

Sunflower Open Sites as of March 2026:

SWMU 4: Pond A and Sludge Disposal Area

This site comprises three acres in the north central portion of the installation. This area was used for the sedimentation of solids and equalization of wastewater from the nitrocellulose (NC) production area prior to lime treatment and subsequent discharge to Pond B (SWMU 6). Pond A was constructed in 1942 with a surface area of 86,200 square feet, and received wastewater from NC production during 1943-1946, 1951-1960, and 1965-1971. In addition, Pond A received waste from many other areas of Sunflower AAP, including the NQ Pilot Plant from 1980-1984. The pond now functions as part of the natural drainage system receiving storm sewer outfall from various parts of Sunflower AAP, including drainage from the industrial wastewater treatment facility area. Pond A receives storm water runoff from the Nitrocellulose (NC) Ditches (SWMU 25) and shares a geographical boundary with the Acid Sewage Disposal Plant (SWMU 5). All underground piping that is associated with the Acid Sewage Disposal Plant will be handled under SWMU 5. A supplemental RCRA Facility Investigation (RFI)/Corrective Measures Study (CMS) was completed in 2024, and remediation will consist of excavation with off-site disposal. Groundwater is being addressed under Groundwater Operable Unit No. 2.

SWMU 5: Acid Sewage Disposal Plant

This site comprises one acre in the north central portion of the installation. This area was used to treat the acidic wastewater flowing into Pond A from the NC Production Area and had three periods of operation- 1943-1946, 1951-1960, and 1965- 1971. The water from Pond A was diverted into the neutralization unit and pH was adjusted by adding burned lime slurry. The neutralized water and unsettled flocculent were then discharged from the unit into an underground drainage pipe which emptied into a tributary ditch to Pond B (SWMU 6). The underground piping and the initial portion of the connecting ditch to Pond B will be remediated under this site. A supplemental RCRA Facility Investigation (RFI)/Corrective Measures Study (CMS) was completed in 2024, and remediation will consist of excavation with off-site disposal. Groundwater is being addressed under Groundwater Operable Unit No. 2.

SWMU 6: Pond B and Sludge Disposal Area

This site comprises 38 acres in the east central portion of the installation. Pond B is an unlined impoundment situated upon limestone bedrock with a surface area of nine acres and a capacity of 16.5 million gallons. This area was used for sedimentation of solids from the neutralized wastewater discharged from the Acid Sewage Disposal Plant (SWMU 5). Unknown quantities of sludge were occasionally dredged from Pond B and were deposited in a series of small dewatering basins west of the pond. Pond B discharges into Kill Creek. A supplemental RCRA Facility Investigation (RFI)/Corrective Measures Study (CMS) was completed in 2024, and remediation will consist of excavation with off-site disposal. Groundwater is being addressed under Groundwater Operable Unit No. 2.

SWMU 12 – Pyotts Pond & Sludge Disposal Area

This site comprises 12 acres in the east central portion of the installation. This area was used as an acidic water retention basin to regulate the pH prior to discharge off-post. Pyott's Pond is an unlined, earthen impoundment with a surface area of 1.7 acres and a capacity of 5.2 million gallons. The pond was

constructed in 1968 to aide in pollution control. The pond received drainage from the South Acid Area, the Paste Mix Area, the NC Area, the Solvent Area, and the Nitroglycerin (NG) Area. Neutralization of water entering the pond resulted in an accumulation of calcium sulfate sludge, which was periodically dredged and landfilled adjacent to the pond to the north. Effluent from the pond drains northeast to Kill Creek and was monitored by National Pollutant Discharge Elimination System (NPDES) permitted Outfall 004. The May 1999 RFI results indicated elevated levels of mercury and nitroguanidine (NQ) in the surface water. Groundwater contained NQ and sediments contained elevated levels of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and NC. A supplemental RCRA Facility Investigation (RFI)/Corrective Measures Study (CMS) was completed in 2024. Ammonia in sediment occurs at levels that do not pose a human health risk and thus will not be removed. No groundwater contamination was found but groundwater will be addressed under Groundwater Operable Unit No. 2

SWMU 17 – G-Line Area Ditches

This site comprises 284 acres in the south-central portion of the installation. This area was used for production of multi-base solvent propellant. G-Line operated from 1943-1948 and 1953-1960. The G-Line area is situated close to the basin divide between westward flow to Captain Creek and eastward flow to Spoon and Kill Creeks. Consequently, it is possible for contamination to migrate in either direction depending on the location of the source of contamination in the G-Line area. In ICM was completed for the MEC foundations and sewers in 2022. An RFI/CMS was completed in 2025. Excavation of contaminated soil with off-site disposal is currently underway. Any groundwater contamination will be addressed under Groundwater Operable Unit No. 3

SWMU 18 – Old/New Sanitary Landfill

This site comprises 50 acres in the west central portion of the installation. This area was used for disposal of solid waste. The landfills employed a trench-type operation. Several types of landfills are included in this area- the sanitary landfill (31 acres); the asbestos landfill (one acre) and the ash landfill (19 acres, SWMU 19-2). This landfill area began operation in 1943. Prior to the designation of the New Sanitary Landfill in 1967, refuse of all types was buried at a site just south of the new landfill. No records from the Old Landfill were available. There is no record of hazardous waste being placed in either landfill. The 1997 RFI report states that the primary concerns at SWMU 18 and 19 are the constituents detected in groundwater (sulfide; cis-1,3-dichloropropene; and ammonia nitrogen) and dioxins/furans in the shallow soil. Institutional controls were implemented (fencing) to control site access. An Interim Corrective Measure (ICM) for eroded areas was completed in September 2003. Shallow groundwater flowing through a sand lens within the site complicates the final corrective measures. The RFI/CMS for soils and groundwater has been completed. A Corrective Measures Implementation (CMI) to include an approved landfill cap was completed in 2023. This site is currently in a Long-Term Management program which requires inspection/maintenance of the cap and groundwater monitoring for possibly the next 30 years.

SWMU 19 – Ash Landfill

This site is made up of two areas, identified as 19-1 and 19-2. These areas were used for the disposal of fly ash and coal fines. SWMU 19-1 occurs in the central part of the installation and 19-2 occurs adjacent to SWMU 18 on the west central side of the property. An RFI was completed in 2006, and a CMS was completed in FY2020. At SWMU 19-1, in the central portion of the installation, excavation and disposal of approximately 16,893 tons of contaminated soil was completed in 2022 and the area has been

restored. A No Further Corrective Action Planned (NFCAP) request was prepared for this site and sent to KDHE. At SWMU 19-2 a predesign investigation occurred in 2022 and completed the delineation of 18 and 19-2. This area received a landfill cap consisting of low permeable clay and topsoil. This site is currently in a Long-Term Management program which requires inspection/maintenance of the cap and groundwater monitoring for possibly the next 30 years.

SWMU 24 – Nitroglycerine and Paste Mix Area

This site comprises 149 acres in the central portion of the installation. It had three periods of operation- 1943-1946, 1951-1960, and 1965-1971. The area was used to produce nitroglycerine and mix pastes for double-base solventless propellant and triple-base solvent propellant. The Contaminants of Concern (COC) are explosives, metals, nitrate/nitrite, PAHs, and SVOCs in the soil, sediment, surface water, and groundwater. An explosive safety assessment conducted in 2004 indicated that the standard investigation and cleanup methods are safe from explosive hazards. An ICM to remediate the Munitions and Explosives of Concern (MEC) foundations, sewers and the contaminated rind soil around them was completed in 2022. A RFI/CMS was completed in 2026. A corrective measure to excavate contaminated soils is underway. Excavated soils will be disposed of off-site. Groundwater contamination will be addressed under Groundwater Operable Unit No. 2

SWMU 45 – Building 9040 & Calcium Cyanamide Conveyors (Bins)

This site comprises two acres in the northwest portion of the installation. This area was used for moving and storing calcium cyanamide, and production of Guanidine Nitrate (GN). Calcium cyanamide was produced in Building 9004 and transferred via belt conveyor to Building 9040. The conveyor led to storage bins located on the east side of Building 9040. Spills were reported during operations. During the ICM to remove the MEC foundations in AOC 17, ammonia/nitrate contaminated soil was found around and under building 9040. This area was remediated in 2025 under the AOC-17/SWMU 47 corrective measure work plan. An RFI/CMS was completed in 2025. Groundwater contamination will be addressed under Groundwater Operable Unit No. 1

SWMU 47 – Nitroguanidine Area Sumps (25)

This site consists of 25 sumps that occupy multiple acres in the northwest portion of the installation and occur completely inside of the AOC 17 boundary. These sumps were used to collect wastewater from each of the NQ Production Area buildings/tanks. Production at the site occurred between 1981 and 1992. Each of the production buildings had dedicated sumps outside the buildings which received wastewater generated by operations in the NQ Area. The wastewater resulted from equipment wash downs and spills. The COC's are explosives, metals, nitrate/nitrite, sulfate and SVOC-PAHs in the soil and groundwater. An updated RFI/CMS for AOC 17/SWMU 45 & 47 was completed in 2025. Sumps on the east half of this area were excavated in 2025 under the AOC-17/SWMU 45 & 47 corrective measure work plan. A CMI to remove the remaining sumps on the west side of AOC 17 and a contaminated area of drainage soils is planned for FY27. Groundwater contamination will be addressed under Groundwater Operable Unit No. 1.

SWMU 58 – Combined Shops Area

This site comprises 55 acres in the north central portion of the installation that was used for maintenance activities and repairs. There is a total of 30 facilities in the area, including offices, a fuel unloading station, storage and distribution center, storehouses, and shops. The COCs are metals and PAHs in the soil. An RFI/CMS was completed in 2024. A CMI to excavate and remove contaminated soil

was completed in 2025. Any groundwater contamination will be addressed under Groundwater Operable Unit No. 2.

SWMU 66 – Stream Study

This site comprises 8.6 miles of streams across the installation. This site is designated for sampling the installation wide surface waters and sediment of Captain Creek, Hanson Creek, Kill Creek, and Spoon Creek which were used for disposal of wastewater created during installation operation activities. The COCs are dioxins/dibenzofurans, explosives, metals, pesticides, SVOC and VOCs in the sediment and surface water. An initial RFI was completed in 2005. KDHE comments indicated that there is significant potential that contaminated sediment will be transported into stream areas. Since then, corrective measures have been implemented at a significant number of sites throughout the property. Another RFI was completed in 2025 to determine whether surface water or sediment were still impacted. Results showed that surface water and sediment were no longer impacted, and no further action was recommended. An NFCAP request will not be completed until all sites on the property have been remediated. There is no groundwater associated with this site.

AOC 13 – General Warehouses (8037 Series)

This site comprises 15 acres in the east central portion of the installation and includes eight warehouse buildings. These buildings were used for storing plant parts, an assortment of supplies, process equipment taken out of commission for reuse or disposal, unused packing drums for NQ, and unused packing containers for 2.75-inch rocket grains. The warehouses still contain an estimated 700,000 of the 2.75-inch rocket grain packing containers. The COCs were metals and PAHs in the soil. A 2004 RFI found soil exceedances for COCs; these sample locations were excavated in 2005. An NFCAP request was denied by KDHE in 2008 due to the 700,000 rocket grain packing containers, which KDHE said must be disposed before they will approve NFCAP. Additional investigation and remediation on this site began in 2025 by the landowner. Once this site is remediated, closure documentation will be submitted when the rocket grain packing containers are removed and disposed of properly.

AOC 16 – Nitrocellulose Production Lines

This site comprises 107 acres in the north central portion of the installation that was used to produce nitrocellulose. Nitrocellulose was produced at the site during the periods of 1943-1946, 1951-1960, and 1965-1971. Each of the four production lines contained 10 or more buildings.; most were intentionally burned down and all that remained were suspect explosively contaminated concrete foundations and underground sewers. The COCs are explosives, and metals in the soil. In 2016 -2023 an ICM was conducted to excavate the MEC foundation slabs and sewers in this area as well as the environmentally contaminated soil associated with them. An RFI/CMS was completed in 2025. Remediation of the site is currently underway and expected to be completed in 2026. Groundwater will be handled under Operable Unit 2.

AOC 17 – Nitroguanidine Production Buildings

This site comprises 139 acres located in the northwest portion of the installation that was used for producing Nitroguanidine (NQ). The site includes all buildings which have been identified as being potentially contaminated with explosives located in the NQ Production Area. The COCs are explosives and metals in the soil. An ICM to remove the MEC foundations and sewers and the contaminated soil

associated with them was completed in 2023. An RFI/CMS to look for any remaining contamination in the area was completed in 2025. An Interim Corrective Measure to remove sumps on the east half of this area was also completed in 2025. A CMI to remove the remaining sumps on the west half of this area and to excavate an area of contaminated drainage soil is expected to be started in 2027. Groundwater will be handled under Operable Unit 1.

GWOU 1,2,3,4 & 5- Groundwater Operable Units 1 through 5

Five Groundwater Operable Units (GWOU) have been identified within the former installation boundary. To date, environmental investigations have been completed to determine the presence or absence of chemical contamination in soils, surface water, sediment, and groundwater at numerous SFAAP sites. However, since groundwater was generally addressed under site-specific investigations, further investigation was needed to address data gaps that existed across the facility. An updated groundwater Conceptual Site Model (CSM) also needed to be prepared.

An updated CSM and investigation for GWOU's 1, 2 & 3 were completed in 2024. Additional investigations occurred in 2025 & 2026 to fill in data gaps in all 5 GWOU's. All field work is complete. Data Summary Reports (DSR) have been completed for GWOU 3, 4, & 5 and No Further Corrective Action Planned requests are in preparation for these three areas. Once the remaining DSR's are completed it will determine future actions for these sites.