Summary of the US EPA Region 9 Superfund Division Initial Review of Ocean Disposal of Waste Acid from Montrose Chemical Corporation

Prepared by the United States Environmental Protection Agency, Region 9, Superfund and Emergency Management Division (May 2021).

Summary and Background

There are fourteen documented deep-water ocean disposal sites off the Southern California coast. These ocean disposal sites received chemical, refinery and other wastes from many sources between the 1930's and the 1960's. *See* SCCWRP Technical Report 010, *The Ecology of the Southern California Bight: Implications for Water Quality Management*, page 107 (March 1973).

In the 1980's and 1990's, State and Federal agencies examined the disposal of acid waste containing DDT (that originated from Montrose Chemical Corporation of California) at ocean disposal sites near Santa Catalina Island. *See, e.g.*, Chartrand, A., et al., California Regional Water Quality Control Board – Los Angeles Region, *Ocean Dumping Under Regional Water Quality Control Board Permit: A Review of Past Practices, Potential Adverse Impacts, And Recommendations for Future Action*, (March 1985).

In April 2021, the US EPA Region 9 Superfund Division (EPA) began an initial review of the available historical record of disposal of acid waste containing DDT to add to our understanding of conditions at Ocean Disposal Site #2 (located northeast of Santa Catalina Island).

EPA's initial review indicates:

- DDT production operations at the Montrose Chemical Corporation of California plant ("Montrose DDT Production Plant") generated waste acid that contained DDT.
- Waste acid generated at the Montrose DDT Production Plant was stored in tanks.
- Montrose contracted with California Salvage Company ("California Salvage") for the transportation and ocean disposal of waste acid from the late 1940's until the early 1960's.
- California Salvage transported waste acid from the Montrose DDT Production Plant to the Port of Los Angeles in tanker trucks and pumped the waste acid into holding tank(s) on a barge.
- These barges were towed to an ocean disposal site off the Southern California coast and the contents of the holding tanks on the barge were released directly into the ocean.

Discussion

EPA's initial review of the historical record of disposal of acid waste containing DDT focused on the operational history at the Montrose DDT Production Plant which is a part of the land-based Montrose Chemical Superfund National Priorities List Site. EPA completed a Remedial Investigation in 1998 which contains a detailed operational history of the DDT production and formulation at the Montrose DDT Production Plant that was located at 20201 Normandie

Avenue, Torrance, Los Angeles County, California. *See* U.S. EPA, Region IX, *Final Remedial Investigation Report for the Montrose Superfund Site, Los Angeles, California*, (May 18,1998).

The 1998 Remedial Investigation Report summarizes EPA's investigation of operations at the Montrose DDT Production Plant, including the generation and on-property management of waste acid resulting from the production of technical grade DDT (i.e., DDT "close to pure, not intentionally diluted or mixed") (Id. pp. 33-40 and pp. 49-50). The 1998 Report contains the following summary of Montrose's management of waste acid:

> *While Montrose would recycle and reuse the acid when possible, after a while acid could no longer be fortified cost-effectively. Thus, throughout plant history, the Montrose operations routinely generated waste acid (Figures I.SA and 1.8B show these waste acid streams and some of their disposal locations.) This acid contained a certain amount of DDT. (Id. at 50).*

This section of the 1998 Report continues:

> *After 1953, when the separation step was first accomplished by "oliver" filter, melter, and static separators (see Separation in section on Technical Grade DDT Manufacturing Process, above), but before 1960 when the acid recovery plant was built, acid was filtered from the acid/DDT slurry and returned to the spent acid holding tank for reuse in the manufacturing process. Acid from the static acid separator was held temporarily in storage tanks and either sold, fortified and reused, or shipped to approved ocean disposal areas by California Salvage Company (see section on Waste Products above). (Id.).*

Montrose Chemical Corporation of California ("Montrose") arranged for the disposal of acid waste containing DDT at several of these ocean disposal sites from the late 1940's and until the early 1960's.

EPA's initial review included looking at depositions of engineers and managers employed by Montrose Chemical. These depositions were taken as part of the United States v. Montrose litigation.

These former Montrose employees describe a process where, beginning around 1948, Montrose would contract with California Salvage to bring a tanker truck to the Torrance facility, which would pump about 3,000 gallons of spent filtrate acid (aka, oleum, or "SOO") sludge per trip from the facility's waste storage tank into the tanker truck. This acid waste contained some DDT. California Salvage would then drive the trucks to the harbor and unload the waste onto a barge. The barges would be towed to an "approved" location offshore and dispose of the acid waste directly into the ocean waters. This process continued until the early 1960's, at which point depositions indicate that Montrose built an acid recovery plant at the Torrance facility, and the company appears to have stopped using a contractor to arrange for the ocean dumping of Montrose's waste acid from its DDT Plant.