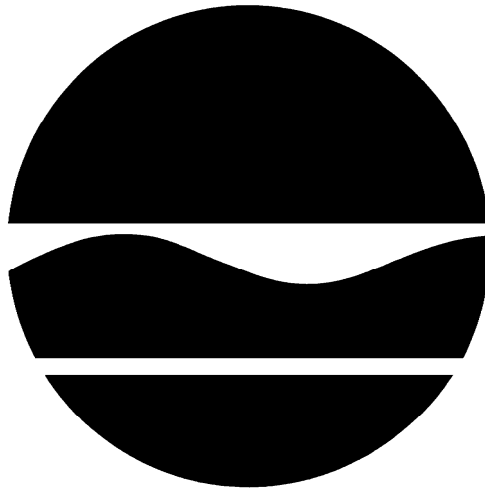


PROPOSED REMEDIAL ACTION PLAN
MATT PETROLEUM SITE
Operable Unit No. 2 Off-site
Environmental Restoration Project
City of Utica, Oneida County, New York
Site No. B00192

December 2009



Prepared by:
Division of Environmental Remediation
New York State Department of Environmental Conservation

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of hazardous substances at the site has resulted in threats to public health and the environment that would be addressed by the remedy proposed by this Proposed Remedial Action Plan (PRAP). The disposal at this site, as more fully described in Sections 5 of this document, has contaminated various environmental media. The proposed remedy, discussed in detail in Section 6, is intended to attain the remedial action objectives for the protection of public health and the environment. This PRAP identifies the preferred remedy and discusses the reasons for the preferred remedy. The Department will select a final remedy for the site only after careful consideration of all comments received during the public comment period.

The Department has issued this PRAP in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, 6 NYCRR Part 375. This document is a summary of the information that can be found in the site related reports and documents which are available for review at the document repositories. The public is encouraged to review the reports and documents, which are available at the following repositories:

New York State Department of Environmental Conservation
Region 6 – Environmental Quality Office
317 Washington Street
Watertown, New York 13601
315-785-2513
Office Hours 7:30 AM to 4:30 PM
Contact: Peter S. Ouderkirk

New York State Department of Environmental Conservation
Region 6 – Utica Sub-Office
207 Genesee Street
Utica, New York 13501
315-794-2554

The Department seeks input from the community on all PRAPs. A public comment period has been set from December, __ 2009 to provide an opportunity for public participation in the remedy selection process. A public meeting is scheduled for January __, 2010 at the City of Utica's Offices located at 1 Kennedy Plaza, Utica, New York 13502 beginning at 7:00 PM.

At the meeting, the findings of the remedial investigation (RI) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which, verbal or written comments may be submitted on the PRAP. Written comments may also be sent to Peter S. Ouderkirk at the above address through January __, 2010.

The Department may modify the proposed remedy or select another of the alternatives presented in this PRAP, based on new information or public comments. Therefore, the public is encouraged to review and comment on all of the alternatives identified here. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

SECTION 2: SITE DESCRIPTION AND HISTORY

2.1: Location and Description

The Matt Petroleum Site is located on Leland Avenue in the City of Utica, Oneida County (See Figure 1). The site is located in a heavy industrial area in the northern part of the City. The City of Utica Fire Training Facility (former bulk petroleum terminal known as the Synthetic Fuel) and Universal Waste (scrap yard) are located to the east and southeast, the City of Utica Bus Garage, the former East Olive Oil Company and rail lines are located to the south, a former bulk petroleum terminal is located to the west and the Mohawk River is found directly north of the site (See Figure 2). The Mohawk is listed as a Class C water body in this section of Utica.

The property is approximately 4.5 acres in size and has one intact building which housed the former Matt Petroleum offices and the maintenance facility. Prior to the spring of 2004, the site was an abandoned petroleum bulk storage facility. From the November of 2003 to June of 2004, an IRM was conducted to remove all structures, including ten bulk petroleum tanks, three above ground blending tanks, a slop tank, an oil/water separator, five loading racks, two pump houses, buried piping, and four buildings (See Figure 3).

Prior to construction of the Barge Canal in the early 1900s, the path of the Mohawk River was to the south of the site, but was relocated to the north as part of the Canal construction program. The property was the site of a former brickyard during the first half of the 1900s. From about 1950 to the early 1990s the property had been the site of a bulk petroleum terminal. Since the 1990s the site has remained unused.

The site is relatively flat and groundwater is found varying from two (2) to four (4) feet below the ground surface, depending on seasonal fluctuations. The site soils are comprised of fill overlying a clay-silt unit. The overlying fill extends from the ground surface to between seven to twelve feet. This soil contains fine to coarse sand and gravel with brick fragments, concrete and other pieces of rubble and debris. The underlying clay-silt unit starts generally from seven to twelve feet below the ground surface. This material is characterized as a low permeability layer, which creates a barrier to downward contamination migration.

A further action Record of Decision (ROD) was signed on June 29, 2007 for Operable Unit No. 1, which required the site to be remediated utilizing a soil turning process.

Operable Unit (OU) No. 2, which is the focus of this document, consists of the bank area and surface water and sediment in the Mohawk River adjacent to the north side of the Matt Petroleum Site. An operable unit represents a portion of the site remedy that for technical or administrative reasons can be addressed separately to eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination. Soils, surface water and sediments found along the banks of the Mohawk River. The RI studied areas upstream, adjacent and downstream of the Matt Petroleum Site.

2.2: Operational/Disposal History

The use of this site as a bulk petroleum terminal from the 1950s to the 1990s has resulted in the release of petroleum products to the environment. Leaking tanks and piping appear to have been the most significant pathway for contamination to reach soil and groundwater. Several major releases in excess of 50,000 gallons have been documented over the operational period. In addition, frequent releases of small amounts of petroleum products occurred during the filling and transfer process. The facility used and spilled various grades of petroleum products, which ranged from a heavy No. 6 fuel oil to lighter gasoline and diesel products.

2.3: Remedial History

There have been no previous site investigations for the OU 2 area. Previous studies for the OU 1 (onsite area) are identified in the June 29, 2007 OU 1 ROD.

SECTION 3: LAND USE

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when assessing the nature and extent of contamination. However, for OU 2, the land use is offsite and is comprised of the surface water and sediment in and along the Mohawk River. These media are not subject to future use considerations.

A comparison of the appropriate SCGs for the identified land use against the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in section 5.1.2.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

Since no viable PRPs have been identified, there are currently no ongoing enforcement actions. However, legal action may be initiated at a future date by the state to recover state response costs should PRPs be identified. Since the site was originally investigated under the Environmental Restoration Program, the City of Utica will assist the state in its efforts by providing all information to the state which identifies PRPs. The City of Utica will also not enter into any agreement regarding response costs without the approval of the Department.

SECTION 5: SITE CONTAMINATION

A remedial investigation has been conducted to determine the nature and extent of contamination and to evaluate the alternatives for addressing the significant threats to human health and the environment.

5.1: Summary of the Remedial Investigation

The purpose of the Remedial Investigation (RI) was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted between June and August of 2009. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Soil borings and monitoring well installations,
- Sampling of subsurface soils and groundwater, and
- Sampling of surface water and sediment.

5.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and surface and subsurface soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in the following Sections list the applicable SCG in the footnotes. For a full listing of all SCGs see:

- Groundwater, drinking water, and surface water SCGs are based on the Department's "Ambient Water Quality Standards and Guidance Values" and Part 5 of the New York State Sanitary Code.
- Sediment SCGs are based on the Department's "Technical Guidance for Screening Contaminated Sediments."
- Soil SCGs are based on the Department's Cleanup Objectives found in 6 NYCRR Subpart 375-6.8(b) Soil Cleanup Objectives (SCOs).

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized in Section 5.1.2. More complete information can be found in the RI Report.

5.1.2: Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation. As described in the RI report, onsite soil and groundwater were identified at the site, and are impacting offsite soil, surface water, and sediment.

Subsurface Soil

In order to determine if contamination from the site might be entering the Mohawk River, thirteen (13) soil borings were advanced in the bank area between OU1 and the river. Soil samples were collected at the site along the banks of the Mohawk River, as well as downstream of the Site. Upstream samples could not be obtained due to the presence of a concrete barrier wall along the Mohawk River.

VOCs were detected in four out of the six soil samples obtained from the banks of the Mohawk River. Parameters which exceeded SCOs for the protection of groundwater, VOCs were detected in two out of the eight soil samples from the downstream area, east of the Leland Avenue Bridge.

Table 1 –Subsurface Riverbank Soil					
Detected Constituents	Concentration Range Detected (ppm) ^a	Protection of Groundwater SCG ^b (ppm)	Frequency Exceeding Protection of Groundwater	Unrestricted Use SCG (ppm)	Frequency Exceeding Unrestricted Use
VOCs					
1,2,4-Trimethylbenzene	5.0 to 55.0	3.6	2 out of 6	3.6	2 out of 6
1,3,5-Trimethylbenzene	ND to 26.0	8.4	1 out of 6	8.4	1 out of 6
Ethyl benzene	ND to 20	1	1 out of 6	1	1 out of 6
Xylene	4.8 to 53.1	1.6	4 out of 6	0.26	5 out of 6
n-propylbenzene	7 to 16	3.9	2 out of 6	3.9	2 out of 6
Naphthalene	ND to 20	12	1 out of 6	12	1 out of 6
Tert-Butylbenzene	ND to 8.7	5.9	1 out of 6	5.9	1 out of 6

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

b - SCG: Part 375-6.8(b), Protection of Groundwater Soil Cleanup Objectives.

Table 2 – Downgradient/Offsite Subsurface Soil					
Detected Constituents	Concentration Range Detected (ppm) ^a	Protection of Groundwater SCG ^b (ppm)	Frequency Exceeding Unrestricted SCG	Unrestricted Use SCG (ppm)	Frequency Exceeding Unrestricted Use
VOCs					
Ethyl benzene	ND to 9.0	1	1 out of 6	1	1 out of 6
Xylene	ND to 5.2	1.6	1 out of 6	0.26	1 out of 6
n-propylbenzene	5.1 to 7.4	3.9	2 out of 6	3.9	2 out of 6

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

b - SCG: Part 375-6.8(b), Protection of Groundwater Soil Cleanup Objectives.

Surface Water

Nineteen (19) surface water samples were obtained from the Mohawk River at locations upstream, adjacent to and downstream of the site. Samples were obtained along the same transects as the soil borings and sediment samples and were collected near the bank of the River where contamination would most likely be entering the water column.

One VOC was detected at upstream sampling location WB-19. Isopropylbenzene was detected at 5.1 ppb (SCG – 5.0 ppb). VOCs were detected at levels exceeding their SCGs in three (3) samples collected adjacent to the site and at the ranges and frequency identified in Table 4. VOCs and SVOCs were detected

in one downgradient sample WB-11 at the ranges and frequency identified in Table 5. This sampling documents a continuing discharge of contaminants attributable to the contamination present on the site. The remedy selected for OU 1 in the June 2007 ROD is expected to address this impact, so no additional evaluation of alternatives is necessary.

Table 3 Surface Water Results Upgradient of the Matt Petroleum Site			
Detected Constituents	Concentration Range Detected (ppb) ^a	SCG ^b (ppb)	Frequency Exceeding SCG
VOCs			
Isopropylbenzene	ND – 5.1	5	1 out of 6

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.

b-SCG: Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1) and 6NYCRR Part 703: Surface Water and Groundwater Quality Standards.

Table 4 - Surface Water Results Adjacent to the Matt Petroleum Site			
Detected Constituents	Concentration Range Detected (ppb) ^a	SCG ^b (ppb)	Frequency Exceeding SCG
VOCs			
1,2,4 – Trimethylbenzene	ND – 9J	5	1 out of 6
1,3,5- Trimethylbenzene	ND – 10 J	5	1 out of 6
Ethyl benzene	ND – 10	5	1 out of 6
Benzene	ND – 1	1	1 out of 6
Toluene	ND – 6.5	5	1 out of 6
Isopropylbenzene	ND - 16	5	1 out of 6
Xylene	ND - 16	5	1 out of 6
n-propylbenzene	ND – 60 J	5	2 out of 6
Naphthalene	ND - 21	13	1 out of 6

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.

b-SCG: Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1) and 6NYCRR Part 703: Surface Water and Groundwater Quality Standards.

Table 5 - Surface Water Results Downgradient of the Matt Site			
Detected Constituents	Concentration Range Detected (ppb) ^a	SCG ^b (ppb)	Frequency Exceeding SCG
VOCs			
1,2,4 –	ND – 40 J	5	1 out of 6

Trimethylbenzene			
1,3,5-Trimethylbenzene	ND – 50 J	5	1 out of 6
Benzene	ND – 72	1	1 out of 6
Isopropylbenzene	ND – 91	5	1 out of 6
Xylene	ND - 144	5	1 out of 6
n-Butylbenzene	ND - 92	5	1 out of 6
n-propylbenzene	ND – 85	5	1 out of 6
Sec-Butylbenzene	ND - 70	5	1 out of 6
SVOCs			
Phenanthrene	ND – 200 J	50	1 out of 6

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.

b-SCG: Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1) and 6NYCRR Part 703: Surface Water and Groundwater Quality Standards.

Sediments

Nineteen (19) sediment samples were collected at locations upstream, adjacent to, and downstream of the Site, to characterize the Mohawk River Sediments. Sediment samples were advanced at locations which correlated with the onsite soil borings and the offsite surface water samples.

VOCs and SVOCs were detected in the Mohawk River sediment samples upgradient, adjacent to and downgradient of the site. No exceedances of individual compounds as compared to the Technical Guidance for Screening Contaminated Sediments have been documented however, two samples, which are downgradient of the site, WB-7 (Total SVOCs at 6.76 ppm) and WB-11 (Total SVOCs at 59.58) ppm exceeded the Technical Guidance for Screening Contaminated Sediments total limit for Poly Aromatic Hydrocarbon (PAHs) of 4 ppm. Total PAH levels ranged from 0.060 ppm to 56.70 ppb. Sediments adjacent to the site did not show impacts which would require the development of remedial alternatives. Downgradient sediment impacts appear likely the result of past operation of an oil terminal at the off-site location. The following tables are provided to show the difference in both contaminants and concentrations of compounds found adjacent to the site and downgradient of the site.

Table 6 Sediment Samples Adjacent to the Site				
Detected Constituents	Concentrations Range Detected (ppm)	SCG (ppm)	Frequency of Detection	Frequency Exceeding SCG
Fluoranthene	ND – 0.1 J	1020	3 out of 6	0 out of 6
Pyrene	ND – 0.8 J	961	4 out of 6	0 out of 6
Benzo(b)fluoranthene	ND – 0.1 J	Not Listed	2 out of 6	

Table 7 Sediment Samples Downgradient of the Site				
Detected Compounds	Concentration Range Detected (ppm)	SCG (ppm)	Frequency of Detection	Frequency Exceeding SCG
Fluoranthene	ND -0.96	8	7 out of 8	0 out of 8
Phenanthrene	ND – 3.1	120	3 out of 8	0 out of 8
Pyrene	ND – 0.720	961	6 out of 8	0 out of 8
Benz(a)anthracene	ND – 0.3 J	Non Listed	7 out of 8	
Chrysene	ND – 0.4 J	Non Listed	7 out of 8	
Benzo(b)fluoranthene	ND – 0.6 J	Non Listed	6 out of 8	
Benzo(k)fluoranthene	ND – 0.2 J	Non Listed	5 out of 8	
Benzo(a)pyrene	ND – 0.4 J	Non Listed	6 out of 8	
Benzo(g,h,i)perylene	ND – 0.1 J	Non Listed	5 out of 8	
Indeno(1,2,3-cd)pyrene	ND – 0.3 J	Non Listed	5 out of 8	
1,2,4-Trimethylbenzene	ND – 6.0 J	186	2 out of 8	0 out of 8
1,3,5-Trimethylbenzene	ND – 0.7 J	Non Listed	1 out of 8	
Isopropylbenzene	ND – 12	Not Listed	2 out of 8	
M,P-Xylene	ND - 1.1	92	1 out of 8	0 out of 8
n-propylbenzene	ND – 11	Non Listed	2 out of 8	0 out of 8
Naphthalene	ND – 1.4	30	1 out of 8	0 out of 8
n-butylbenzene	ND – 14	Non Listed	1 out of 8	0 out of 8
Sec-butylbenzene	ND – 11	Non Listed	1 out of 8	0 out of 8

5.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Record of Decision. There were no IRMs performed at this operable unit during the RI.

5.3: Summary of Human Exposure Pathways:

This section describes the current or potential human exposures (the way people may come in contact with contamination) that may result from the site contamination. A more detailed discussion of the human exposure pathways can be found in the RI report available at the document repository. An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population are people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

DOH NEEDED

5.4: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential, future environmental impacts, presented by the site, prior to the IRM. Environmental impacts include: existing and potential future exposure pathways to fish and wildlife receptors, as well as, damage to natural resources, such as, aquifers and wetlands. The following environmental exposure pathways and ecological risks have been identified:

Based on the June 29, 2007 Record of Decision for OU 1, it is understood that the onsite conditions have impacted site wide soils and groundwater. The RI conducted in 2009 for OU 2 has shown that contamination in the subsurface soils are consistent with previous investigations. It also shows that offsite surface water and sediment contaminant levels found adjacent to the site are only slightly above SCGs.

The RI has shown that down gradient sediment conditions are the result of a separate offsite source, the former major oil storage facility (MOSF) known as Synthetic Oil. This site has been referred to the Departments Spill Response program for appropriate follow-up.

SECTION 6: SUMMARY OF THE PROPOSED REMEDY

The RI has confirmed the presence of petroleum contamination in soils onsite along the banks of the Mohawk River. The RI has shown that impacts to both surface water and sediment exist, however, the sediment impacts are due to a separate downgradient source. Based on the finding of the RI for OU2, the Department is proposing 'No Action' for OU2, contingent on the implementation of the on-site remedy for OU1 as specified in the June 2007 ROD. By addressing the source materials found in soil in OU1, the migration of site related VOCs in groundwater, which are causing the surface water exceedances adjacent to the site in the barge canal, would cease. Contaminated soils along the River would be removed to the maximum extent practical.