



**LITERATURE SEARCH
FOR THE
MALTA ROCKET FUEL AREA
SUPERFUND SITE
TOWNS OF MALTA AND STILLWATER
SARATOGA COUNTY, NEW YORK**

Volume I

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9.0 INVENTORY OF UNDERGROUND AND ABOVEGROUND STORAGE TANKS

9.1 TANK INVENTORY REQUIREMENTS

This inventory of underground and aboveground storage tanks was prepared in accordance with Sections 4.28 (Investigation of Underground Storage Tanks) and 4.29 (Investigation of Aboveground Storage Tanks) of the RI work plan, which required the following:

- a. Compile an inventory of all underground and aboveground storage tanks and information regarding past use. Tank locations and piping systems are required to be mapped (if possible).
- b. Determine the nature and volume of the tank contents, including tanks that contained petroleum products or pressurized gases.
- c. Inspect the area in the vicinity of each tank for stained surficial soil and map the location of the stained soil, if present.
- d. Submit a proposal to EPA identifying the tanks that are recommended for further investigation, and those for which no further investigation is recommended.

If based on their investigations, the PRPs believe that any underground or aboveground tanks could not serve as potential sources of contamination, the PRPs are required to propose to EPA that these tanks need not be investigated further. The criteria for this decision is whether or not the tanks contained petroleum hydrocarbon products or pressurized gases. If EPA determines that additional investigation is warranted, the PRPs are required to propose methods for further investigation as required by EPA.

To complete the inventory, Geraghty & Miller conducted the investigation by first reviewing all pertinent documents and maps. Prior inventories of these tanks are shown on a 1952 map of the site (Figure 2 in RI Work Plan), which has been reproduced as Figure 10 of this report, and also on the 1959 site utility maps (Figures 3 and 4). Two site visits were conducted (on May 3 and August 29, 1991) to verify the presence of these tanks by searching for fill pipes and pipe connections to buildings or furnaces, and to inspect the site for stained surficial soil. Additional information on the tank locations or former locations was provided by past and present Wright-Malta employees, past and present NYSERDA employees, and current tenants at the former GE/Exxon building and at MTI. Wright-Malta personnel accompanied Geraghty & Miller during each of our visits to provide information and answer questions at each building or tank location as it was inspected.

9.2 TANK INVENTORY RESULTS

A total of 43 underground and 35 aboveground storage tanks were used throughout the site, and each tank is listed on Table 9 and shown on Figures 7 and 8. The information in Table 9 for the number of tanks, the type of tanks, the size of the tanks, and their contents was obtained from the 1952 and 1959 maps, site visits, and from the tank owners or from the tenants that use the tanks. After comparing the 1952 map of the site with the 1959 site utility maps, some inconsistencies were noted. In general the 1959 maps include updated conditions since 1952. However, Wright-Malta personnel believe that some errors or inconsistencies appear on the 1959 maps (73). For example, the 1952 map shows three 10,000-gallon underground fuel oil storage tanks south of Building 15, and the 1959 utility map shows four 10,500-gallon tanks. Wright-Malta personnel believe only three 10,000-gallon tanks were ever located in this area. Other inconsistencies that were not resolved are (1) a 10,000-gallon fuel oil tank at Building 13 (1952 map) where the 1959 map shows a 4,000 gallon fuel oil tank; (2) a 1,000-gallon fuel oil tank at Building 16 (1952 map) where the 1959 map shows a 2,000 gallon fuel oil tank; (3) a 5,000-gallon fuel oil tank at Building 21 (1952 map) where the 1959 map shows a 2,000-gallon fuel oil tank; and (4) one 3,000-

gallon alcohol tank at Building 28 (1952 map) where the 1959 map shows three 3,000-gallon alcohol tanks.

Many underground storage tanks were reportedly removed by GE in 1961, but none of them were known to be leaking according to Interviewee P(78). However, Interviewee S initially reported a 10,000 No. 2 fuel oil tank near Building 30 was replaced in the 1960's because it was leaking. During a subsequent phone conversation, Interviewee S stated that only a leaking line was replaced and not the tank.

In April 1991, Wright-Malta removed five tanks in Area A and near Building 15. The tanks had been installed in 1945 or 1946 and had been empty for approximately 20 years. Geraghty & Miller personnel conducted a site visit in May 1991 to inspect the tanks and piping that had been removed during excavation activities. Site maps and field inspections indicated that these tanks had been used solely for hydrocarbon storage. Piping from the tanks was either hooked to a furnace or a pump, or formerly hooked to a pump as evidenced from the piping that was removed. No holes were observed in any of the tanks or piping, and any evidence of surficial rusting and pitting was minor. Evidence of contaminated soil was not observed by Geraghty & Miller (64). The Geraghty & Miller report on the investigation of the tank removal, which was submitted to EPA and NYSDEC in May 1991, is incorporated as part of this inventory by reference.

In December 1990, NYSERDA removed five tanks from the vicinity of Building 17, 20, and 25 (138). In addition, a 550-gallon underground gasoline storage tank is shown on the 1952 site map near Building 20, and another 550-gallon underground gasoline storage tank is shown near Building 25 on the same map. NYSERDA attempted to remove these tanks; however, neither tank was present. An MTI employee vaguely recalled removing the tank near Building 20, according to the NYSERDA report (138). During the investigation at Building 25, an underground pipe leading into the building was found to be cut off which suggests the tank had been removed. The five tanks that were located and removed were found to be petroleum storage tanks, and each tank was also formerly hooked to a furnace

or pump, as evidenced from the piping that was removed (Table 9). No holes were observed in the tanks and there was no evidence of soil contamination. NYSERDA received a Notice of Substantial Compliance from the NYSDEC. A report for the tank removal program was also submitted to EPA and NYSDEC in May 1991, and the PRPs recommended that the tanks removed in 1990 and 1991 be excluded from further RI work (138). This document is incorporated as part of the inventory by reference.

Geraghty & Miller compiled an inventory of all past and present underground and aboveground storage tanks during site visits on May 3 and August 29, 1991. Wright-Malta personnel accompanied Geraghty & Miller personnel during the site visits. Storage tanks and pressurized gas tanks shown on the 1952 and 1959 maps, and any other tanks identified, were inventoried to determine their location, number of tanks, tank construction material, tank size, contents, and status (Table 9). Each building was inventoried to determine whether new tanks had been installed, and whether furnaces exist or had existed. Tank sizes were estimated if not known and the information on the site maps was field checked. Additional information was acquired from building plans. Locations that were not field checked nor addressed by the NYSERDA or Wright-Malta tank removal reports are listed below.

- Building 16 - This building was a one-man guard house with a small furnace. The building, furnace, and tank were removed sometime in the past; therefore, there was no structure or tank to inspect.
- Building 17 - Access to the building interior was not available at the time of the Geraghty & Miller site visits, but the tank location was inspected. The information on Table 9 was supplemented with data from the NYSERDA tank report (138). In November 1991, a new fuel oil AST was installed and hooked to a new heater inside the building, which is currently being used by ERM for the RI field office.

- Building 20 - Access to the building interior was not available at the time of our site visits; however, tank locations were inspected. The information on Table 9 was supplemented with data from the NYSERDA tank report (138).
- Building 21 - Information for three of the five tanks near this building was obtained from Wright-Malta personnel after our site inspection was completed.
- Building 24 - This building was completely renovated, and, therefore, former locations for the fuel oil tank, furnace, and the rocket fuel tank could not be inspected.

Several previously unidentified tanks were discovered during the literature search review and these tanks were included in the inventory presented in Table 9 under the section describing the tanks found during the 1991 literature search. The tank locations are shown on Figure 7. The past and present use of each identified tank was described by NYSERDA for Buildings 17, 20, and GE-Exxon nuclear building, and by Wright-Malta for the remainder of the tanks. The status of each tank is described including whether the tank is present or whether it has been removed, whether it is in use or empty, and whether it is hooked up to a pump or a furnace, or if it had been hooked up in the past (e.g., pipes formerly used to connect a furnace to a fuel oil storage tank).

Maps of tank piping systems were not provided because none were found for either former or existing tanks. No aboveground piping systems associated with USTs or ASTs, with the exception of fill pipe and vent pipes, were visible during the field visits.

Each former and existing tank area was inspected for stained soil with the exception of portions of the Building 30 area, which was heavily overgrown with vegetation. The only location where stained surficial soil was observed was at Building 25, near the location of a

former underground gasoline tank and a former fuel oil storage tank, which were both removed by NYSERDA in December 1990. This stained area is approximately 10 foot by 10 foot in size, and is shown on Figure D-4.

Table 9. Inventory of Underground and Aboveground Storage Tanks at the Malta Rocket Fuel Area Superfund Site,
Towns of Malta and Stillwater, Saratoga County, New York.

Location	Number	Type	Size	Contents	Status	Sources for Status Information
Tanks Present on 1952 Location Map (Figure 10) and 1959 Utility Maps (Figures 3 & 4)*						
Building 3	1	Steel AST	500,000 cu.ft.	Liquid Oxygen	Removed (no date)	1,2
Building 3	1	Steel AST	600,000 cu.ft.	Liquid Oxygen	Removed (no date)	1,2
Building 3	1	Steel AST	3,000 gallon	Alcohol	Removed (no date)	1,2
Building 3	1	Steel AST	3,000 gallon	Gasoline	Removed (no date), Formerly Hooked to Pump, Pump Removed	1,2
Building 5	1	Steel UST	550 gallon	No. 2 Fuel Oil	Present & Empty, Formerly Hooked to Furnace, Furnace Removed	1,2
Building 5	Unknown	Gas Bottles	Unknown	Gas Bottles	Removed (no date)	1,2
Building 6A	1	Steel UST	550 gallon	No. 2 Fuel Oil	Present & Empty, Formerly Hooked to Furnace, Furnace Removed	1,2
Building 7	1	Steel UST	3,000 gallon	No. 2 Fuel Oil	Present & Empty, Hooked to Furnace	1,2
Building 7	1	Steel UST	550 gallon	No. 2 Fuel Oil	Present & Empty, Hooked to Furnace	1,2
Building 7	1	Steel AST	300,000 cu.ft.	Compressed Air	In Use	1,2
Building 7	1	Steel AST	300,000 cu.ft.	Nitrogen	Removed (no date)	1,2
Building 10	1	Steel AST	3,000 gallon	Diesel Fuel	In Use	1,2
Building 10	1	Steel UST	550 gallon	Diesel Fuel	In Use, Hooked to Pump	1,2
Building 10	1	Steel AST	275 gallon	No. 2 Fuel Oil	Removed (no date), Hooked to Furnace	1,2
Building 11	1	Steel UST	3,000 gallon	No. 2 Fuel Oil	In Use, Hooked to Furnace	1,2
Building 11C	1	Steel UST	550 gallon	No. 2 Fuel Oil	In Use, Hooked to Furnace	1,2
Building 13	1	Steel UST	10,000 gallon	No. 2 Fuel Oil	In Use, Hooked to Furnace	1,2
Building 13	1	Steel UST	1,000 gallon	No. 2 Fuel Oil	Present & Empty, Hooked to Furnace	1
Building 14	1	Steel UST	4,000 gallon	No. 2 Fuel Oil	In Use, Hooked to Furnace	1,2
Building 15	1	Steel UST	3,000 gallon	Gasoline	Removed 4/91, Formerly Hooked to Pump, Pump Removed	1,3
Building 15	3	Steel UST	10,000 gallon	No. 2 Fuel Oil	In Use, Hooked to Pump	1,2
Building 15	1	Steel UST	550 gallon	Gasoline	Removed 4/91, Formerly Hooked to Pump, Pump Removed	1,3
Building 15	1	Steel UST	550 gallon	No. 2 Fuel Oil	Removed 4/91, Formerly Hooked to Furnace, Furnace Present	1,3
Building 16	1	Steel UST	1,000 gallon	No. 2 Fuel Oil	Removed (no date), Formerly Hooked to Furnace, Furnace Removed	1
Building 17	1	Steel UST	550 gallon	No. 2 Fuel Oil	Removed 12/90, Formerly Hooked to Furnace	4,5
Building 18	2	Aluminum AST	500 gallon	Hydrogen Peroxide (90%)	Present & Empty	1,2
Building 18	1	Steel UST	550 gallon	No. 2 Fuel Oil	Present & Empty, Hooked to Furnace	1,2

See page 3 for footnotes.

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Location	Number	Type	Size	Contents	Status	Sources for Status Information
Tanks Present on 1952 Location Map (Figure 10) and 1959 Utility Maps (Figures 3 & 4) (Con't).*						
Building 20	1	Steel UST	5,000 gallon	No. 2 Fuel Oil	Removed 12/90, Formerly Hooked to Furnace	4,7
Building 20	1	Steel UST	4,000 gallon	No. 2 Fuel Oil	Removed 12/90, Formerly Hooked to Furnace	4,7
Building 20	1	Steel UST	550 gallon	Gasoline	Removed (1981)	7
Building 21	1	Steel UST	5,000 gallon	No. 2 Fuel Oil	In Use, Hooked to Furnace	1,2
Building 21	1	Steel UST	2,000 gallon	No. 2 Fuel Oil	Present & Empty, Hooked to Furnace	1
Building 21	1	Steel UST	5,000 gallon	Kerosene	Present & Empty, Formerly Hooked to Pump, Pump Removed	1
Building 21	1	Steel UST	10,000 gallon	Kerosene	Present & Empty, Formerly Hooked to Pump, Pump Removed	1
Building 21	1	Steel AST	5,000 gallon	Water (Condensate)	Removed (no date)	1,2
Building 23	1	Steel UST	4,000 gallon	No. 2 Fuel Oil	In Use, Formerly Hooked to Pump, Pump Removed	1,2
Building 23	1	Steel UST	3,000 gallon	Gasoline	In Use, Hooked to Pump	1,2
Building 24	1	Steel UST	2,000 gallon	No. 2 Fuel Oil	Removed 1983, Formerly Hooked to Furnace, Furnace Removed	1
Building 25	1	Steel AST	1,500,000 cu.ft.	Liquid Oxygen	Removed (no date)	1,2
Building 25	1	Steel UST	10,000 gallon	JP4	Removed 12/90, Formerly Hooked to Pump, Pump Present	4
Building 25	1	Steel UST	10,000 gallon	No. 2 Fuel Oil	Removed 12/90, Formerly Hooked to Furnace, Furnace Present	4
Building 25	1	Steel UST	3,000 gallon	Alcohol	Could Not Locate	2
Building 25	1	Steel UST	550 gallon	Gasoline	Could Not Locate	2,4
Building 28	2	Steel UST	6,000 gallon	No. 2 Fuel Oil	Removed 4/91, Formerly Hooked to Pump, Pump Removed	3
Building 28	2	Steel AST	3,000 gallon	Alcohol	Removed (no date)	1,2
Building 28	1	Steel AST	650 gallon	Rocket Fuel	Removed (no date)	1,2
Building 28	1	Steel UST	550 gallon	No. 2 Fuel Oil	Removed (no date) Formerly Hooked to Furnace, Furnace Present	1,2
Building 28	1	Steel AST	3,000 gallon	Rocket Fuel	Removed (no date)	1,2
Building 29	2	Steel UST	6,000 gallon	No. 2 Fuel Oil	Present & Empty Formerly Hooked to Pump, Pump Removed	1,2
Building 29	2	Steel UST	10,000 gallon	No. 2 Fuel Oil	Present & Empty Formerly Hooked to Pump, Pump Removed	1,2
Building 30	1	Steel UST	10,000 gallon	No. 2 Fuel Oil	Present & Empty, Hooked to Furnace	1,2
Building 30	1	Steel UST	3,000 gallon	No. 2 Fuel Oil	Present & Empty, Hooked to Furnace	1,2
Building 30	1	Steel UST	550 gallon	No. 2 Fuel Oil	Present & Empty, Hooked to Furnace	1,2

See page 3 for footnotes.

Table 9. Inventory of Underground and Aboveground Storage Tanks at the Malta Rocket Fuel Area Superfund Site,
Towns of Malta and Stillwater, Saratoga County, New York.

Location	Number	Type	Size	Contents	Status	Sources for Status Information
Tanks Identified During 1991 Literature Search (See Figures 7 and 8)						
Building 1	2	Steel AST	30 gallon**	Rocket Fuel	Removed (no date)	1,2
Building 2	2	Steel AST	30 gallon**	Rocket Fuel	Removed (no date)	1,2
Building 2	6***	Gas Bottles	Various	Nitrogen Bottles	Present & Empty	1,2
Building 3	2	Steel AST	5,000-10,000 gallon**	Rocket Fuel	Present & Empty	1,2
Building 3	17***	Gas Bottles	Unknown	Gas Bottles	Removed (no date)	1,2
Building 4	2	Steel AST	1,000 gallon**	Rocket Fuel	Present & Empty	1,2
Building 4	1	Steel AST	1,000 gallon**	Kerosene	In Use	1,2
Building 4	1	Steel AST	3,000 gallon**	Kerosene	Present & Empty	1,2
Building 5	1	Steel UST	6,000 gallon**	Liquid Oxygen	Present & Empty	1,2
Building 6A	14***	Gas Bottles	Various	Gas Bottles	Present & Empty	1,2
Building 7	10***	Gas Bottles	Various	Gas Bottles	Present & Empty	1,2
Building 7B	Unknown	Gas Bottles	230 cu.ft.	Nitrogen	Removed (no date)	1,2
Building 17	1	Steel AST	275 gallon	No. 2 Fuel Oil	Installed 11/15/91, Hooked to Furnace	8
Building 20	1	Steel AST	275 gallon	Diesel Fuel	In Use, Hooked Generator	2,7
Building 20	1	Steel AST	5,000 gallon	No. 2 Fuel Oil	In Use, Hooked to Furnace	7
Building 24	3***	Gas Bottles	Unknown	Gas Bottles	Removed 1983	1,2
Building 24	4	Steel AST(Roof)	Unknown	Rocket Fuel	Removed 1983	1,2
Isolde	1	Steel AST	700 gallon**	Nitric Acid	Present & Empty	1,2
GE Exxon	1	Steel AST	550 gallon	No. 2 Fuel Oil	In Use, Hooked to Furnace	6

Sources for Status Information: 1. Wright-Malta personnel.

2. Site inspection.
3. Wright-Malta tank removal report (1991).
4. NYSERDA tank removal report (1991).
5. NYSERDA personnel.
6. ALPS personnel.
7. MTI personnel.
8. ERM personnel.

* Information for the number, type, size, and contents of each tank was obtained from the 1952 and 1959 maps, site visits, and from the tank owners or the tenants that use the tanks.

** Estimated size.

*** Approximate number (number varies).