CSXT RIVER STREET DERAILMENT PROJECT

SITE MANAGEMENT PLAN
RIVER STREET
ROCHESTER, NEW YORK

REVISED JUNE 2012

Prepared for:
CSX Transportation, Inc.
500 Water Street, J-275
Jacksonville, FL 32202

Submitted to:
New York State Department of Environmental Conservation
Region 8
6274 East Avon-Lima Road
Avon, New York 14414

Prepared by:
AMEC E & E, PC.
Edison Plaza, 2nd Floor
155 Erie Boulevard
Schenectady, New York 12305

Written/Submitted by:

Marie T. Dowd

Marie T. Dowd, PE
Project Manager

TABLE OF CONTENTS

Page

List of Figures

List of Tables

1.0 INTRODUCTION AND BACKGROUND

This Site Management Plan (SMP) was drafted to address the residual impacts in the remaining sediment hot spots within the Genesee River from the December 23, 2001 derailment of a CSXT freight train in Rochester, New York. This document summarizes the site background; describes the historical field activities, the interim remedial measures (IRM), and subsequent monitoring events; and details the proposed institutional controls to address the residual impacts in the remaining sediment hot spots.

This SMP is intended to provide guidance in the management of sediment containing methylene chloride and acetone above the site-specific cleanup levels of 773 ug/kg for acetone and 1,133 ug/kg for methylene chloride that may be disturbed in the unlikely circumstance that the United States Army Corp of Engineers (USACE) dredging limits are revised or if future development activities disturb river sediments within the interim remedial measure (IRM) dredging limits.

The landside investigative and remedial activities are not discussed in this document since evaluation of the effectiveness monitoring results following the remedial actions demonstrate that the soil and groundwater impacts resulting from the 2001 derailment have been fully addressed.

1.1 Site Description

The Site is located on River Street in the City of Rochester, County of Monroe, and State of New York. The derailment occurred along the CSXT railroad tracks adjacent to the Monroe County Public Boat Launch where the tracks make a westward change in direction. The site is located in an area comprised of mixed industrial/commercial properties with residences present to the west and south. The locations of the impacts within the Genesee River were generally located adjacent to the landside spill area extending from the shoreline to the approximate centerline of the river channel. **Figure 1** details the location of the Site.

1.2 Site History

On December 23, 2001 at 3:40 p.m., a CSXT train derailed in Rochester, New York, north of the Latta Road and River Street intersection. The train consisted of 43 cars (including two diesel locomotive engines) traveling north from Kodak Park towards the RG&E Russell Station when the accident occurred. The two engines and 28 additional cars derailed. A majority of the cars contained coal. However, two tank cars contained acetone and one contained methylene chloride. The tank cars derailed slightly northeast of the Tapecon, Inc. (Tapecon) manufacturing facility and approximately 100 feet to 150 feet west of the Genesee River. The area in which the acetone and methylene chloride was spilled is approximately one mile upstream from the mouth of the Genesee River. Approximately 14,000 gallons of acetone,

16,000 gallons of methylene chloride, and 3,000 gallons of diesel fuel were released into the environment.

1.3 Previous Field Activities

1.3.1 Emergency Response Activities

Immediately following the derailment, emergency response activities commenced including fire suppression; diesel, coal, and plastic pellet cleanup; spill delineation and containment; continuous community air monitoring; and river water quality monitoring. For a complete description of the emergency response activities refer to the *River Street Derailment Interim Remedial Measure Report*, Shaw, March 10, 2003.

1.3.2 Sediment Investigation

Ten sampling events, identified chronologically as Phases, were conducted in the Genesee River to determine the extent of impacts to the sediments and monitor COC concentrations. Samples were collected from 79 locations throughout the course of the ten sampling Phases. In total, 370 samples were collected during these events to fully characterize the sediments adjacent to the landside of the derailment Site. Although sampling locations have varied during each sampling event, a number of the sampling locations remained consistent throughout the events to monitor for possible migration or natural attenuation.

For a complete discussion of sediment and surface water monitoring activities please refer to the *River Street Derailment Interim Remedial Measure Report*, Shaw, March 10, 2003; *Remedial Action Selection/Design Report,* AMEC, October, 2 2003 and *Dredging Interim Remedial Measure Summary Report, AMEC, May 20, 2005.*

1.3.3 Interim Remedial Measures

An IRM work plan for impacted sediment was developed and implemented in the summer of 2004. The primary objectives of the IRM were to:

- Protect human health and the environment.
- Remove sediments exceeding the site-specific cleanup levels of 1,133 micrograms per kilogram (ug/kg) for methylene chloride and 773 ug/kg for acetone.
- Minimize chemicals of concern migration caused by resuspension of impacted sediments.
- Remediate the navigational channel to at or below its maintenance dredging limits and to allow for open water or lake bottom disposal of maintenance dredging spoils from subsequent USACE maintenance dredging operations.

The IRM activities included the excavation, dewatering, stabilization and disposal of approximately 3,950 tons of the acetone and methylene chloride impacted sediments. The IRM activities were successful in removing the vast majority of impacted sediment from the river. For

a complete discussion of the dredging IRM activities please refer to the *Dredging Interim Remedial Measure Summary Report*, AMEC, May 20, 2005.

1.3.4 Genesee River Water Quality Monitoring

River water quality monitoring was conducted on a regular basis following the derailment incident. A significant decrease in chemicals of concern (COC), methylene chloride and acetone, concentrations was evident during the first year. Since then the COC detection's have been either non-detect or extremely minimal. Including the last sampling event, completed in April 2005, analytical results for the last five events have been below the sample quantitation limit. This indicates that residual COCs in the sediment are not adversely affecting the water column above them.

2.0 NATURE AND EXTENT OF REMAINING RESIDUALS

A design quantity of 3,000 cubic yards (CY) of sediment was to be removed. Based on disposal certificates, project records indicate that 2,856 CY (3,950 tons) was actually removed. This is 95% of the project goal. As a result, a vast majority of impacted sediments from the bed and bank of the Genesee River were eliminated during the IRM. Factors that made the removal of all impacted sediment infeasible:

- Concerns with the stability of the sheet pile wall and shoreline prevented deeper excavations along the riverbank.
- The density of the deeper sediments within the riverbed made further removal at depth with the environmental clamshell dredge infeasible.
- Methylene chloride is the primary COC and it does not readily bind to sediment.

Based on initial IRM closure sediment sampling, two of the 10 closure sample locations exhibited concentrations that exceeded the site-specific cleanup levels of 773 ug/kg for acetone and 1,133 ug/kg for methylene chloride. Closure samples DC-4 and DC-8 were identified as being above the cleanup levels at 24,000 and 1,900 ug/kg methylene chloride, respectively. DC-4 is located outside the navigational limits and will not be disturbed by current USACE maintenance dredging protocol. Also, DC-4 is at an elevation of 218.3 feet IGLD85 that is only 0.4 feet above the 217.9 feet IGLD85 target and within the specified +/- 0.5 foot construction tolerance. Closure sample DC-8 is located within the channel limits, but at a depth three feet below the USACE dredge elevation (221.3 feet IGLD85). Therefore, the residual methylene chloride contained in the sediment should not be disturbed by current USACE maintenance dredging protocol. Also, DC-8 exhibited a methylene chloride concentration that was within the same order of magnitude as the 1,133 ug/kg site-specific cleanup level.

Due to these two dredging closure sample locations having exhibited residual methylene chloride above the site-specific cleanup level, CSXT implemented additional monitoring in April 2005. Sediment samples were collected from a total of six locations: SS-19A, SS-15, SS-24,

DC-4/SS-90, DC-8/SS-89, and SS-88. Samples DC-4/SS-90, SS-19A and SS-88 were identified as having elevated concentrations of methylene chloride. As stated above, DC-4/SS-90 is outside of the navigational channel limits. Its concentration of 2,400 ug/kg, was also a full order of ten magnitude lower than that detected in the October 2004 closure sample. Although sample SS-19A is within the navigational limits, like DC-8/SS-89, it is located below the USACE dredging limit (221.3 feet IGLD85) at an elevation of 220.7 feet IGLD85. Further, additional dredging in the vicinity of SS-19A is unlikely, as the area of SS-19A must be maintained at a 4H:1V slope to ensure upland stability of the riverbank. The sample collected at the two feet depth interval at SS-88 did not meet the 1,133 ug/kg site-specific cleanup level. However, the upper sample collected at SS-88, 0.5 feet below the sediment surface, met the level. The elevated sample from SS-88 is at an elevation of 217 feet IGLD85 which is 4.3 feet below the USACE maintenance dredge depth of 221.3 feet IGLD85.

Table 1 identifies the sample identification numbers and the corresponding historical analytical results of the locations that exhibited exceedances during the post dredging April 2005 monitoring event. **Figure 2** illustrates the locations of the exceedances and the Riverside Site Residual Boundary.

TABLE 1
Residual Methylene Chloride Analytical Results

Sample ID	June '04	October '04	April '05
SS-19A	10,000,000 E	NA	12,000,000
SS-88 – 2'	NA	8 U	52,000
DC-4/SS-90	NA	24,000	2,400

Methylene chloride cleanup criteria approved by the NYSDEC and the is 1,133 ug/kg
E – Identifies the compound exceeded the instrument's calibration range
U- Compound was analyzed for but not detected
NA – Not Applicable
All units are in ug/kg (ppb)
All concentrations are from the top 1' of sediment (except as noted).

3.0 SEDIMENT MANAGEMENT PLAN

The dredging IRM removed the impacted sediments to the extent feasible, and in doing so, removed the vast majority of the impacted sediments. The residuals are limited in nature to hot spots within the Riverside Site Residual Boundary depicted in **Figure 2**. Moreover, the IRM was completed in such a manner that future activities conducted in the river should not be adversely affected by the residuals from the 2001 CSXT derailment. The remaining methylene chloride is not expected to be resuspended during USACE maintenance dredging activities (because the sediments are below the specified dredge depth of 221.3' IGLD85) and is not of sufficient quantity to be detectable in the Genesee River water column as demonstrated by the analytical results. However, if the USACE dredging limits are revised or if future development activities

disturb river sediments within the Riverside Site Residual Boundary, management of the sediment containing residual methylene chloride impacts will be required.

3.1 Notification

If development, maintenance dredging, or any other type of work is planned within the Riverside Site Residual Boundary identified on **Figure 2** which has the potential to disturb sediment, then it is necessary to contact Bill Parry, CSXT, Manager Environmental Remediation at 1-518-767-6049.

3.2 Project Plan Review

CSXT or its representative will be supplied in full, final copies of the design plans, maintenance activities, etc. CSXT will, in a timely manner, review the project documents, to determine whether the potential of the work might disturb the residual sediment impacts.

3.3 Determination of Potential of Residual Disturbance

Based on the review of the project documents, CSXT will execute one of the following three courses of action:

1. Draft a letter to the applicable party and regulatory agencies indicating that their intended project plans were carefully reviewed and the proposed actions will not disturb the identified residual impacts.
2. Draft a letter to the applicable party and regulatory agencies indicating that their intended project plans have the potential to disturb the identified residual impacts. In addition, CSXT will promptly implement a sampling program within the area of potentially disturbed sediments to ascertain whether any residual impacts in excess of the site-specific cleanup levels remain. Included within that sampling program will be an appropriate background study, including at least one sample taken up-river of the Riverside Site Residual Boundary in order to ascertain whether background conditions have changed since the implementation of the dredging IRM. If the sampling indicates the potential for disturbing sediments containing residual impacts in excess of the site-specific cleanup levels, CSXT will also provide for a representative to be on-site during the course of the work that may disturb the residual impacts. If the activities are concluded to be within a close proximity to the residual location, CSXT will provide labor and materials or cover the costs incurred with respect to the residually impacted sediment and any associated water by the applicable party to properly handle, segregate, stage, sample, analyze, and dispose (if impacted with methylene chloride or acetone in excess of the site-specific cleanup levels) of the impacted sediment and associated water.
3. Draft a letter to the applicable party and regulatory agencies indicating that their intended plans will likely disturb the location where sediments with residual impacts have been

previously identified. CSXT will also characterize the area of disturbance in close proximity to the identified residual sediment impacts prior to the work to verify the presence or absence of residuals. CSXT will promptly implement a sampling program within the area of potentially disturbed sediments to ascertain whether any residual impacts in excess of the site-specific cleanup levels remain. Included within that sampling program will be an appropriate background study, including at least one sample taken up-river of the Riverside Site Residual Boundary in order to ascertain whether background conditions have changed since the implementation of the dredging IRM. If the sampling indicates the potential for disturbing sediments containing residual impacts in excess of the site-specific cleanup levels, CSXT will also provide for a representative to be on-site. CSXT will work closely will the applicable party, regulators, subcontracts, etc. to ensure proper plans, notifications, permits, health and safety measures, decontamination procedures, and monitoring (air, water, etc.) are in place prior to the initiation of the work as a result of the disturbance of the residuals. If necessary, CSXT will provide labor and materials or cover the costs incurred by the applicable party to: prepare and implement work plans; notifications and permits; additional health and safety measures; conduct monitoring (air, water, etc.); properly handle, segregate, stage, sample, analyze, and dispose of the impacted sediment and associated water.

4.0 CONTACT INFORMATION

Key contacts that have been involved with the CSXT-River Street Derailment Project are provided below. The list includes the CSXT Manager Environmental Remediation, CSXT's engineering consultant (AMEC E & E, PC), CSXT's internal and local legal counsel (Hiscock Barclay, LLC), NYS regulators, Monroe County officials, City of Rochester engineer's and lawyers, and the USACE representative.

COMPANY	NAME	TITLE	PHONE	E-MAIL
CSXT.	**William Parry**	**Manager Environmental Remediation**	**518.767.6049**	**william_parry@csx.com**
CSXT	**Jeff Styron**	**Counsel Environmental**	**904.366.4058**	**jeff_styron@csx.com**
AMEC	**Marie Dowd**	**Project Manager**	**518.372.0905**	**marie.dowd@amec.com**
Hiscock Barclay	**Tom Walsh**	**Outside Counsel**	**585.295.4414**	**twalsh@hblaw.com**
NYSDEC	**Frank Sowers**	**Project Manager**	**585.226.5357**	**flsowers@gw.dec.state.ny.us**
NYSDOH	**Krista Anders**	**Public Health Specialist**	**716.847.4385**	
MCDOH	**Jeff Kosmala**	**Senior Public Health Engineer**	**585.753.5904**	**jkosmala@monroecounty.gov**
City of Rochester	**Donald Crumb**	**Municipal Attorney**	**585.428.6775**	**crumbd@cityofrochester.gov**

COMPANY	NAME	TITLE	PHONE	E-MAIL
City of Rochester	Joe Biondolillo	Project Manager	585.428.6649	biondj@cityofrochester.gov
USACE	Steve Metivier	Chief	716.879.4314	steven.v.metivier@usace.army.mil

Public Safety & Environment

SITE LOCATION MAP

Site Management Plan
CSXT - River Street Derailment Site
490 River Street
Rochester, NY

FIGURE # 1

Monroe County — New York

Location of Site

LEGEND

CSXT Rail

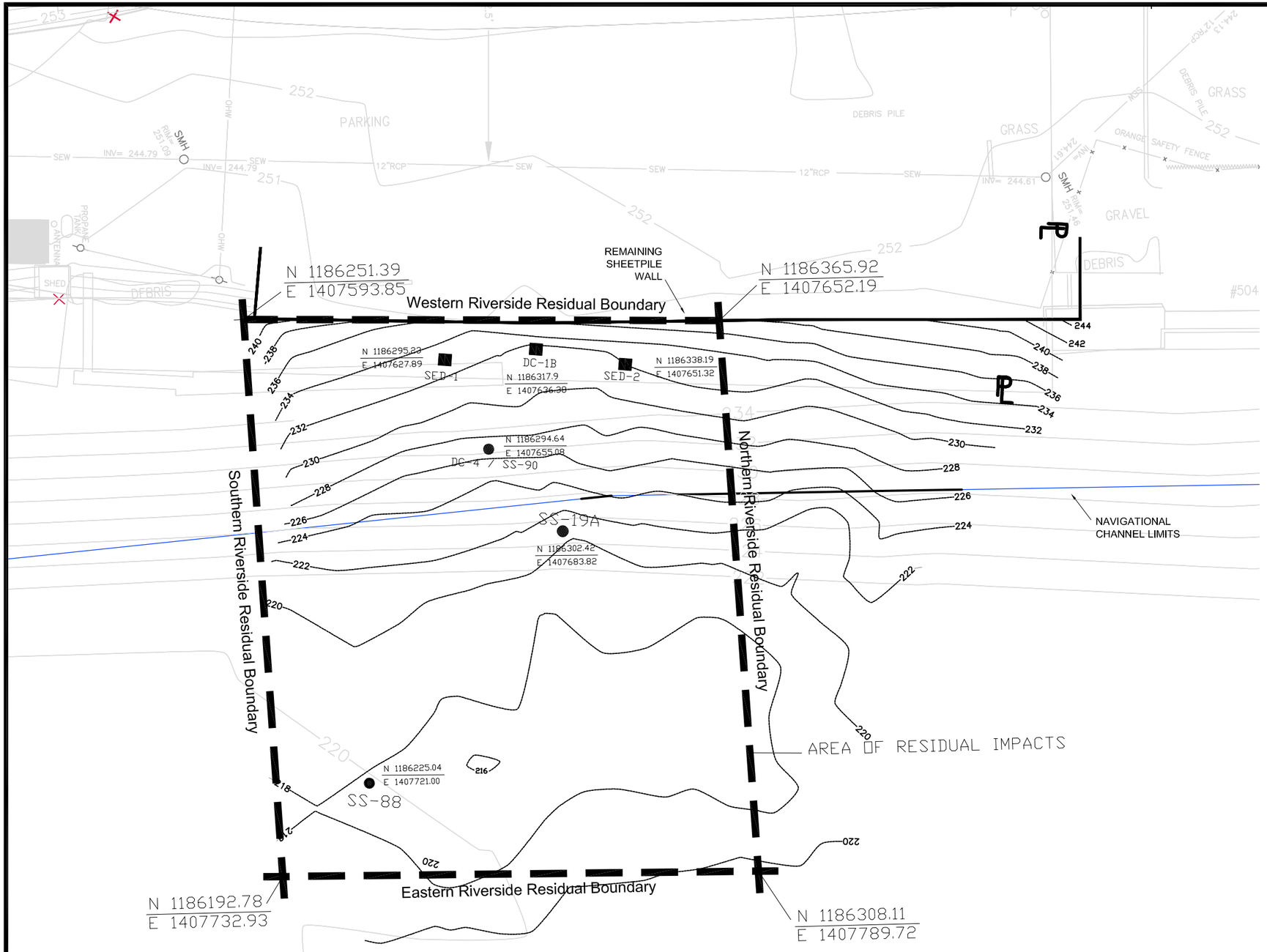
NOTES & SOURCES

Aerial Imagery Source: ESRI.
Projection: NAD 83 UTM Zone 18N

0 — 200
Feet

N
W E
S

AMEC Earth & Environmental, Inc.
2 Robbins Road
Westford, MA 01886
(978) 692-9090



LEGEND:

- POST-DREDGING RIVER BOTTOM CONTOUR
- CSXT SEDIMENT SAMPLE LOCATION CONTAINING RESIDUAL METHYLENE CHLORIDE CONCENTRATIONS
- CITY SEDIMENT SAMPLE LOCATION CONTAINING RESIDUAL METHYLENE CHLORIDE CONCENTRATIONS
- BOUNDARY OF RESIDUAL IMPACTS

NOTES:

1. BATHYMETRIC SURVEY SERVICES WERE PROVIDED BY THEW ASSOCIATES, CANTON, NY TO DOCUMENT AS-BUILT CONDITIONS.

2. THE EXISTING SHEET PILE WALL WAS LEFT IN PLACE AND CUT FLUSH WITH THE RIVER BED.

3. ORIGINAL BASE MAP PROVIDED BY LABELLA ASSOCIATES, PC, ROCHESTER, NY

4. RESIDUAL IS DEFINED IN THIS DRAWING AS: A SAMPLE LOCATION CONTAINING METHYLENE CHOLIDE CONCENTRATIONS GREATER THAN THE ESTABLISHED SCGs. SAMPLES WERE COLLECTED DURING THE POST DREDGING SAMPLING EVENT (APRIL 2005).

NORTH

0' 15' 30' 45'

1" = 30'

AMEC
Earth & Environmental, Inc.
2 Robbins Road
Westford, Massachusetts 01886
Telephone: (978) 692-9090
Fax: (978) 692-6633
Web: www.amec.com

CLIENT:

CSX TRANSPORTATION

PROJECT:

SITE MANAGEMENT PLAN,
CSXT - RIVER STREET
DETAILMENT SITE
ROCHESTER, NY

REV	DATE	DESCRIPTION

ISSUE / REVISION:

DESIGNED BY: M. DOWD	DRAWN BY: M. YAU
CHECKED BY: M. DOWD	DATE: 2010-06-14
SCALE: AS SHOWN	ISSUE / REVISION: 0
DISCIPLINE LEAD: M. DOWD	PROJECT MANAGER: M. DOWD
PROJECT ENGINEER: M. DOWD	
PROJECT NUMBER: DESIGNED BY:	

TITLE: FIGURE 2

RIVERSIDE SITE RESIDUAL BOUNDARY MAP

Figure 2 – Jun. 14, 2010 10:43am – michael.you

U:\DEPT-EGNR\CSX\CSX Rochester\2010-06-14 Site Management Plan\Figure 2.dwg – Figure 2