Unit 5 Assignment Paper details: This assignment will allow you to demonstrate the following objectives: • Explain the analytical methods to be used for evaluating health hazards in the workplace. • Calculate the equivalent exposure given a group of exposure results and the applicable OSHA permissible exposure limits (PELs). Instructions: Complete your work directly on this document. When you are finished, select “Save As,” and save the document using this format: Student ID\_UnitIV. Upload this document to BlackBoard as a .doc, docx, or .rtf file. Show all of your work. Welding fumes are a common occupational exposure. Several different welding fumes can cause similar adverse health effects. Personal sampling of a welding operation at a manufacturing facility produced the following 8-hour time-weighted average (TWA) results for individual metal fumes. Metal Fume Result OSHA PEL ACGIH TLV Antimony 0.05 mg/m3 0.5 mg/m3 0.5 mg/m3, Beryllium 0.00001 mg/m3 0.0002 mg/m3 0.00005 mg/m3 (I), Cadmium 0.025 mg/m3 0.005 mg/m3 0.01 mg/m3, Chromium 0.02 mg/m3 1 mg/m3 0.5 mg/m3, Copper 0.03 mg/m3 0.1 mg/m3 0.2 mg/m3, Iron Oxide 0.5 mg/m3 10 mg/m3 5 mg/m3 (R), Magnesium Oxide 0.02 mg/m3 15 mg/m3 10 mg/m3, Molybdenum 0.003 mg/m3 15 mg/m3 10 mg/m3 (I), Nickel 0.25 mg/m3 1 mg/m3 1.5 mg/m3 (I), Zinc Oxide 0.3 mg/m3 5 mg/m3 2 mg/m3 (R) (R) Respirable fraction, (I) Inhalable fraction. Briefly summarize the primary health effects associated with overexposure to each type of metal fume, including both acute and chronic health effects. Explain what analytical methods you would use for evaluating health hazards in the workplace. Identify the types of metal fumes that would produce similar health effects on an exposed worker. Calculate the equivalent exposure (in relation to OSHA PELS) for the metal fumes with similar health effects based on the “Result” column in the table above. Discuss whether you believe any of the individual metal fume exposures or the combined exposure exceeds an OSHA PEL or an ACGIH TLV. Begin your assignment on the next page. Your homework assignment should be a minimum of two pages in length (not including this page of instructions), and you must use at least one reference to support your answer. Adhere to APA Style when creating citations and references for this assignment. APA formatting, however, is not necessary.