Explanation of Significant Differences

MALTA ROCKET FUEL AREA SUPERFUND SITE

Towns of Malta and Stillwater, Saratoga County, New York

EPA Region 2

May 2018

INTRODUCTION

The purpose of this Explanation of Significant Differences (ESD) is to explain changes made by the U.S. Environmental Protection Agency (EPA) to the remedy selected for the Malta Rocket Fuel Area Site (Site), located in the towns of Malta and Stillwater, Saratoga County, New York.

Under Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. Section 9617(c) (CERCLA or Superfund), and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Contingency Plan (NCP), EPA is required to issue an ESD when, after issuance of a Record of Decision (ROD),[1] a significant, but not fundamental, change is made in either scope, performance or cost of a selected site remedy.

This ESD provides a brief history of the Site, describes the original 1996 ROD remedy, explains how, subsequent to the ROD, issues concerning the scope of the selected remedy were identified for the Site, and describes significant changes to the selected remedy.

The ROD called for, among other things, continued air stripping of the groundwater for potable use at the Malta Test Station (Test Station), which is a square parcel of developed land, approximately 165 acres in size, within the Site. In 2010, the Saratoga County Water Authority completed the construction of a waterline that now supplies water to the Test Station and several surrounding municipalities. The on-Site air-stripper treatment system was decommissioned following the connection of the Test Station to the new waterline. Therefore, EPA is eliminating the air stripping of the Test Station groundwater for potable use portion of the selected remedy.

The ROD also called for Institutional Control (ICs)[2] to limit the use of groundwater in a portion of the Site. Volatile organic compounds (VOCs) in groundwater, soil or other sources, even at low levels, can migrate as vapors into buildings. This process, which is called vapor intrusion, can result in unacceptable human exposures to VOCs inside occupied buildings. Although there is no current risk of exposure at the Test Station based on the current use of that portion of the Site (the original buildings are unoccupied and VOCs were not detected in samples collected from the two recently-constructed buildings), EPA has determined that vapor intrusion may be a concern for any existing Test Station buildings that may become occupied in the future or if there is new construction at the Test Station. Accordingly, EPA has determined that to ensure the protectiveness of the remedy, additional ICs are necessary to limit occupancy of existing buildings or new construction, on or within 200 feet of the Test Station property, unless appropriate vapor intrusion investigations are conducted and/or mitigation measures (including periodic monitoring) are implemented.

In 2011 and 2014, as part of Site redevelopment activities by the current owner, buried drums and containers were encountered in an area of the Test Station property. The drums, containers, and surrounding contaminated soils were excavated and removed from the Site by current owner/operators and/or General Electric Company (GE), which is implementing the selected remedy pursuant to a judicial consent decree entered in March of 1998. EPA has determined that ICs are needed to ensure the protectiveness of the remedy. The ICs will limit excavation at the Site unless an EPA-approved Subsurface Drum Management Plan (SDMP) is in place and implemented whenever intrusive activities are conducted at the Site. The SDMP will provide for: 1) the performance of an electromagnetic survey in any area of the Site where soil disturbance is planned; 2) in areas where anomalies are

[1] A ROD documents EPA's remedy decision.

[2] ICs are non-engineered controls, such as property or groundwater use restrictions placed on real property by recorded instrument or by a governmental body by law or regulatory activity for the purpose of reducing or eliminating the potential for human exposure to contamination and/or protecting the integrity of a remedy.

identified, the excavation of any buried drums and/or containers and associated soils; 3) the sampling and analysis of drum content, soil, and groundwater; and 4) the treatment and/or off-Site disposal of containers, soil and groundwater.

This ESD serves to document EPA's determination to incorporate into the remedy ICs that limit occupancy of existing buildings or new construction, on or within 200 feet of the Test Station property, unless appropriate vapor intrusion investigations are conducted and/or mitigation measures (including periodic monitoring) are implemented. This ESD also documents EPA's determination that an SDMP should be implemented whenever intrusive activities are planned on the Test Station property, as well as EPA's determination to eliminate the air stripping of the Test Station groundwater for potable use. The modified remedy remains protective of human health and the environment.

SITE HISTORY, CONTAMINATION PROBLEMS AND SELECTED REMEDY

The Site, currently known as the Luther Forest Technology Campus, includes a square parcel of approximately 165 acres of developed land, known as the Test Station. The Test Station, at one time, included 33 buildings, numerous rocket test stands, concrete quench pits, leach fields/septic tanks, dry wells, storage areas, disposal areas and a small artificial pond known as Muggett's Pond. The Test Station has been fully decommissioned and is currently owned by the Luther Forest Technology Campus Economic Development Corporation (LFTCEDC) and GlobalFoundries US, Incorporated (GlobalFoundries). The existing Test Station buildings are currently unoccupied and a fence surrounds much of the property. The Site also includes portions of predominantly undeveloped woodlands that surround the Test Station; the Saratoga Technology Energy Park, owned by New York State Energy Research and Development Authority (NYSERDA); and areas located adjacent to the Test Station that have been impacted by Site-related contaminants in the groundwater, owned by NYSERDA and Luther Forest Corporation (Luther Forest).

The U.S. government established the Test Station in 1945 for rocket engine and fuel testing. A perpetual restrictive safety easement, encompassing approximately 1,800 acres of pine forest in a circular area of a one-mile radius from the center of the Test Station, was also established to limit facility access to only facility personnel. The Test Station was first leased by various agencies, including several departments of the military, and then purchased in 1955 by a predecessor of the Department of Defense. GE operated the Test Station as a government contractor from 1945 to 1964. In 1964, the Test Station and the easement were acquired by a predecessor of NYSERDA. GE continued as an operating contractor while NYSERDA and its predecessor conducted atomic and space research and development at the Test Station. Research and development activities at the Test Station continued until 1984. In 1984, NYSERDA sold approximately 81 acres of the Test Station, including most of the original buildings, test areas, rocket gantries and other facilities, to the Wright-Malta Corporation (Wright-Malta).

Operations at the Site involved the use of hazardous substances. Investigations of soil, sludge, surface water and groundwater at the Site indicated the presence of VOCs and polychlorinated biphenyls (PCBs). Numerous potential source areas were identified at the Site, including scrap metal storage, chemical storage, solid waste disposal, drum disposal and fuel mixing areas; a burning pit; the rocket gantries and associated cooling pits; septic tanks and leach fields; aboveground and underground storage tanks and piping systems; and the magazine area (where ammunition or other explosive material was stored). In 1987, an air stripper was installed on the Test Station water supply wells by Wright-Malta under a New York State Department of Environmental Conservation (NYSDEC) permit to treat the groundwater prior to its use by employees at the Test Station.

In July 1987, the Site was placed on the National Priorities List and from 1991 to 1994, a comprehensive remedial investigation was performed to define the nature and extent of the contamination at the Site.

In July 1996, EPA selected a remedy for the Site, which was documented in a ROD. The ROD called for, among other things, continued air stripping of the Test Station groundwater for potable use, natural attenuation of contaminants in groundwater at the Site, excavation and off-Site disposal of contaminated soil at the Test Station, continued monitoring of the groundwater and surface water, and ICs to prevent ingestion of contaminated groundwater and to restrict the Test Station to its current commercial/industrial land use. GE is the performing party responsible for implementing the selected remedy.

In 1998, contaminated soil and debris were excavated and disposed of off-Site. The groundwater at the Site was treated by an air stripper and used as a drinking water supply for the Test Station from 1987 until 2010. In 2010, operation of the air stripper was discontinued and the technology campus (including the Test Station) was connected to the Saratoga County water supply, which uses the Hudson River as its source. Groundwater and surface water have been monitored between the Site and public water supply wells since 1987; the monitoring will continue until groundwater cleanup standards are attained.

Active redevelopment of the Site is underway. In 2004, LFTCEDC purchased more than 1400 acres of property, including the Test Station property and surrounding areas, and in 2009, began the first phase of the construction of the Luther Forest Technology Campus. GlobalFoundries, the first company to occupy the Luther Forest Technology Campus, has already redeveloped a portion of the Site. It is anticipated that the entire Malta Rocket Fuel Area Site will eventually be encompassed by the technology campus.

In 2010, the Saratoga County Water Authority completed the construction of a 27-mile water supply line which uses the Upper Hudson River as its water source. This waterline supplies water to the technology campus (including the Test Station) and five surrounding municipalities, including the Towns of Malta, Moreau, Wilton, Ballston and Clifton Park and the Village of Stillwater. The on-Site air-stripper treatment system was decommissioned following the connection of the Test Station to the public water line.

In June 2011, evidence of buried drums was discovered during the excavation and grading of soils for a GlobalFoundries parking lot on the Test Station property. In response, approximately 60 drums/containers and surrounding soils were sampled and removed for proper off-Site disposal by a contractor for GlobalFoundries. NYSDEC provided oversight for the response activities in coordination with EPA.

In May 2014, during preconstruction activities associated with another GlobalFoundries parking lot on the Test Station property, an area of buried drums and debris was discovered. Because of concerns about the potential for buried munitions and other military items, an electromagnetic survey was conducted in the planned construction area. The survey found some anomalies and an investigation of the area was performed in May 2016. Subsequently, approximately 60 drums and containers and 34 stainless steel cylinders (of varying sizes up to 12 inches in length and having U.S. Navy markings on them) were excavated. The drums and containers were sampled and properly disposed of off-Site by Luther Forrest and GE. Since their contents were unknown, the cylinders were destroyed on-Site by controlled detonation in a remote area.

As part of both the 2011 and 2016 investigations, post-excavation samples were collected from the soil and nearby groundwater wells and the results were compared to NYSDEC NYCRR Part 375 Soil Cleanup Objectives for Commercial Use and New York State Groundwater Quality Standards, respectively. Based upon the results of these investigations, it was concluded that the responses adequately addressed the limited contamination in these two areas.

The ROD required the implementation of ICs to prevent ingestion of contaminated groundwater, restrict withdrawal of groundwater within the vicinity of the plume that could adversely impact groundwater remediation and restrict the Test Station to its commercial/industrial land use. To implement the ICs, an environmental restriction zone (ERZ) was designated to prevent the capture zone of hypothetical future groundwater wells from intersecting the VOC plume and thereby ensure containment of the plume. Environmental Protection Easement and Declarations of Restrictive Covenants were recorded in the Saratoga County Clerk's Office on the property located within the ERZ (then owned by Luther Forest, NYSERDA and Wright-Malta) in 1999.

In light of the presence of elevated VOCs in the groundwater, the August 2009 Five-Year Review Report[3] recommended that post-construction vapor intrusion sampling be performed at the GlobalFoundries building, designated as the Fab 8 Administration 1 Building, that was under construction at that time, and that a mitigation system be installed if vapors were detected above levels of concern. It was also recommended that future construction include vapor mitigation measures that entail either the installation of a vapor barrier and vapor mitigation system (followed by post-installation indoor air sampling to verify that the system is working as intended), or the performance of a vapor intrusion study once construction is completed. The existing GlobalFoundries microchip manufacturing building is constructed with a vapor barrier and 36-inch thick concrete foundation slab, which eliminates any potential for vapor intrusion.

The GlobalFoundries Fab 8 Administration 1 Building was completed in 2012 and another building, designated as the Fab 8 Administration 2 Building was completed in 2013. Vapor intrusion studies were conducted by GlobalFoundries at the Administration 1 and 2 Buildings in 2012 and 2013, respectively. The sampling results were compared to values developed using EPA's vapor intrusion screening level calculator and values provided in the NYSDOH *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York,* 2006. Based upon these results, EPA determined that no further vapor intrusion sampling was warranted in either building.

A post-construction vapor intrusion study will be conducted in the GlobalFoundries Project Building, located in the north corner of the Test Station property (adjacent to Parking Lot D). If vapors are detected above levels of concern, then a mitigation system will be installed and periodic monitoring will be performed to ensure that the system is functioning properly. Vapor intrusion is not an immediate concern in other existing buildings located on the Test Station property because they are not currently occupied. Future use may pose an exposure risk and would require an evaluation of the potential for vapor intrusion. In addition, if concentrations in any Site monitoring well(s) show an increasing trend, then a vapor intrusion evaluation and, if necessary, mitigation measures (including periodic monitoring) will be required for occupied buildings (existing and new construction) located in the vicinity of this well(s).

[3] Because hazardous substances, pollutants or contaminants remain at the Site which do not allow for unlimited use or unrestricted exposure, in accordance with 40 CFR 300.430 (f)(4)(ii), a review is performed every five years to determine if the remedy is, and will continue to be, protective of human health and the environment.

DESCRIPTION OF SIGNIFICANT DIFFERENCES

EPA has determined that vapor intrusion, although not currently a concern at the Site, may be a concern in the future for existing buildings, if they become occupied, and for new construction in this area. The Saratoga County Water Authority completed construction of a public water supply line in 2010. The Test Station was subsequently connected to the public water line and the air-stripper treatment system at the Site was decommissioned. In 2011 and 2014, as part of Site redevelopment activities, buried drums and containers were encountered in different locations on the Test Station property. Therefore, EPA has determined that modifications to the ROD remedy are necessary.

This ESD serves to document EPA's decision to incorporate into the remedy ICs that limit occupancy of existing buildings or new construction, on or within 200 feet of the Test Station property, unless appropriate vapor intrusion investigations are conducted and/or mitigation measures (including periodic monitoring) are implemented. These ICs would be in the form of amendments to the existing Environmental Protection Easements and Declarations of Restrictive Covenants. This ESD also documents EPA's determination that an SDMP should be implemented whenever intrusive activities are planned on the Test Station property, as well as EPA's determination to eliminate the air stripping of the Test Station groundwater for potable use.

The modified remedy remains protective of human health and the environment.

SUPPORT AGENCY COMMENTS

NYSDEC, after careful consideration of the modified remedy, supports this ESD, as the modified remedy significantly changes but does not fundamentally alter the remedy selected in the ROD.

FIVE-YEAR REVIEWS

Because hazardous substances, pollutants, or contaminants remain at the Site which do not allow for unlimited use or unrestricted exposure, in accordance with 40 CFR 300.430 (f)(4)(ii), the remedial action for the Site shall be reviewed no less often than every five years. EPA has completed four reviews thus far and will conduct another five-year review on or before July 2019.

AFFIRMATION OF STATUTORY DETERMINATIONS

EPA is issuing this ESD after consultation with NYSDEC. NYSDEC concurs with the approach presented in this ESD. The remedy, as modified by this ESD, will continue to be protective of human health and the environment and will comply with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action. The modified remedy is technically feasible, cost-effective and satisfies the statutory requirements of CERCLA by providing for a remedial action that has a preference for treatment as a principal element and therefore permanently and significantly reduces the toxicity, mobility and volume of hazardous substances.

PUBLIC PARTICIPATION ACTIVITIES

Pursuant to NCP §300.825(a)(2), this ESD will become part of the Administrative Record for the selected remedy. The Administrative Record is available for public review at the following locations:

Malta Town Hall, 2540 Route 9, Ballston Spa, NY 12020

Round Lake Library, Round Lake, NY 12151

The Administrative Record and other Site-related records are also available for public review at EPA Region 2's office at the following location:

U.S. Environmental Protection Agency
290 Broadway, 18th Floor
New York, New York 10007-1866
(212) 637-3263

Links to the Administrative Record and other Site-related documents can be found on the EPA Site Profile Page at https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0202084&msspp=med. EPA is making this ESD available to the public to inform them of the changes made to the remedy. Should there be any questions regarding this ESD, please contact:

Patricia Simmons Pierre
Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway, 20th Floor
New York, New York 10007-1866
Telephone: (212) 637-3865

e-mail: pierre.patricia@epa.gov

With the publication of this ESD, the public participation requirements set out in §300.435(c)(2)(i) of the NCP have been met.