PWS 360 – JBPHH Water System Photo Documentation of Chemicals Used in the Water Treatment Process

PWS 360 – JBPHH Water System chemically treats raw water from Waiawa Shaft with sodium hypochlorite (NaOCl). Totes of NaOCl are stored the covered storage shown in Figure 1. Approximately two (2) totes are ordered weekly and are either stored inside of the covered storage space or in the covered pump room as shown in Figure 3.

Figure 1. Storage space for totes of NaOCl solutions used for disinfection at Waiawa Shaft

Figure 2. Inside view of NaOCl storage space

Figure 3. Pump room for NaOCl in totes with secondary containment (Inside view of Building 75)

Proper signage for chemicals and required personal protective equipment (PPE) are posted on the doors for NaOCl as shown in Figure 4 below. Figure 4 also shows empty totes staged to be transported back to the vendor. Totes containing any amount of NaOCl are stored in a covered storage or inside of Building 75 as shown in Figures 1 and 3, respectively.

Figure 4. Outside view of Building 75

Figure 5. Close-up view of representative manufacturer label for NaOCl solution

PWS 360 – JBPHH Water System also chemically treats raw water from Waiawa Shaft with sodium fluoride (NaF). NaF is procured in salt form and stored inside the injection room as shown in Figure 6 below. Original manufacturer labels for NaF are shown in Figures 7 and 8.

Figure 6. NaF is stored inside the injection room (Building S-72)

Figure 7. Representative manufacturer label and packaging for NaF

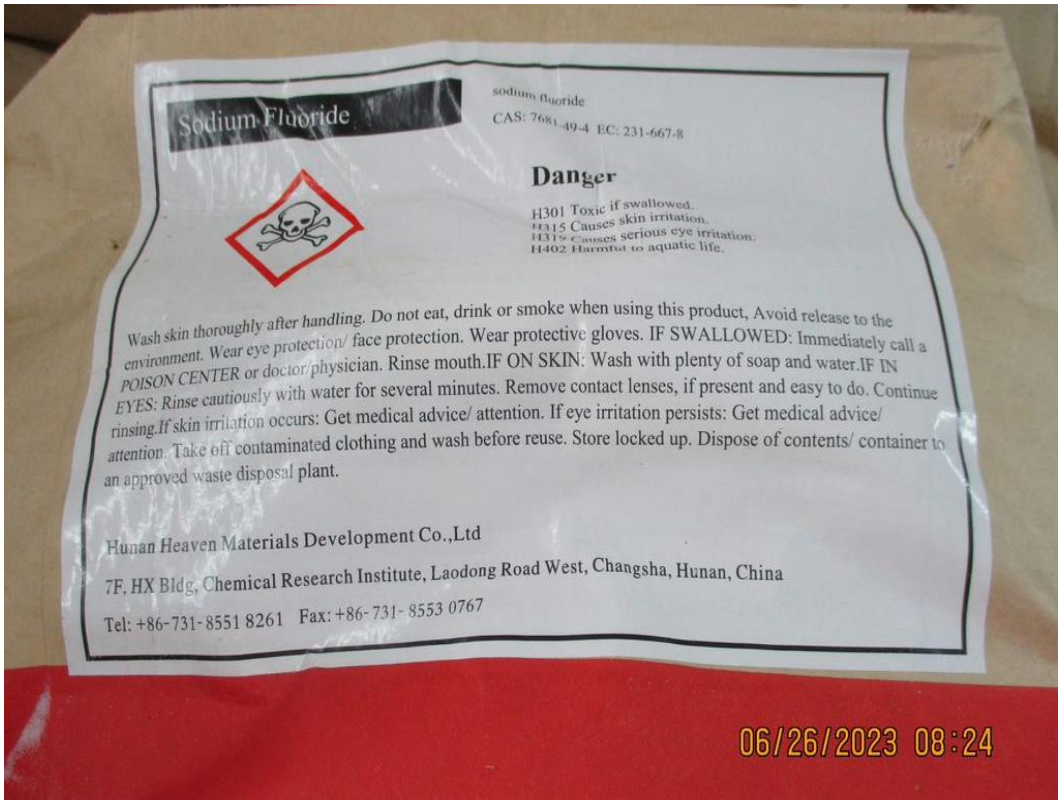

Figure 8. Close-up view of representative manufacturer label for NaF

A dilute solution of NaF is mixed and stored in drums with a secondary container as shown in Figure 9 below. This solution is injected to treat raw water at Waiawa Shaft.

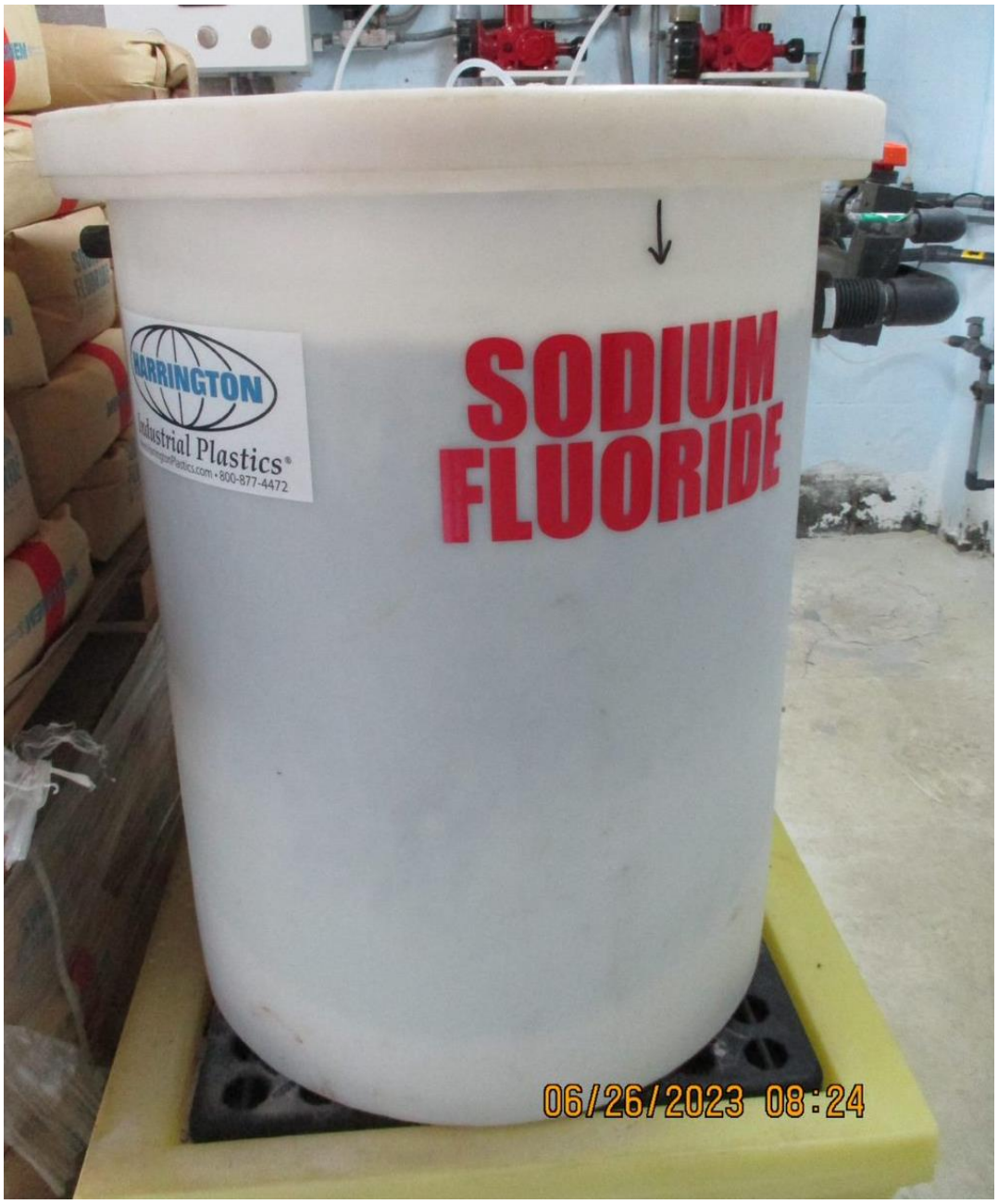

Figure 9. NaF solution for injection inside Building S-72

Connection lines for NaF and raw water inside of Building S-72 are labeled as shown below in Figure 10.

Figure 10. Connection lines for NaF and raw water inside Building S-72

Chemical testing equipment and reagents are stored in a shelf inside of the injection room (Building S-72) as shown in Figure 11 below.

Figure 11. Chemical testing equipment and reagents

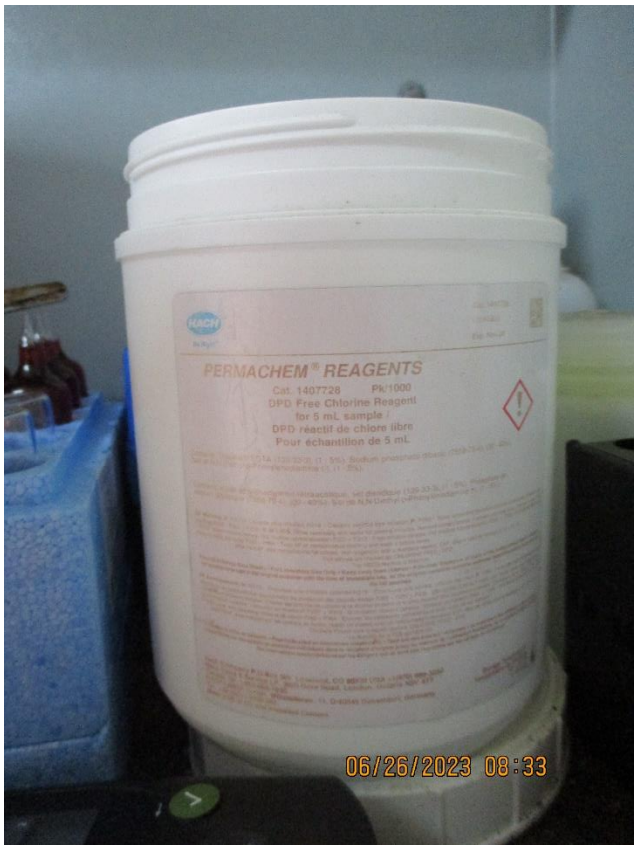

Figure 12. Close-up view of chemical testing reagent label

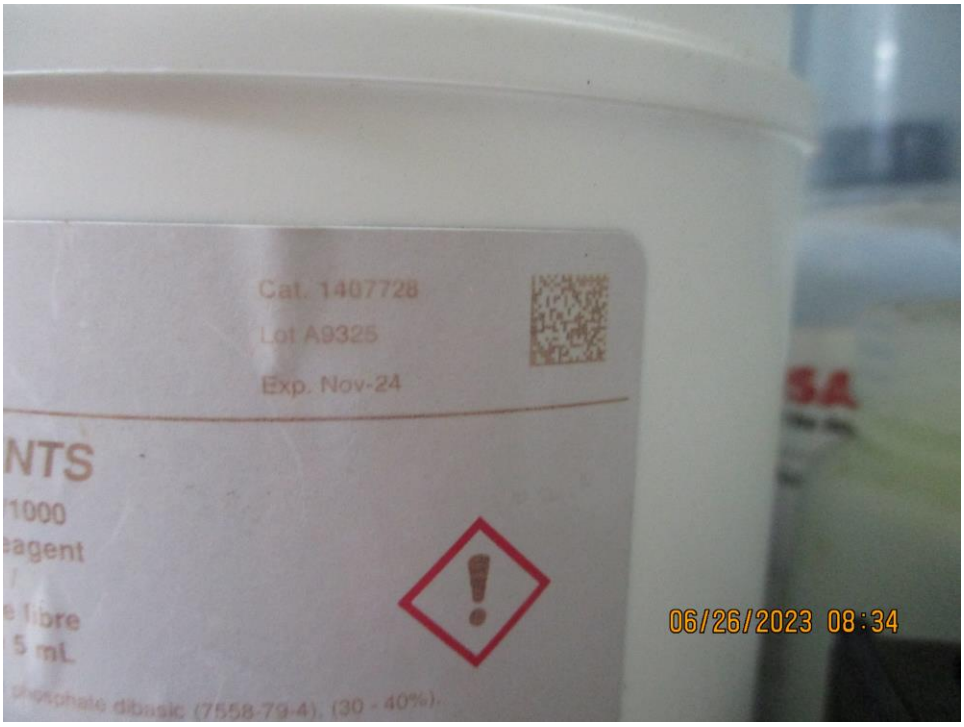

Figure 13. Close-up view of reagent label. Current reagents on-hand are valid until November 2024

Outside of Building S-72, signage for proper PPE is posted at the door as shown in Figure 14 below.

Figure 14. Signage of PPE requirements for injection room (Building S-72)

Figure 15. NaOCl storage and injection room at Aiea-Halawa Shaft (Building 408)

Figure 16. Inside view of Building 408

Figure 17. Inside view of Building 408 from another angle

Figure 18. Chemical testing equipment and reagent shelf inside Building 408

Figure 19. Close-up view of reagent packet used for chlorine testing. Current reagents on-hand valid until March 2024