



Job Safety Analysis

Safety Information for The University of North Carolina at Chapel Hill

Energy Services- Chilled Water Technical Support

Water Treatment- Adding NALCO 7346 “Bromine Pellets” to Plant Brominators



Title	Work Task	Hazards	Controls
Prepare for job	1a. Obtain Personal Protective Equipment (PPE) for job. 1b. Don PPE: (impervious gloves, long sleeve work shirt, and/or chemical splash apron, and full face air purifying respirator equipped with P100 filters/and combination organic vapor/acid gas cartridges.	1a. Skin, face, eye, and respiratory exposure to bromine dust from pellets if personal protective equipment is not used.	1a. Ensure personal protective equipment is inspected prior to use. 1b. Ensure respirator is inspected before use. Inspect for damage, loose parts, or defective components. Verify filter/chemical cartridge is not cross-threaded when inserting on respirator. Perform a respirator positive and negative pressure user seal checks prior to performing job.
	Work Task	Hazards	Controls
Retrieve bucket of NALCO 7346 “Bromine Pellets” and add pellets to plant brominator.	2a. Isolate brominator feeder and open. 2b. Place funnel on brominator tank top where pellets will be poured. 2c. Obtain bucket of “Bromine Pellets”, open lid, pick it up, and dump pellets (approximately half of content) slowly into the brominator. 2d. Pour second load into the tank.	2a, 2b, 2c. Back Strain. 2c. Improperly adjusted respirator and not using PPE which could result in skin, face, eye, and respiratory exposure to bromine dust. <div data-bbox="947 1177 1299 1421" data-label="Image"> </div>	2a. Use safe lifting practices to prevent back strain or injury. 2b. Ensure the funnel is in place to reduce dust generation, and potential skin contact with dust. 2c. Ensure all required PPE from work task #1 is donned and used when pouring pellets. 2d. When pouring is complete, step away from brominator until visible dust has settled. 2e. Use good hygiene practices to prevent skin contact with dust. 2f. Keep the Nalco 7346 container closed when not in use. Avoid generating dusts.

	Work Task	Hazards	Controls
Completion of Job	3a. Close brominator feeder. 3b. Store Nalco 7346 containers when not in use away from other chemicals. Ensure containers are closed and secured. Note: "Empty containers must be rinsed free of dust and their labels removed or painted. Place in designated location for disposal/recycling." 3c. Doff PPE. 3d. Clean and store PPE (including respirator after use).	3a. System problem. 3b. Reaction or explosion if mixed with incompatible chemicals. 3c. Contact with residual dust if it got on PPE. 3d. Unsanitary respirator.	3a. Keep PPE donned during this task. 3b. Ensure containers are stored in dry area (such as current location). Ensure all other chemicals (such as hydrocarbon oils or solvents) are segregated away from Nalco 7346 containers. 3c. Use good hygiene practices to prevent skin contact with dust. 3d. Clean respirator after use according to manufacture instructions. After cleaning store in a zip-lock bag in a clean dry location.
Training	Hazard Communication Training- employees must complete HAZCOM training on Material Safety Data Sheet for Nalco 7346.	Respirator training (Course # 6210) can be completed on-line at http://ehs.unc.edu , under Workplace Safety/Safety Training/Self Study Units. Employees that perform this work task must also be medically qualified and pass a respirator fit-test, annually.	
Created	Daniel Gilleski, 2-26-2009		
Referenced Material	Material Safety Data Sheet for Nalco 7346- Microbial Control Chemical UNC-CH Environment Health and Safety Manual, Chapter 4: Respiratory Protection Program		
Contact Info	For more information about this JSA and other JSAs, contact: <i>Department of Environment, Health and Safety</i> UNC-CH, 1120 Estes Drive Extension, Chapel Hill NC 27599 CB# 1650 (919) 962-5507 http://ehs.unc.edu		