4.0 DESCRIPTION OF SOLID WASTE MANAGEMENT UNITS

This section presents detailed descriptions of each solid waste management unit (SWMU) identified during the PR and VSI. These descriptions encompass unit description, dates of operation, wastes managed, release controls, history of releases, and release potential to soil/groundwater, surface water, and air, plus the potential to generate subsurface gas.

4.1 SWMU #1 - Wastewater Impoundment (Photo 1)

4.1.1 Information Summary

Unit Description: This unit is also known as the Settling Pond and the Equalization Basin. This unit is a closed surface impoundment and is located in the southeast corner of the CC&P production facility, 4 feet west of an unnamed County drainage ditch and east of the WWTF Enclosed Steel Storage Tanks #1 and #2 (SWMUs #11 and #12). The unit was approximately 100 feet wide, 382 feet long and 5 feet, 8.6 inches deep and had a capacity of 1.25 million gallons (Ref. 20). The unit was an earthen structure with a raised dike surrounding the impoundment. The unit was part of the wastewater treatment process prior to 1983. The unit received wastewater from the Wastewater Collection Sump (SWMU #3) and discharged the wastewater to the Treatment Pits (SWMU #8). The sludges were sent to Sludge Dewatering Belt Press (SWMU #9) (Ref. 36).

Magna sold the plant to Chardonol in December, 1983, however, Magna retained the surface impoundment (Ref. 37) following the sale. Magna did not implement a regular RCRA groundwater monitoring program, but in early 1984 submitted a groundwater monitoring waiver demonstration to the TWC. Magna also submitted a closure plan for the unit at the same time. TWC notified Magna to modify the closure plan to include installation of three groundwater monitoring wells and conduct analyses for certain parameters for a period of one year following the installation of these wells. In June of 1984 Magna was able to successfully reclassify the Wastewater Impoundment (SWMU #1) sludges from Class I to Class II industrial solid waste. However, the reclassification did not apply to the Wastewater Impoundment (SWMU #1), which itself remained a Class I hazardous waste management unit. Magna was required to clean close the unit.

The unit was eventually closed in 1985. During closure, approximately 200 five thousand gallon tank trucks of fluid sludge were removed from the unit for off-site disposal (Ref. 3). The Wastewater Impoundment (SWMU #1) was cleaned to background levels (less than 50 ppb) for xylene, toluene and mercury (Ref. 3). The unit was filled with compacted clay, graded for drainage and capped with 2 feet of clay having a compacted permeability of less than $1x10^{-7}$cm/sec. The unit is now covered with vegetation (Ref. 3). However, TWC has not received a certification of clean closure for the unit from a registered certified professional engineer. In addition, TWC, as a result of a comprehensive ground-water monitoring evaluation (CME) in 1987, determined that the monitoring wells were not adequately located down gradient of the unit, and, therefore, that the wells may not be able to detect the edge and center of the plume where significant concentrations of the contaminants may be present (Ref. 20).

Dates of Operation: This surface impoundment was constructed in the 1950s and began receiving waste shortly thereafter. The unit is no longer active. In 1982, the Wastewater Impoundment (SWMU #1) was replaced by two 250,000 gallon tanks; WWTF Enclosed Steel Storage Tank #1 and #2 (SWMUs #11 and 12). Wastes were no longer placed in the unit after 1983 and the unit was closed in 1985 (Ref. 20).

Wastes Managed: The surface impoundment was used to store wastewater after it had been through the Wastewater Collection Sump (SWMU #3), and oil skimmed from the surface of this sump, prior to treatment in the Treatment Pits (SWMU #8). This unit managed wastes generated by Aquaness, Milchem, and Magna. Wastes consisted of liquid process wastewater containing F003-F005 solvents, and xylene, toluene and mercury (Ref. 3). The sludges in the unit have been reclassified by the TWC from Class I to Class II non-hazardous. The sludges contained detectable levels of xylene, toluene, and mercury (Ref. 3).

Release Controls: The impoundment was surrounded by an earthen dike with 1.2 feet of freeboard. The impoundment had an earthen compacted clay liner, but does not possess leachate control mechanisms. Waste entered the impoundment by process sewer pipes (Ref. 3).

History of Releases: Groundwater samples collected for a CME by TWC in 1987 show the presence of barium, acid esters, butyl myristate, 2-H-azepine-2-one, triethyl phosphate, hexadecanoic acid and nonyl phenol in the monitor wells all in the low ppb range (Ref. 20). There are no groundwater sampling results in the files after 1987 (Ref. 35).

4.1.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is high due to the nature of operations, the type of waste handled, the presence of a shallow water table in the area, and contamination noted in groundwater monitoring wells in 1987.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water in the past is high due to the lack of runoff controls the unit's proximity to a nearby drainage ditch, and an observed release in 1985.

The potential for release of hazardous waste or hazardous constituents to surface water in the present is low because the unit is no longer active.

Air: The potential for release of hazardous waste or hazardous constituents to air in the past was high due to the fact

that the impoundment was open to the atmosphere, and that volatile organics were known to be managed in the unit.

The potential for release of hazardous waste or hazardous constituents to air, in the present, is low due to the unit's inactive status, and the presence of a cap.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the wastes managed at the unit and removal of all the wastes from the unit during closure.

4.2 SWMU #2 - Black Tar Area (Photo 2)

4.2.1 Information Summary

Unit Description: This unit is located just south of the closed Wastewater Impoundment (SWMU #1). It consisted of an unknown volume of buried black tarry material approximately 2-4 feet below surface. The material was discovered during the closure of the Wastewater Impoundment (SWMU #1) in 1984 (Ref. 3). The facility decided to remove the tar and any visually contaminated soil in the area during December 1984 and February 1985. The soil was removed until the soil test results indicated that xylene levels were less than 0.01 ppm (Ref. 3).

Dates of Operation: This unit was discovered in 1984 and is not currently active. The material was removed during the earthwork associated with closing the wastewater Impoundment (SWMU #1) during December 1984 and February 1985 (Ref. 35).

Wastes Managed: This unit consisted of an unknown volume of buried black tarry material. A sample of the tar was tested to determine the chemical composition. The tar had less than 0.001 ppm of benzene, toluene and phenol, 0.006 ppm of mercury and 116.8 ppm of xylene (Ref. 3).

Release Controls: The unit was located on the soil and there were no known release controls (Ref. 35).

History of Releases: Analytical test results of the soil after removal indicate no contaminants remain above detection limits (Ref. 3).

4.2.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil in the past is high due to the confirmed soil contamination. The potential for release of hazardous waste or constituents to soil, in the present is low because the material was removed until no contamination was found.

The potential for release of hazardous waste or hazardous constituents to groundwater, both past and ongoing, is moderate due to the location of the unit on soil, and past confirmed soil contamination.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing is low, due to the nature of the waste constituting the unit.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of the wastes managed.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, because the waste was removed.

4.3 SWMU #3 - Wastewater Collection Sump (Photo 3)

4.3.1 Information Summary

Unit Description: This unit is located southeast of the main production area, south of the Metal Catch Trays at Tank Car Railside (SWMU #22) and is adjacent to the Skimmed Oil Storage Tank (SWMU #4). The unit is a below grade concrete sump with a rope and belt oil type skimmer. The unit is approximately 6 feet wide, 12 feet long and 4 feet deep. The sump has two cells separated by a 4 inch concrete wall. Each cell is approximately 6 feet long, 6 feet wide and 4 feet deep. The top of the sump is open to the atmosphere and is covered by steel grating. A raised concrete curb surrounds the sump area. A metal roof extends over the sump. The area surrounding the sump is grassy. This unit receives wastewater from the manufacturing process. The skimmed oil was sent to the Skimmed Oil Storage Tank (SWMU #4), where it was stored. In 1981, the skimmer was removed and the Skimmed Oil Storage Tank (SWMU #4) was no longer used because there was a change in the process; diesel fuels were no longer used as a solvent in the process. Prior to 1983, this unit discharged the wastewater to the Wastewater Impoundment (SWMU #1). After 1983, the unit discharged wastewater to WWTF Enclosed Steel Storage Tanks #1 and #2 (SWMUs #11 and #12) by above-ground piping, which exits from the top of the sump (Ref. 35).

Dates of Operation: This unit was constructed in the 1950s and is currently active. The oil skimmer was removed in 1981 (Ref. 35).

Wastes Managed: This unit manages oily process wastewater. Oil was separated from the wastewater by a rope and belt type skimmer until 1981 (Ref. 35).

Release Controls: The sump is concrete and is below grade. A raised concrete curb surrounds the sump (Ref. 35).

History of Releases: No releases are known to have occurred and no visual evidence of releases from the unit was noted during the VSI. However, the integrity of the unit could not be ascertained during the VSI conducted on August 29, 1991 due to the presence of liquids (Ref. 35). Due to the nature of the materials managed, the unit integrity is expected to be intact, but this could not be confirmed.

4.3.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the design of the unit, but this could not be confirmed.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the unit's design and location.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of the waste managed.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the wastes managed.

4.4 SWMU #4 - Skimmed Oil Storage Tank (Photo 4)

4.4.1 Information Summary

Unit Description: This above-ground tank is adjacent to the Wastewater Collection Sump (SWMU #3) and is 90 feet southeast of the main production facility and 100 feet northwest of the closed Wastewater Impoundment (SWMU #1). This unit consists of a 4000-gallon vertical steel tank for the storage of skimmed oils, although the unit is currently inactive. The tank is on top of a concrete floor and is surrounded by a concrete curb. This curbed area drains to the adjacent Wastewater Collection Sump (SWMU #3). Prior to 1981, this unit received skimmed oil from the Wastewater Collection Sump (SWMU #3) (Ref. 33). Oils were temporarily stored in this tank prior to off-site disposal. The Skimmed Oil Storage Tank (SWMU #4) was not used after 1981 because there was a change in the process and diesel fuel (responsible for the oil sheen) was no longer used as a solvent in the process (Ref. 35).

Dates of Operation: The unit was constructed in the 1950s and operated from that time until 1981. The unit is on-site but is currently inactive (Ref. 35).

Wastes Managed: This unit stored skimmed oil (Ref. 35).

Release Controls: The tank is located on a concrete pad and a 4-inch raised concrete curb surrounds the tank (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases was noted during the VSI conducted on August 29, 1991.

4.4.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the above-ground location of the tank on a curbed concrete pad.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the unit's design and location on a curbed concrete pad.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the closed topped nature of the unit.

Subsurface Gas: There is no potential for the generation of subsurface gas, both the past and ongoing, due to the nature of the wastes managed at the unit.

4.5 SWMU #5 - Old Drum Storage Area at WWTF (Photo 5)

4.5.1 Information Summary

Unit Description: This above-ground, inactive unit was located north of the Treatment Pits (SWMU #8), at the current location of the WWTF Sludge Hopper (SWMU #23). The unit contained dried sludge generated by the Sludge Dewatering Belt Press (SWMU #9) machine. The sludge was temporarily stored here prior to off-site disposal. After 1982, the dried sludge was stored in WWTF Sludge Hopper (SWMU #23). After the unit was deactivated, the drums were cleaned and sent off-site (Ref. 35).

Dates of Operation: This unit was in operation from the 1950s until 1982. The unit is currently inactive (Ref 35).

Wastes Managed: This unit received dried sludge produced by the Sludge Dewatering Belt Press (SWMU #9). The sludges have been classified non-hazardous by the TWC (Ref. 35).

Release Controls: The unit was located on a concrete pad (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases was noted during the VSI conducted on August 29, 1991.

4.5.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low because the unit was on a concrete pad, and is no longer present.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low because the unit was on a concrete pad, and is no longer present.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of the waste managed.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the location on a concrete pad, the nature of the wastes managed at the unit, and the fact that the unit is no longer present.

4.6 SWMU #6 - Dumpster for Filter Press Cake (Photo 6)

4.6.1 Information Summary

Unit Description: This above-ground dumpster is located south of the warehouse production facility. The unit consists of an open-topped 20 cubic yard metal dumpster resting on a concrete pad. The unit contains dried filter press cake generated by the glass lined unit. The dried filter press cake is first transferred to the Dumpsters at Glass-Lined Unit (SWMU #20), and then is transferred to this unit for storage prior to off-site disposal. During the VSI, this unit was covered by a plastic sheet (Ref. 35).

Dates of Operation: This unit began operation in 1982 and is currently active (Ref. 35).

Wastes Managed: This unit receives non-hazardous dried filter press generated in the glass lined units (Ref. 35).

Release Controls: The unit rests on a concrete pad (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases was noted during the VSI conducted on August 29, 1991.

4.6.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low because the unit is on a concrete pad.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water both past and ongoing, is low because the unit is on a concrete pad.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of the waste managed.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the location on a concrete pad and the nature of the wastes managed at the unit.

4.7 SWMU #7 - Wastewater Holding Tank (Photo 7)

4.7.1 Information Summary

Unit Description: This above-ground unit is located southeast of the main production facility, just west of the Treatment Pits (SWMU #8), of the closed Wastewater Impoundment (SWMU #1). The unit consists of one 6000-gallon enclosed wastewater holding tank labeled "T-4 Acid Waste Water." The tank is constructed of steel and is located on a 6 inch concrete pad. Originally, this tank was used for the storage of coagulants used for treatment in the Treatment Pits (SWMU #8), but this treatment did not work so the facility went back to using alum and sodium hydroxide. This tank, along with two other tanks located north of it, were replaced by two alum tanks and one sodium hydroxide tank in 1983. The unit now temporarily stores non-hazardous process wastewater prior to disposal off-site. The wastewater has been tested and has been classified as non-hazardous waste by the TWC (Ref. 35).

Dates of Operation: This unit was constructed in 1981. The unit is currently active (Ref. 35). In the past, the unit was used to store coagulants.

Wastes Managed: This unit is used for the temporary storage of non-hazardous process wastewater (Ref. 35).

Release Controls: The unit is an enclosed steel tank located on a concrete pad (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases was noted during the VSI conducted on August 29, 1991.

4.7.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the type of waste handled (non-hazardous liquid waste) and above-ground location on a concrete pad.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the above-ground location on a concrete pad.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the close-topped nature of the tank.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the wastes managed at the unit and the above-ground location of the tank on a concrete pad.

4.8 SWMU #8 - Treatment Pits (Photos 8 and 8.1)

4.8.1 Information Summary

Unit Description: This unit is located immediately east of the Wastewater Holding Tank (SWMU #7), 50 feet north of the WWTF Enclosed Tanks #1 and #2 (SWMUs #11 and #12), and 50 feet west of the closed Wastewater Impoundment (SWMU #1). The unit consists of seven rectangular concrete pits. Each pit is 80 feet long, 12 feet wide and 4 feet deep. This unit is partially above-ground and partially in-ground. These pits are covered by a metal roof, but otherwise are open to the atmosphere. This unit is used to pretreat wastewater by flocculation and precipitation prior to the wastewater being discharged to the POTW, under City of Houston Permit No. 20684. The sludges generated are collected by the Sludge Dewatering Belt Press (SWMU #9). Prior to 1983, the unit received wastewater from the Wastewater Impoundment (SWMU #1), and since 1983, the unit receives wastewater from the WWTF Storage Tanks #1 and #2 (SWMUs #11 and #12).

Dates of Operation: This unit was constructed in the 1950s and it is currently active (Ref. 35).

Wastes Managed: The unit is designed to pretreat wastewater by precipitation and flocculation, using alum and sodium hydroxide prior to its discharge to a POTW. Non-hazardous sludges are produced during pretreatment activities. The sludges have been classified non-hazardous by the TWC (Ref. 35).

Release Controls: The release controls at this unit consist of the rectangular concrete pit located on the west side of the unit, which also holds the wastewater. This pit extends the entire length of the unit. There is no secondary containment around the unit (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases was noted during the VSI conducted on August 29, 1991. However, the integrity of the unit could not be ascertained during the VSI conducted on August 29, 1991 due to the presence of liquids (Ref. 35). Due to the nature of the materials managed, the unit integrity is expected to be intact, but this could not be confirmed.

4.8.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is expected to be low, due to the nature of the materials managed, and the design of the unit but this could not be confirmed.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the design of the unit.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is moderate due to the open nature of the operation.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the wastes managed at the unit.

4.9 SWMU #9 - Sludge Dewatering Belt Press (Photo 9)

4.9.1 Information Summary

Unit Description: This above-ground unit is located above one of the seven Treatment Pits (SWMU #8), in the northeast corner of the WWTF. The unit has a conveyor belt with a bucket that goes into the pits and removes the sludge. A 3.5 to 4 foot wide belt press machine mechanically dewaters the sludge. After the water is removed from the sludge, a mostly dry non-hazardous sludge is produced; this sludge is then collected in a WWTF Sludge Hopper (SWMU #23) and then sent off-site for disposal. The sludge effluent is routed back to the Treatment Pits (SWMU #8) (Ref. 35).

Dates of Operation: This unit was constructed in the 1950s. The unit is presently active, but was closed down for repairs during the VSI on August 29, 1991 (Ref. 35).

Wastes Managed: This unit manages non-hazardous sludges produced by mechanically dewatering the sludge produced during the pretreatment of wastewater at the WWTF. The sludges have been classified non-hazardous by the TWC (Ref. 35).

Release Controls: This unit is partially underlain by a concrete pad (Ref. 35).

History of Releases: No releases are known to have occurred and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.9.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the unit's design, the nature of the waste management activities and the location on a concrete pad.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the unit's location on a concrete pad.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of the waste management activities and the unit's design.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the wastes managed at the unit.

4.10 SWMU #10 - WWTF Piping/Chemical Sewer Conduits (Photo 10 and 10.1)

4.10.1 Information Summary

Unit Description: These pipes and troughs are both underground and aboveground, and are located between the process areas and the wastewater treatment facility. The unit consists of concrete troughs (covered by metal grating) and lined piping which collect spills throughout the plant and discharge the wastewater to the WWTF (Ref. 35).

Dates of Operation: This unit began operation in 1962 and is currently active.

Wastes Managed: This unit manages spilled fluids from various parts of the plant. Spilled fluids are sent to the WWTF.

Release Controls: There are no known release controls; this unit is itself a release control.

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991. However, the integrity of the unit could not be determined due to its below-grade construction, the metal grating, and safety considerations.

4.10.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is expected to be low, due to the construction of the unit.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the unit's construction.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the units design.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the waste managed at the unit.

4.11 SWMU #11 - WWTF Enclosed Tank #1 (Photo 11)

4.11.1 Information Summary

Unit Description: This above-ground tank is located south of the Treatment Pits (SWMU #8). This unit consists of an enclosed steel tank with a capacity of 250,000 gallons. The tank is surrounded by an earthen dike. The tank stores wastewater from the Wastewater Collection Sump (SWMU #3) prior to treatment at the Treatment Pits (SWMU #8). Wastewater enters the tank from aboveground pipes. Either this tank or WWTF Enclosed Tank #2 (SWMU #12) is in use at any given time. If this tank is not in use, then it is used as an emergency tank for the storm sewer system or for additional storage for process wastewater on an as needed basis. Prior to 1983, the Wastewater Impoundment (SWMU #1) received the wastewater from the Wastewater Collection Sump (SWMU #3).

Dates of Operation: The tank was constructed in 1983 and is currently active. It is usually not in use when WWTF Enclosed Tank #2 (SWMU #12) is being used.

Wastes Managed: This unit receives untreated wastewater from plant processes. Wastewater is temporarily stored in this tank prior to treatment in the Treatment Pits (SWMU #8).

Release Controls: This tank and WWTF Enclosed Tank #2 (SWMU #12) are surrounded by an earthen dike. Water which collects inside the earthen dike is collected by a pump located in the northeast corner of the diked area, which drains the area.

History of Releases: No releases are known to have occurred from the unit, and no visual evidence of releases from the unit were observed during the VSI conducted on August 29, 1991.

4.11.2 Release Potential

Soil/Groundwater: The potential for releases of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the above-ground location of the unit, and the fact that it is surrounded by an earthen dike.

Surface Water: The potential for releases of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the earthen dike surrounding the unit.

Air: The potential for releases of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the close-topped nature of the tank.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the above-ground location of the unit.

4.12 SWMU #12 - WWTF Enclosed Tank #2 (Photo 12)

4.12.1 Information Summary

Unit Description: This above-ground tank is located south of the Treatment Pits (SWMU #8). This unit consists of an enclosed steel tank with a capacity of 250,000 gallons. The tank is surrounded by an earthen dike. The tank stores wastewater from the Wastewater Collection Sump (SWMU #3) prior to treatment at the Treatment Pits (SWMU #8). Wastewater enters the tank from aboveground pipes. Either this tank or WWTF Enclosed Tank #1 (SWMU #11) is in use at any given time. If this tank is not in use, then it is used as an emergency tank for the storm sewer system or for additional storage for process wastewater on an as needed basis. Prior to 1983, the Wastewater Impoundment (SWMU #1) received the wastewater from the Wastewater Collection Sump (SWMU #3) (Ref. 35).

Dates of Operation: The tank was constructed in 1983 and is currently active (Ref. 35). It is usually not in use when WWTF Enclosed Tank #1 (SWMU #11) is being used.

Wastes Managed: This unit receives untreated wastewater from plant processes. Wastewater is temporarily stored in this tank prior to treatment in the WWTF (Ref. 35).

Release Controls: This tank and WWTF Enclosed Tank #1 (SWMU #11) are surrounded by an earthen dike. Water which collects inside the earthen dike is collected by a pump, located in the northeast corner of the diked area, which drains the area (Ref. 35).

History of Releases: No releases are known to have occurred from the unit, and no visual evidence of releases from the unit were observed during the VSI conducted on August 29, 1991.

4.12.2 Release Potential

Soil/Groundwater: The potential for releases of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the above-ground location of the unit, and the fact that it is surrounded by an earthen dike.

Surface Water: The potential for releases of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the earthen dike surrounding the unit.

Air: The potential for releases of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the close-topped nature of the tank.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the above-ground location of the unit.

4.13 SWMU #13 - T-1011 Storage Tank (Photo 13)

4.13.1 Information Summary

Unit Description: This above-ground unit consists of one 8700-gallon liquid waste storage tank (T-1011), which is currently used to manage process wastewaters. The unit is located south of the autoclave building and northwest of the WWTF and is situated among ten other similar sized and shaped tanks used for bulk product storage. This tank is labeled "Waste Water." Tank T-1011 is positioned on a concrete base which in turn sits upon a concrete slab surrounded by four-foot high concrete walls. Floor drains within this area discharge to the onsite WWTF. This tank receives reaction wastewater from the ester kettle; the wastewater is disposed off-site (Ref. 35).

Dates of Operation: This unit began operation in 1978 and is currently active (Ref. 35).

Wastes Managed: The unit stores process wastewaters resulting from the production activities at the ester kettle (Ref. 35).

Release Controls: The unit is located on a concrete floor and is surrounded by a four-foot high concrete walls. The area inside the walls drains to the WWTF (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.13.2 Release Potential

Soil/Groundwater: The potential for releases of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the location of the tank on a concrete pad, and secondary containment provided by concrete walls and the presence of drains designed to collect and convey any seepage or spillage.

Surface Water: The potential for releases of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the location of the tank on a concrete pad, and secondary containment provided by concrete walls and the presence of drains designed to collect and convey any seepage or spillage.

Air: The potential for releases of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of the of the materials being handled.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the materials being handled.

4.14 SWMU #14 - Waste Storage Area in Laboratory (Photo 14)

4.14.1 Information Summary

Unit Description: This unit consists of the waste storage area in the plant QA/QC laboratory, which is located in the Plant Office area. The Plant Office area is located in the eastern portion of the facility north of the Drum Storage Area (SWMU #26). The lab stores small amounts of chemicals and laboratory supplies for conducting QA/QC testing of the various plant processes. Small amounts of wastes are generated during these tests. Wastes are stored in the laboratory in 5-gallon labpack containers and are periodically transferred to a 55-gallon drum located outside of the building - Container Storage Outside Laboratory (SWMU #30) and then to the Drum Storage Area (SWMU #26). Sinks in the laboratory drain to the sanitary sewer system. No laboratory wastes are disposed via these drains (Ref. 35).

Dates of Operation: This unit began operation in 1962 and is currently active.

Wastes Managed: This unit stores small amount of chemicals and laboratory supplies for conducting QA/QC testing of the various processes located at the facility. Small amounts of wastes are generated during these tests. Wastes are stored in the laboratory in 5-gallon labpack containers and are periodically transferred to 55-gallon drums located outside of the building - Container Storage Area Outside Laboratory (SWMU #30).

Release Controls: The building is enclosed and has a concrete floor.

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.14.2 Release Potential

Soil/Groundwater: The potential for releases of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low because the unit is inside a building and is located upon a concrete floor.

Surface Water: The potential for releases of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low because the unit is inside a building.

Air: The potential for releases of hazardous waste or hazardous constituents to air, both past and ongoing, is low because the unit is inside a building.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the unit's low release potential to soil and groundwater.

4.15 SWMU #15 - Waste Storage Area in Maintenance Shop (Photo 15)

4.15.1 Information Summary

Unit Description: This unit is the waste storage area in the Maintenance Shop which is located south of the Supply Building. The unit is in an enclosed and roofed metal building with a concrete floor. The floor does not possess floor drains. Used oils and chemicals are stored inside the building in drums and tote bins which are later moved outside to the Container Storage Outside Maintenance Shop (SWMU #16). Waste drums and the tote bins do not have a specific location in the Maintenance Shop.

Dates of Operation: This unit began operation in 1981 and is currently active (Ref. 35).

Wastes Managed: This unit manages used oils and cleaning chemicals (Ref. 35).

Release Controls: The unit is located in the Maintenance Shop.

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1993.

4.15.2 Release Potential

Soil/Groundwater: The potential for releases of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low because the unit is inside a building and is located upon a concrete floor.

Surface Water: The potential for releases of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low because the unit is inside a building.

Air: The potential for releases of hazardous waste or hazardous constituents to air, both past and ongoing, is low because the unit is inside a building.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the unit's low release potential to soil and groundwater.

4.16 SWMU #16 - Waste Storage Outside Maintenance Shop (Photos 16 and 16.1)

4.16.1 Information Summary

Unit Description: This unit is a container storage area. This unit manages used oils and cleaning chemicals generated from various activities conducted in the Maintenance Shop. These wastes are generated in the Maintenance Shop and are first stored in the Waste Storage Area in Maintenance Shop (SWMU #15), and then are transferred outside into drums and tote bins. The unit consists of a 400-gallon tote bin and several drums stored on the south side of the Maintenance Shop on a concrete pad. The tote bin is used for the temporary storage of used oil prior to off-site disposal. This unit is approximately 10 feet long and 6 feet wide. The cleaning chemicals are stored in closed drums which are on wooden pallets. The used oil is stored in open steel tote bins. A concrete pad underlies the unit.

Dates of Operation: This unit began operation in 1981 and is currently active (Ref. 48).

Wastes Managed: This unit manages used oils and cleaning chemicals (used paint solvent) (Ref. 35).

Release Controls: Drums and tote bins are stored outdoors adjacent to the Maintenance shop on a concrete pad. Drums are stored on wooden pallets.

History of Releases: No releases are known to have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.16.2 Release Potential

Soil/Groundwater: The potential for releases of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to unit's location on a concrete pad.

Surface Water: The potential for releases of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the unit's location on a concrete pad, far from surface waters.

Air: The potential for releases of hazardous waste or hazardous constituents to air, both past and ongoing, is low because the drums and tote bins are close-topped.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the unit's location on a concrete pad.

4.17 SWMU #17 - Tote Bins at Autoclave Units (Photo 17)

4.17.1 Information Summary

Unit Description: This unit is a waste storage area. This unit consists of several tote bins which are used to collect waste product, off specification raw materials and the beginning and end runs of the process at the autoclave units. The bins are located in a large, enclosed roofed metal building situated in the central portion of the facility. These bins do not have any specific location within the building. The building has a concrete floor with floor and trench process sewer drains surrounding the area. These sewer drains discharge to the on-site WWTF. Entrances/exits within the building are ramped to prevent runoff from process upsets, spillage, or leaks. Once the tote bins are filled with waste materials, they are closed and sent to Container Storage Outside Process Areas (SWMU #31) (Ref. 35).

Dates of Operation: This unit began operation in 1978 and is currently active (Ref. 35).

Wastes Managed: This unit manages wastes resulting from the processing (reacting) of raw materials such as nonyl phenol with ethylene oxide or propylene oxide. Most of the wastes and solvents derived from this process are recycled, however, small amounts of waste that are intended for discard are collected in tote bins (Ref. 35).

Release Controls: The unit is located on a concrete floor inside the building. The tote bins are closed. The building contains floor and trench process sewer drains. These sewer drains discharge to the on-site WWTF (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.17.2 Release Potential

Soil/Groundwater: The potential for releases of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low because the unit is located inside a building on a concrete floor.

Surface Water: The potential for releases of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low because the unit is located inside a building on a concrete floor.

Air: The potential for releases of hazardous waste or hazardous constituents to air, both past and ongoing, is low because the unit is located inside a building.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the unit's low release potential to soil and groundwater.

4.18 SWMU #18 - Tote Bins at Ester Kettle Unit 1B (Photo 18)

4.18.1 Information Summary

Unit Description: This unit is a waste storage area. This unit consists of several tote bins which are used to collect waste products and other production ends and bottoms resulting from processes conducted in the ester kettle unit 1B. This unit is located immediately north of the Tote Bins at Autoclave Units (SWMU #17). Once the tote bins are filled with waste materials, they are closed and taken from the area to the Container Storage Outside Process Areas (SWMU #31). The tote bins do not have any specific location in the building. The ester kettle consists of a reactor and tanks used for sulfonation and esterification. Feedstocks such as dodecylbenzylsulfonic acid, tall fatty acid, diethylene tetramine methanol, and aminoethyl ethanol amine are pumped into the reactor from either storage tanks or drums (Ref. 35).

Dates of Operation: The unit began operation in 1978 and is currently active (Ref. 35).

Wastes Managed: This unit manages process wastes generated during the esterification and sulfonation of unsaturated polyester resins (Ref. 35).

Release Controls: The unit is located inside a building with a concrete floor and raised concrete curbs. This area also has floor and trench process sewer drains which discharge to the on-site WWTF (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.18.2 Release Potential

Soil/Groundwater: The potential for releases of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low because the unit is located inside a building on a concrete floor with raised concrete curbs.

Surface Water: The potential for releases of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low because the unit is located inside a building, on a concrete floor with raised concrete curbs.

Air: The potential for releases of hazardous waste or hazardous constituents to air, both past and ongoing, is low because the unit is located inside a building.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due the unit's low release potential to soil and groundwater.

4.19 SWMU #19 - Waste Storage Area at Glass Lined Unit (Photo 19)

4.19.1 Information Summary

Unit Description: This unit is a waste storage area. This unit consists of several 5-gallon carboys which are used to collect waste product and other ends and bottoms resulting from processes conducted in the glass lined unit. The unit is located south of the Old Warehouse and north of the autoclave building. The unit is inside a building with a concrete floor. The area around the unit is surrounded by a raised concrete curb. Once the carboys are filled with waste materials, they are closed and taken from the area to tote bins in the Container Storage Outside Process Areas (SWMU #31) (Ref. 35).

Dates of Operation: This unit began operation in 1982 and is currently active (Ref. 35).

Wastes Managed: This unit manages process wastes resulting from reactions within the glass lined reactor (Ref. 35).

Release Controls: This unit is located inside a building with a concrete floor. A raised concrete curb surrounds the building.

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.19.2 Release Potential

Soil/Groundwater: The potential for releases of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low because the unit is located inside a building on a concrete floor with raised curbs.

Surface Water: The potential for releases of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low because the unit is located inside a building on a concrete floor with raised curbs.

Air: The potential for releases of hazardous waste or hazardous constituents to air, both past and ongoing, is low because the unit is located inside a building.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due the unit's low release potential to soil and groundwater.

4.20 SWMU #20 - Dumpsters at Glass Lined Unit (Photo 20)

4.20.1 Information Summary

Unit Description: This unit consists of several dumpster bins which are used to collect non-hazardous filter press cake from the glass lined unit. The unit is located south of the Old Warehouse and north of the autoclave building. The dumpsters are not located at any specific location in the building. The unit is inside a building with a concrete floor. The area around the unit is surrounded by a raised concrete curb. Once the dumpsters are filled with waste materials, they are taken from the area to the Dumpster for Filter Press Cake (SWMU #6) (Ref. 35).

Dates of Operation: This unit began operation in 1982 and is currently active (Ref. 35).

Wastes Managed: This unit manages filter press cake resulting from the glass lined unit (Ref. 35).

Release Controls: This unit is located inside a building with a concrete floor. A raised concrete curb surrounds the building (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.20.2 Release Potential

Soil/Groundwater: The potential for releases of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low because the unit is located inside a building on a concrete floor with raised curbs.

Surface Water: The potential for releases of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low because the unit is located inside a building on a concrete floor with raised curbs.

Air: The potential for releases of hazardous waste or hazardous constituents to air, both past and ongoing, is low because the unit is located inside a building.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due the unit's low release potential to soil and groundwater.

4.21 SWMU #21 - Tote Bins at Finished Compound Blending Unit (Photo 21)

4.21.1 Information Summary

Unit Description: This unit is a waste storage area. This unit is located south of the Old Warehouse and adjacent to the waste at the Glass Lined Unit (SWMU #19). This unit consists of several tote bins which are not located at any specific location in the building. The unit is inside a building with a concrete floor. The area around the unit is surrounded by a raised concrete curb. Once the tote bins are filled with waste materials, they are closed and taken from the area to the Container Storage Outside Process Areas (SWMU #31) (Ref. 35). The area has been engineered to drain to the WWTF. Product waste is stored in tote bins for later recycling (Ref. 35).

Dates of Operation: The blending unit was originally built in 1962 but was demolished in 1988. In 1988, a new unit was constructed on the same site and is currently active.

Wastes Managed: This unit manages process chemicals and product waste (Ref. 35).

Release Controls: The unit is inside a building with a concrete floor. Area drainage is to the WWTF (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.21.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the unit's design, and the unit's inside location.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the unit's design and location inside a building.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low because the unit is inside a building.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, based on the nature of the wastes managed, and location inside a building.

4.22 SWMU #22 - Metal Catch Trays at Tank Car Railside (Photo 22)

4.22.1 Information Summary

Unit Description: This unit is located in the western portion of the plant, north of Treatment Pits (SWMU #8) and east of the Tote Bins at Autoclaves Units (SWMU #16). The unit underlies a tank car unloading area with a metal roof covering the area. Metal catch trays are located between the rails and above the ties. Drips and spills from tank car loading/unloading are contained by the metal catch basins and are discharged to the WWTF. The metal trays were installed in 1989. Prior to 1989, the area was underlain by concrete, and prior to that, asphalt, and, the area drained to a sump (Ref. 35) which is no longer in operation.

Dates of Operation: This unit began operation in 1989 and is currently active (Ref. 35).

Wastes Managed: This unit manages drips and spills of raw products and materials from the tank car loading/unloading process (Ref. 35).

Release Controls: This unit is made of metal (Ref. 35).

History of Releases: During the VSI conducted on August 29, 1991, staining was observed around the unit on the concrete. During the VSI, one tank car was parked at the end of the track where there is no metal tray.

4.22.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is moderate due to the observed staining, and the nature of the wastes managed.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the in-ground location of the unit, and the fact that there is no adjacent surface water.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of wastes managed.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the waste managed and unit containment structures.

4.23 SWMU #23 - WWTF Sludge Hopper (Photos 23 and 23.1)

4.23.1 Information Summary

Unit Description: This above-ground unit is located north of the Treatment Pits (SWMU #8). The unit consists of an open topped 20 cubic yard metal dumpster resting on a concrete pad. The unit contains dried sludge generated by the Sludge Dewatering Belt Press (SWMU #9) machine. The sludge is temporarily stored here prior to off-site disposal. Prior to 1982, the dried sludge was stored in drums at Old Drum Storage Area at WWTF (SWMU #5).

Dates of Operation: This unit began operation in 1982 and is currently active.

Wastes Managed: This unit receives dried sludge produced by the Sludge Dewatering Belt Press (SWMU #9). The sludges have been classified non-hazardous by the TWC.

Release Controls: The unit rests on a concrete pad.

History of Releases: No known releases have occurred from this unit and no visual evidence of releases was noted during the VSI conducted on August 29, 1991.

4.23.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low because the unit is on a concrete pad

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low because the unit is on a concrete pad.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of the waste managed.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the location on a concrete pad and the nature of the wastes managed at the unit.

4.24 SWMU #24 - Old Bone Yard (Photo 24)

4.24.1 Information Summary

Unit Description: This unit no longer exists. It was located in the southern portion of the plant. It is now covered by the concrete slab used for the Drum Staging Area #2 (SWMU #27). The unit was a landfill used by the plant for disposal of non-hazardous trash, construction debris and crushed drums. The size of this unit is not known. The disposal of crushed drums was a one time event. The unit was closed and materials removed in 1980 (Ref. 35).

Dates of Operation: This unit began operation in the 1950s and was closed and removed in 1980 (Ref. 35).

Wastes Managed: This unit managed non-hazardous trash, debris, and crushed drums (Ref. 35).

Release Controls: This unit had no known release controls.

History of Releases: No known releases occurred from the unit. This unit has been covered by a concrete slab and thus this unit could not be observed during the VSI conducted on August 29, 1991.

4.24.2 Release Potential

Soil/Groundwater: The potential for a past release of hazardous waste or hazardous constituents to soil is high due to the nature of the unit. The potential for present release is low due to the removal of the unit.

The potential for release of hazardous waste or hazardous constituents to groundwater, both past and ongoing, is high because the unit did not have any release controls.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low the due to the nature of the unit when it was active, and due to the subsequent removal of the unit.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of wastes managed and the removal of the unit.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of wastes managed and the removal of the unit.

4.25 SWMU #25 - Drum Staging Area #1 (Photo 25)

4.25.1 Information Summary

Unit Description: This unit is an outdoor open area along the east fence line in the northeastern portion of the property northeast of the Treatment Pits (SWMU #8). 55-gallon drums containing non-hazardous wastes are stored at this unit for less than two weeks. These drums are stored on pallets or individually on a concrete floor prior to off-site disposal. The unit is approximately 20 feet by 50 feet (Ref. 35).

Dates of Operation: This unit began operation in 1988 and is currently active.

Wastes Managed: This unit acts as a temporary storage area for 55-gallon drums containing non-hazardous wastes (Ref. 35).

Release Controls: The unit is located on a concrete pad (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.25.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the unit's location on a concrete pad.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the unit's location on a concrete pad.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of the waste managed.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the wastes managed.

4.26 SWMU #26 - Drum Storage Area (Photo 26)

4.26.1 Information Summary

Unit Description: This unit is an outdoor concrete floored drum storage area located south of the plant office and north of the Supply Building. This above-ground unit is approximately 80 feet long and 65 feet wide. This area is use as a temporary storage area for 55-gallon drums containing products, lab waste, and recyclable materials. This unit is located on a concrete pad with a concrete berm. The drums are closed and stored on pallets (Ref. 35).

Dates of Operation: This unit began operation in 1978 and is currently active (Ref. 35).

Wastes Managed: This area is used as a temporary storage area for 55-gallon drums containing products, lab waste, and recyclable materials (Ref. 35).

Release Controls: This unit is located on a concrete pad with a concrete berm. Drainage is to the stormwater system. (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.26.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the unit's location on a concrete pad.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the unit's location on a bermed concrete pad.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of the waste managed.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the wastes managed.

4.27 SWMU #27 - Drum Staging Area #2 (Photo 27 and 27.1)

4.27.1 Information Summary

Unit Description: This unit is located in the southern portion of the plant, west of the Treatment Pits (SWMU #8). The unit consists of an outdoor concrete pad used as a drum and tote bin staging area. It is approximately 200 feet long and 135 feet wide. The unit is used for the temporary storage of non-hazardous sludges and hazardous liquids generated from the process units in 55-gallon drums and 400-gallon (closed) tote bins prior to off-site disposal. The drums are stored on wooden pallets. The concrete pad was constructed at the location of the Old Bone Yard (SWMU #24) (Ref. 35).

Dates of Operation: This unit began operation in 1978 and is currently active (Ref. 35).

Wastes Managed: The unit is used for the temporary storage of nonhazardous sludges and liquids in 55-gallon drums and 400-gallon closed tote bins (Ref. 35).

Release Controls: The unit is located on a concrete pad (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.27.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the unit's location on a concrete pad.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the unit's location on a concrete pad.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of the waste managed.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the wastes managed.

4.28 SWMU #28 - Sewer Effluent Sump (Photo 28)

4.28.1 Information Summary

Unit Description: This unit is located in the northeast corner of the plant, northeast of the Security Office and the New Warehouse. The unit is a concrete lined sump approximately four feet across with an open metal top. A pump is situated on the metal cover. This unit receives treated wastewater from the Sewer Effluent Sump at Treatment Pits (SWMU #29). The sump discharges pretreated effluent to the City of Houston POTW (Ref. 35).

Dates of Operation: This unit began operation in approximately the 1950s and is currently active (Ref. 35).

Wastes Managed: This unit manages treated effluent (Ref. 35).

Release Controls: The unit is a sump constructed of concrete (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991. However, the integrity of the unit could not be ascertained during the VSI conducted on August 29, 1991, due to the presence of liquids (Ref. 35). Due to the nature of the materials managed, the unit integrity is believed to be intact, but this could not be confirmed.

4.28.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is expected to be low, due to the construction of the unit, but this could not be confirmed.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the below ground location of the unit and the nature of the waste managed.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the nature of the waste managed.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the nature of the waste managed at the unit.

4.29 SWMU #29 Sewer Effluent Sump at Treatment Pits (Photo 29)

4.29.1 Information Summary

Unit Description: This unit is located at the northeast corner of the Treatment Pits (SWMU #8). This unit receives treated wastewater from the Treatment Pits and discharges it to the Sewer Effluent Sump (SWMU #28). This sump is a below grade concrete sump (Ref. 35).

Dates of Operation: This unit began operation in 1950s and is currently active (Ref. 35).

Wastes Managed: This unit manages wastewater treated at the Treatment Pits (SWMU #8) (Ref. 35).

Release Controls: This unit is a concrete sump (Ref. 35).

History of Releases: One known release occurred from this unit on September 21, 1990 from a stuck float valve. No visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991. The integrity of the unit could not be ascertained during the VSI conducted on August 29, 1991 due to the presence of liquids (Ref. 35). Due to the nature of the materials managed, the unit integrity is expected to be intact, but this could not be confirmed.

4.29.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is moderate due to the nature of the materials managed, and due to the fact that a release was observed to occur in this area.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the below ground location of the unit and the nature of the waste managed.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low due to the unit's design and the nature of the waste management operations at the unit.

Subsurface Gas: There is no potential for the generation of subsurface gas, both past and ongoing, due to the unit's low the nature of the waste managed and the unit's design.

4.30 SWMU #30 - Container Storage Outside Laboratory (Photo 30)

4.30.1 Information Summary

Unit Description: This unit is a loading dock used for drum storage. This area is located outside the plant QA/QC laboratory which is located in the Plant Office area. The Plant Office area is located in the eastern portion of the facility, west of the Drum Storage Area (SWMU #26). This above-ground unit is approximately 10 feet long and 8 feet wide. This unit is located on a concrete floor. The drums are closed and stored on pallets. This unit stores chemicals and laboratory supplies for conducting QA/QC testing of the various processes located at the facility. Small amounts of wastes are generated during these tests. Wastes are stored in the Waste Storage Area in Laboratory (SWMU #14) and are periodically transferred to the unit. From this unit, the wastes are transferred to the Drum Storage Area (SWMU #26). This area is used as a temporary storage area for 55-gallon drums containing products, lab waste, and recyclable materials (Ref. 35).

Dates of Operation: This unit began operation in 1962 and is currently active (Ref. 35).

Wastes Managed: This unit stores chemicals and laboratory supplies for conducting QA/QC testing of the various processes located at the facility. Small amounts of wastes are generated during these tests (Ref. 35).

Release Controls: This unit is located on a concrete floor (Ref. 35).

History of Releases: No known releases have occurred from this unit and no visual evidence of releases from the unit was noted during the VSI conducted on August 29, 1991.

4.30.2 Release Potential

Soil/Groundwater: The potential for release of hazardous waste or hazardous constituents to soil and groundwater, both past and ongoing, is low due to the unit's location on a concrete floor.

Surface Water: The potential for release of hazardous waste or hazardous constituents to surface water, both past and ongoing, is low due to the unit's location on a concrete floor.

Air: The potential for release of hazardous waste or hazardous constituents to air, both past and ongoing, is low because the drums are closed.