I: ENSURE RADIATION PROTECTION

•Task 1— Perform surveys and inspections/investigations of radiation hazards (testing equipment/sampling methods used to detect radiation). •Task 2— Demonstrate knowledge of types of radiation (common sources of exposure). •Task 3— Demonstrate knowledge of protection methods (health risks of radiation exposure). •Task 4— Know the units of radiation measurement. •Task 5— Understand ionizing and non-ionizing radiation. •Task 6— Understand the agencies that establish guidelines, regulations, and standards for radiation protection.

### DUTY J: PROMOTE OCCUPATIONAL SAFETY AND HEALTH

•Task 1— Perform surveys and inspections/investigations in occupational settings. •Task 2— Demonstrate knowledge of common health and safety hazards at work sites. •Task 3— Understand how to use MSDS sheets. •Task 4— Be familiar with current OSHA Hazard Communication Standards.

### DUTY K: ENSURE AIR QUALITY AND NOISE CONTROL

•Task 1— Perform surveys and inspections/investigations of air quality control facilities (assess ambient air quality and environmental noise, air/noise sampling methods and equipment, air/noise pollution control equipment and techniques). •Task 2— Demonstrate knowledge of air pollution sources. •Task 3—

Demonstrate knowledge of health risks associated with poor air quality and excessive noise. •Task 4— Understand the ambient air quality standards and the Pollutant Standards Index (PSI). •Task 5— Know and understand the basis for determining ambient air quality standards. •Task 6— Understand the methods used to measure smoke and soiling. •Task 7— Know and understand the effects of wind and atmospheric stability on air pollutants. •Task 8— Know the importance of topography on air quality. •Task 9— Understand the relationship between the effects of noise and public welfare. •Task 10— Know and understand the principles of noise reduction, including sound absorption and sound transmission.

### DUTY L: SAFEGUARD HOUSING

•Task 1— Demonstrate knowledge of health/safety risks of substandard housing (housing codes, heating, ventilation, cooling systems, lead contamination, utility connections, public lodgings). •Task 2— Be familiar with federal, state, and local regulations as they apply to housing sanitation and safety.

### DUTY M: INSPECT INSTITUTIONS AND LICENSES ESTABLISHMENTS



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•Task 1— Perform surveys and inspections/investigations of schools, hotels/motels, correctional facilities, medical facilities, childcare facilities, and barber shops. •Task 2—Maintain and improve biohazard safety, blood-borne pathogen control, and infection control techniques. •Task 3— Assess hazardous and infectious waste disposal procedures. •Task 4— Understand the specific plumbing and hot water control methods that must be employed to prevent burns. •Task 5— Know potentially hazardous sources of lead, blood levels that indicate exposure, and effects of lead on a developing child. •Task 6— Examine restroom sanitation and equipment.

### **DUTY N: INSPECT SWIMMING POOLS AND RECREATIONAL FACILITIES**

•Task 1— Perform surveys and inspections/investigations of public swimming pools/spas, and recreational areas (sampling/test methods). •Task 2— Perform surveys and inspections/investigations of temporary mass gathering sites (concerts, fairs). •Task 3— Demonstrate knowledge of common organisms that result in diseases associated with swimming pools/spas. •Task 4— Demonstrate knowledge of water treatment systems and water chemistry. •Task 5— Demonstrate knowledge of safety issues. •Task 6— Perform field calculations on turnover rates, filter loading, corrosion control, disinfection levels, pump sizing, and breakpoint chlorination requirements. •Task 7— Identify structural issues that threaten health and safety. •Task 8— Provide advice concerning hazardous chemicals (materials use and storage). •Task 9— Make recommendations for closure from the field based on imminent health and safety hazards. •Task 10— Know why the main drain outlet grating must have an area of opening that is a minimum of four times the area of the discharge pipe. •Task 11— Know and understand the differences of each type of filter. •Task 12— Understand the special concerns of operating hot tubs and therapeutic pools (NSPF). •Task 13— Know the safety equipment that should be on hand. •Task 14— Evaluate water clarity.

### **DUTY O: DISASTER AND TERRORISM PREPAREDNESS RESPONSE AND REMEDIATION**

•Task 1— Demonstrate knowledge of disaster and/or terrorism preparation. •Task 2— Demonstrate knowledge of emergency response procedures (chain of command, supply needs, temporary shelter/facilities and services, remediation methods). •Task 3— Understand situations and determine whether food is acceptable for human consumption. •Task 4— Know how to use the current DOT *Emergency Response Guidebook*, including color codes and layout of information. •Task 5— Provide oversight for temporary facilities and life support services. •Task 6— Assess food exposed to disaster situations or terrorist activity. •Task 7— Provide guidance for development of sanitary shelter, water, and waste management systems. •Task 8— Assess needs, recommend actions, and implement solutions for insect and vector control. •Task 9— Demonstrate knowledge of disaster terrorism preparedness, including ICS training. •Task 10— Understand disease transmission from vectors.