# DEMOLITION WORK PLAN
# AND CASE-SPECIFIC BUD REQUEST

**Former REA Building**
**Amtrak Sunnyside Yard**
**Queens, New York**

ROUX Associates, Inc.
ENVIRONMENTAL CONSULTING & MANAGEMENT

# DEMOLITION WORK PLAN
# AND CASE-SPECIFIC BUD REQUEST

**Former REA Building**
**Amtrak Sunnyside Yard**
**Queens, New York**

**September 26, 2003**

*Prepared for:*

**NATIONAL RAILROAD PASSENGER CORPORATION**
400 West 31st Street
6th Floor
New York, New York 10001

*Prepared by:*

**ROUX ASSOCIATES, INC.**
209 Shafter Street
Islandia, New York 11749

ROUX

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### FIGURE



### APPENDIX

## 1.0 INTRODUCTION

On behalf of National Railroad Passenger's Association (Amtrak), Roux Associates, Inc. (Roux Associates) and its associated engineering firm Remedial Engineering, P.C. (Remedial Engineering), have prepared this Demolition Work Plan (DWP) for the former Railway Express America (REA) Building in Sunnyside Yard, Queens, New York (Site) (Figure 1). The DWP is part of the work associated with the removal of the REA building. The DWP will address the procedures and equipment to be used for the demolition/dismantling and removal of the REA Building.

### 1.1 Site Location and Description

The Amtrak Sunnyside Yard is an operating train maintenance yard located in Long Island City, Queens, New York. The REA building is located in the northeast corner of the property and is currently abandoned. The building is vacant and in a state of disrepair.

### 1.2 Site Background

Railway Express America used the building as a distribution point for freight shipping. In 1976, Amtrak took ownership of Sunnyside Yard including the REA building. The REA building was not used by Amtrak and is currently vacant.

## 2.0 PRE-DEMOLITION ACTIVITIES

Prior to commencing the demolition activities, certain pre-demolition activities will be performed to ensure onsite and offsite safety, and to minimize the potential for accidents and/or damage to any adjacent properties. This section presents the specific activities to be performed before demolition activities begin.

### 2.1 Asbestos Survey

An asbestos survey of the REA building was conducted in February 2003 by Testwell Laboratories, Inc. (Testwell, 2003). The asbestos survey was conducted to determine if any asbestos containing material (ACM) was present in the REA building. During the inspection, bulk samples of suspect ACM were collected and submitted for laboratory analysis. The results of the asbestos survey found that ACM was found in certain parts of the building (i.e., roof flashing). The ACM will be removed prior to demolition activities by a licensed abatement contractor. The ACM removal and handling are not discussed in this DWP.

### 2.2 Permit Issues

Amtrak is not required to submit a New York City Department of Buildings demolition permit. However, Amtrak will conform to the substantive requirements of the demolition permit. The substantive requirements may include completing the following activities prior to demolition activities:

- Pest/rodent controls to certify that building is "rat free," and
- Identification and abandonment (disconnection) of all onsite underground and aboveground utility lines and structures.

### 2.3 Temporary Facilities

Temporary facilities and controls will be provided during mobilization activities. The temporary facilities will consist of barricades and fencing for Site control and security. In addition, equipment for managing precipitation run-off, basement dewatering, and erosion/sediment control will be provided.

### 2.3.1 Protection of 39th Street Bridge

The portion of the REA building adjacent to the 39th Street Bridge is currently acting as a traffic barricade on the east side of the bridge. Since the building will be demolished, this traffic barricade will be removed. As a result, it is important that the bridge be safeguarded for the duration of the project until the demolition activities have been completed. The construction contractor shall prevent traffic and pedestrians from exiting the bridge. The construction contractor shall coordinate and plan this activity with the New York City Department of Transportation and Amtrak.

## 3.0 CASE-SPECIFIC BUD REQUEST

Amtrak proposes to re-use soil currently stockpiled at the Yard as grading material during site restoration activities following the REA building demolition. The following sections describe the case-specific Beneficial Use Determination (BUD) request.

### 3.1 Background Information

During routine track repair and reconstruction, Amtrak will excavate and replace old ballast and soil beneath the track to a depth of approximately 2-feet below grade. Prior to beginning any routine track repair or reconstruction, Roux Associates typically collects soil samples to determine reuse or disposal options. The soil samples are sent to a laboratory and analyzed for the contaminants of concern at the Yard (i.e., polychlorinated biphenyls [PCBs], carcinogenic polyaromatic hydrocarbons [cPAHs], and lead). The New York State Department of Environmental Conservation (NYSDEC) has issued the following cleanup levels for the contaminants of concern at the Yard:

- PCBs – 25 parts per million (ppm)
- cPAHs – 25 ppm
- Lead – 1,000 ppm

Following a review of the analytical data, if necessary, Roux Associates will identify to Amtrak locations and depths where soil cleanup levels for the Yard were exceeded. Amtrak personnel will then excavate any soil that exceeds the soil cleanup levels for proper off-site disposal.

Track bed excavated soil that is below the soil cleanup levels for the Yard (approximately 8,000 cubic yards) is currently stockpiled at the Yard. This BUD request results from the need to use this excavated soil as grading and/or backfill during site restoration activities associated with the REA Building decommissioning activities.

### 3.2 BUD Request

The following paragraphs address the specific information requested in the regulations for a Case-specific BUD petition:

6 NYCRR Subpart 360-1.15 Beneficial Use

(d) Case-specific beneficial use determination

(i) a description of the solid waste under review and its proposed use;

*As described above, the solid waste stockpile consists of approximately 8,000 cubic yards of soil and ballast excavated during normal track repair and reconstruction that is below the Yard-specific soil cleanup levels. The soil will be used as grading and/or backfill material during site restoration activities associated with the REA Building decommissioning. Additionally, the material will be used to backfill the basement during these operations.*

(ii) chemical and physical characteristics of the solid waste under review and of each type of proposed product;

*The solid waste stockpile consists of excavated track bed (ballast and soil) material that has been analyzed for the contaminants of concern at the Yard (PCBs, cPAHs, and lead) and found to have concentrations of these compounds that do not exceed the NYSDEC cleanup levels for the Yard of 25 ppm, 25 ppm, and 1,000 ppm, respectively.*

(iii) a demonstration that there is a known or reasonably probable market for the intended use of the solid waste under review and of all proposed products by providing one or more of the following:

(b) a description of how the proposed product will be used;

*The fill material will be used for backfill purposes. It is proposed that the fill material will be placed in the basement during the site restoration activities.*

(iv) a demonstration that the management of the solid waste under review will not adversely affect human health and safety, the environment, and natural resources by providing:

(a) a solid waste control plan

*Additional laboratory analysis will be completed on the solid waste prior to on-site backfill activities. Laboratory analyses of representative samples of the solid waste will be completed in accordance with the procedures set forth in the solid waste control plan described below:*

1. *The fill material will be surveyed to determine the volume of material for disposal.*

2. *The 8,000 CY of material will be divided into 16 segments, each segment representing approximately 500 CY of material.*

3. *Four (4) grab samples per 500 CY segment (one representing each 125 CY of material) will be collected and combined to form one composite.*

4. *A total of 16 samples, one from each 500 CY segment composite, will be collected for PCBs, cPAHs, and lead analysis.*

## 4.0 DEMOLITION

### 4.1 Methodology

The REA building will be demolished in its entirety to platform grade level. Demolition includes the removal and disposal of structural concrete, walls, doors, windows, structural steel, metals, roofs, masonry, attachments, appurtenances, piping, electrical and mechanical equipment, etc. The building will have been cleared of asbestos or other harmful contaminants before demolition begins. Further safety measures include the wet down of the site with water during operations to prevent dust from rising and the execution of a community air monitoring program to protect the local area on an as-needed basis.

The demolition of the REA building will be accomplished using traditional civil construction equipment (track excavator with grapple or shear attachments). The demolition of the building will begin, as necessary, with the removal of debris (construction, non-hazardous, etc.) from within the building and the basement. Waste characterization sampling will be performed on the basement debris. If encountered within the limits of the basement area, any piping, appurtenances, miscellaneous debris will be removed for offsite disposal including any residual material that may be present. Prior to removal of the basement debris, the basement will be dewatered. The water from the basements will be treated onsite, as necessary, to meet any discharge requirements for the onsite sewer owned by Amtrak. Following the basement dewatering and basement debris removal, the concrete slab of the basement will be fractured to allow for future drainage. Basement material will not be used for onsite backfill and will be properly disposed of.

Once the basement is cleared of debris, demolition will continue by dismantling the interior building space. This interior space includes metal platforms, non-bearing walls (i.e., offices), etc. Once the interior portion of the building has been cleared, the exterior masonry (brick) and the structural steel or wood frame of the building will be removed. All concrete piling, slabs and other concrete structures to be removed will be demolished, crushed and may be used as fill in designated areas of the Site including the basement, or disposed of offsite. Periodic visual inspections will be performed to determine if additional waste characterization and segregation of the demolition debris is required.

Following all of the activities associated with the demolition of the REA building, the Site will be graded to platform level and to promote drainage. Any excess crushed concrete debris (as described in Section 4.0) not used for grading or fill, will be staged onsite for disposal. Additional work associated with the Site (i.e., track bed excavation) will be conducted following demolition activities and is not discussed in this DWP.

### 4.2 Health and Safety Monitoring

Health and safety monitoring will be performed during all demolition activities, which will include both worker and community health and safety monitoring. All monitoring activities will be performed in accordance with the NYSDEC TAGM #4031 (Fugitive Dust Suppression and Particulate Monitoring Program), the NYSDOH Community Air Monitoring Protocol, Health and Safety Plan (HASP) for the Site (to be prepared by the construction contractor), and the Community Air Monitoring Plan (CAMP) (Appendix A).

The demolition activities will be performed in a manner consistent with 29 CFR 1910 and 1926. The construction contractor will be required to prepare and submit a site-specific HASP prior to initiation of work activities. The HASP will include details on emergency procedures, communications, training, public and personal protection and procedures to address specific hazards including work at heights, manual handling, process/crushing of material, Site traffic, and if required, confined space. This HASP shall be available at the Site for the construction contractor's reference and cover work associated with the REA building demolition. During the demolition work, the construction contractor shall monitor safety and health conditions and fully enforce its own site-specific HASP.

Air particulate monitoring will be conducted on a continuous basis during the demolition activities at two locations: upwind and downwind of the demolition activities. The air particulate monitoring equipment will be set up at each station. A Dataram 2000™ particulate monitor (manufactured by MIE, Inc.) will be used to record air particulate levels. All air monitoring measurements will be recorded in the field notebook. If particulate levels exceed 150 micrograms per cubic meter, work will be ceased. Water spray will be used during the demolition activities for dust control if action levels are exceeded. Water spray will be applied to control dust but at a rate to minimize impacts to operations and generation of surface runoff.

## 5.0 CONSTRUCTION DEBRIS

Construction debris will either be treated as onsite fill to re-grade the Site, or be treated as refuse and will be transported offsite or disposed of. On-site fill will be obtained from onsite-crushed masonry recycled from the building demolition. The crushing operation will be capable of providing material of 3-inch diameter or smaller. It will be substantially free from any metal (i.e., rebar) or foreign matter and debris and will be used to backfill the former basement. The construction debris that will be used to re-grade the Site will be stockpiled in staging areas for crushing, backfilling operations and offsite disposal. The staging and processing/crushing areas will be described in the construction contractor's submittals.

Debris and material staged for transportation and disposal will include all demolition debris from the REA building not used for onsite backfill, all soil stockpiles within the REA building, and all basement debris. The amount of each type of waste (i.e., non-hazardous) will be determined based on waste characterization sampling. Transportation and disposal will be performed in accordance with all applicable federal, state and local laws and regulations and the requirements of the disposal facilities. Demolition debris will be placed in containers for transport to approved disposal facilities. The debris will be wetted down and covered with tarpaulins to minimize dust generation during transport.

## 6.0 PROJECT DOCUMENTS AND SCHEDULE

### 6.1 Technical Specifications

Technical specifications will be prepared for the demolition of the REA building. The technical specifications will describe the construction contractor's responsibilities. The specifications will be prepared in the 16-division format of the Construction Specifications Institute (CSI). The specifications constitute the "Biddable Quality" documents that will be used along with other Amtrak contract documents to solicit bids from qualified contractors. The specifications will also describe the construction contractor's submittal requirements. The required submittals will include, but not limited to:

- plan for securing 39th Street Bridge;
- HASP;
- staging/crushing area plans;
- waste handling and disposal plan;
- transport routes;
- work area access and egress;
- nature, extent and location of measures provided for public protection;
- arrangements for utility disconnects;
- dust suppression methods;
- description of demolition techniques and equipment;
- details on weakening or collapsing structure;
- proposed work sequence; and
- details on personnel training and project team organization.

### 6.2 Completion Report Summary

Following completion of the REA building demolition and site restoration (i.e., grading) activities, Remedial Engineering, P.C. will prepare a final report summarizing the demolition activities. Any significant changes to the DWP will be described along with reasons for each

change. Also, the final report will include copies of oversight logs, sampling records, and any waste manifests.

### 6.3 Project Schedule

The demolition activities are anticipated to begin in January 2004. Any proposed revisions to the schedule will be discussed with the NYSDEC.

Sincerely,

REMEDIAL ENGINEERING, P.C.

Glenn Netuschil, P.E.
Senior Engineer

Brian P. Morrissey, P.E.
Principal Engineer

## 7.0 REFERENCES

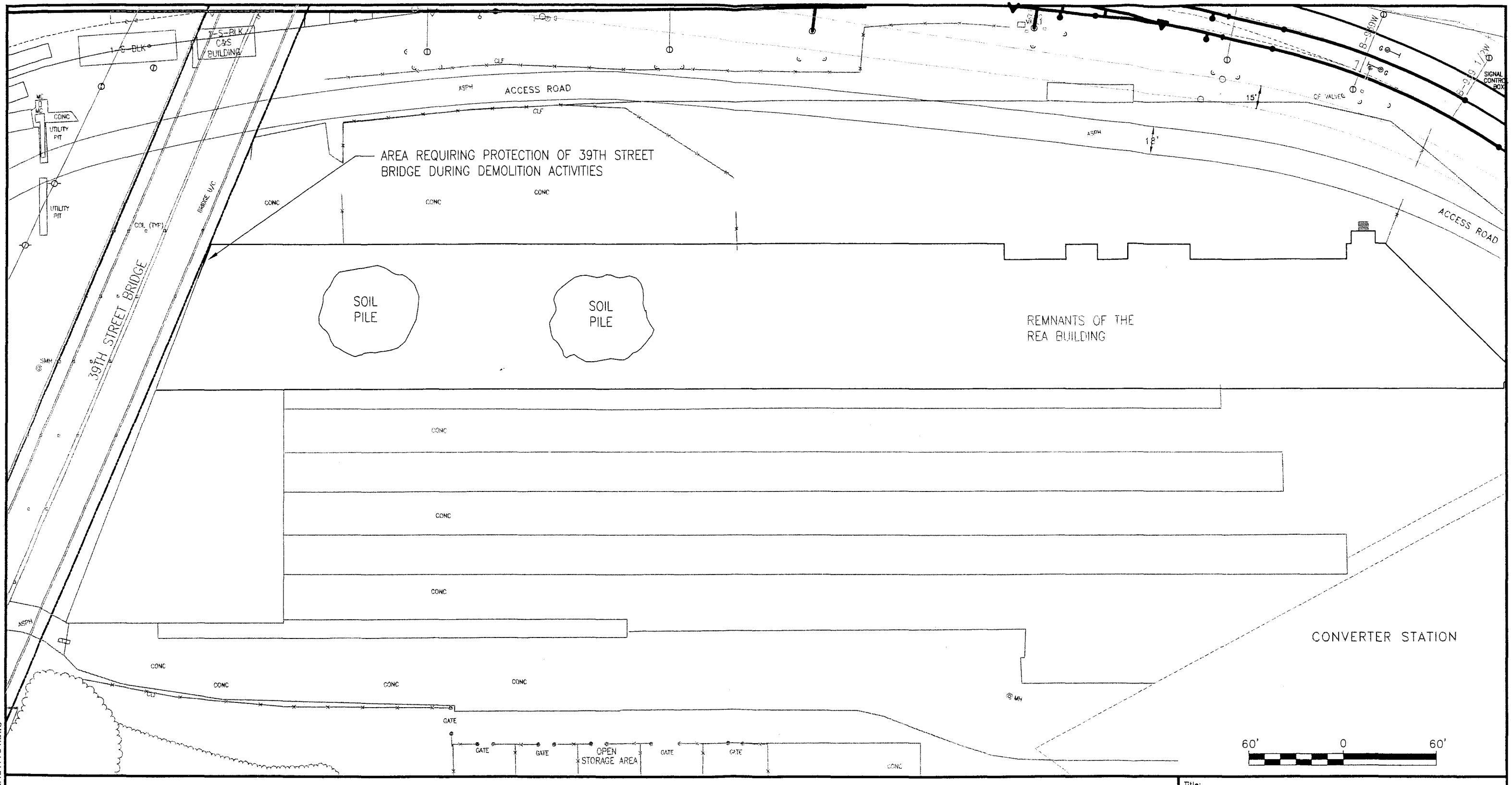
NYSDEC. 1994. Memorandum: Division of Hazardous Waste Remediation, Division of Technical and Administrative Guidance Memorandum 4046: Determination of Soil Cleanup Objectives and Cleanup Levels.

NYSDEC. 2001. Revised Soil Cleanup Criteria Tables for TAGM 4046, August 22, 2001.

Roux Associates, Inc., April 1994. Site Investigation Report, Amtrak Sunnyside Yard, Queens, New York.

Testwell Laboratories, Inc., February 2003. Inspection for Asbestos-Containing Materials, Amtrak Sunnyside Yard, Queens, New York.

# FIGURES




NOTE:

1. BASEMENT DEBRIS, WHICH ARE NOT SHOWN ON THIS FIGURE, SHALL BE DESIGNATED FOR REMOVAL UNDER THIS CONTRACT.

LEGEND

SOIL PILE — APPROXIMATE SOIL/DEBRIS STOCKPILE SIZE AND LOCATION

N

Title:

# SITE PLAN
# REA BUILDING DEMOLITION

FORMER REA BUILDING
SUNNYSIDE RAIL YARD

Prepared For: AMTRAK

ROUX ASSOCIATES, INC.
*Environmental Consulting & Management*

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| Compiled by: G.N. | Date: 13JUN03 | FIGURE |
| Prepared by: R.K. | Scale: AS SHOWN | 1 |
| Project Mgr: G.N. | Office: NY | |
| File No: AM4318301 | Project: 05543Y46 | |

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# APPENDICES

APPENDIX A

# COMMUNITY AIR MONITORING PLAN

**Former REA Building**
**Amtrak Sunnyside Yard**
**Queens, New York**

**September 26, 2003**

*Prepared for:*

**NATIONAL RAILROAD PASSENGER CORPORATION**
400 West 31st Street
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## 1.0 INTRODUCTION

This Community Air Monitoring Plan (CAMP) has been prepared to ensure that the demolition of the REA building will not adversely affect the community or the surrounding area at the Amtrak Sunnyside Yard, Queens, New York. The Plan has been prepared in accordance with the New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum #4301 (Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites) (Attachment 1), the New York State Department of Health (NYSDOH) Community Air Protocol (Attachment 2) and Roux Associates, Inc. (Roux Associates) Standard Operating Procedures.

Compliance with this CAMP is required for all Roux Associates and Remedial Engineering employees and contractors related to the demolition performing work at the REA Building.

The REA Building is located at the Amtrak Sunnyside Facility in Long Island City, New York.

### 1.1 Exposure Pathway Analysis

An exposure pathway analysis has not been performed at the REA Building to determine whether or not the fill poses a significant risk to either public health or the environment. As was discussed in the Demolition Work Plan (DWP), volatile organic compounds were not detected in previous investigations conducted at the REA building.

## 2.0 DEMOLITION SCOPE OF WORK

The REA Demolition Work Plan is designed to support the onsite demolition of the REA Building.

The REA Demolition Work Plan includes the following tasks:

- Task 1: Pre-Demolition Activities;
- Task 2: Building Demolition;
- Task 3: Grading Activities; and
- Task 4: Health and Safety Monitoring.

A description of each scope of work task is presented below.

### 2.1 Pre-Demolition Activities

The pre-demolition activities for the REA building will consist of the following activities:

- Temporary barrier installation (barricades and fencing for site control and security).
- Temporary controls (designation and preparation of equipment for precipitation run-off, dust suppression equipment, basement dewatering, erosion/sediment, and pest/rodent controls).
- Identifying and abandoning all on-site underground and aboveground utility lines and structures.
- Securing and protecting the 39th Street Bridge. The bridge will be safeguarded for the duration of the project until the demolition activities have been completed.
- Acquisition and preparation of the New York City Department of Environmental Protection Sewer Discharge Permit, where required) and making all necessary notifications.

### 2.2 Building Demolition

The demolition of the REA building will begin, as necessary, with the removal of debris (construction, non-hazardous, etc.) from within the building and the basement. If encountered within the limits of the basement area, any piping, appurtenances, miscellaneous debris will be removed for off-site disposal including any residual material that may be present. Prior to removal of the basement debris, the basement will be dewatered. The water from the basement will be treated on-site, as necessary, to meet any discharge requirements for the on-site sewer

owned by Amtrak. Following the basement dewatering and basement debris removal, the concrete slab of the basement will be fractured to allow for future drainage. Basement material will not be used for on-site backfill and will be properly disposed of.

### 2.3 Grading Activities

All concrete piling, slabs and other concrete structures removed from the aboveground portion of the REA Building will be demolished, crushed and may be used as grading or fill in designated areas of the Site including the basement, and any excess will be disposed of offsite.

### 2.4 Health and Safety Monitoring

Monitoring of air quality for health and safety will be conducted using a particulate monitor in accordance with the DWP, the contractor prepared HASP for onsite personnel and the CAMP for the general community. All activities will be documented in a field logbook.

## 3.0 MONITORING PROCEDURES FOR DEMOLITION ACTIVITIES

Air monitoring for particulates will be regularly performed during the demolition of the REA Building. The Site Health and Safety Officer (SHSO) will record wind direction and temperature during monitoring in the field logbook. All monitoring equipment will be calibrated per the owner's manual that will be kept onsite.

### 3.1 Particulate Monitoring

Particulate monitoring and fugitive dust suppression will be employed to minimize the potential for off-site exposure. Particulate monitoring will be performed prior to the demolition activities to establish background conditions.

Particulates will be continuously monitored upwind and downwind of the demolition activities. The air particulate monitoring equipment will be set up at each station (at approximately 4 ft to 5 ft above land surface) within the breathing zone. The alarm for the particulate monitoring device will be set at 150 micrograms per cubic meter ($\mu g/m^3$). If the downwind particulate levels, integrated over a period of 15 minutes, is 150 $\mu g/m^3$ greater than the upwind particulate level, or particulate measurements are greater than 100 $\mu g/m^3$ above background levels, then dust suppression techniques will be employed.

There may also be situations where the dust being generated is not detected by the monitoring equipment at or above the action level. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observations. Therefore, if dust is observed leaving the working area, additional dust suppression techniques will be employed. All readings will be recorded in the field logbook and will be available for the NYSDEC and NYSDOH personnel to review.

The following techniques will be employed to mitigate the generation and migration of fugitive dust during demolition activities:

- spraying water onto the work area during demolition;
- covering each construction debris stockpile with 6-mil plastic sheeting;

- hauling materials in properly tarped or watertight containers; and
- limiting vehicle speeds.

If the dust suppression techniques do not lower particulates to below 150 $\mu g/m^3$ and no visible dust is noted, work will be suspended until appropriate corrective measures are identified and implemented to remedy the situation.

## 4.0 REFERENCES

NYSDEC, 1989. Memorandum: Division of Hazardous Waste Remediation, Division of Technical and Administrative Guidance Memorandum 4031: Fugitive Dust Suppression and Particulate Monitoring Program.

NYSDOH, 2000. New York State Department of Health Generic Community Air Monitoring Protocol, June 20, 2000.

# ATTACHMENT 1

NYSDEC TAGM #4031



# TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM #4031

FUGITIVE DUST SUPPRESSION AND PARTICULATE MONITORING PROGRAM
AT INACTIVE HAZARDOUS WASTE SITES

**TO:** Regional Hazardous Waste Remediation Engrs., Bur. Directors & Section Chiefs

**FROM:** Michael J. O'Toole, Jr., Director, Division of Hazardous Waste Remediation

**SUBJECT:** DIVISION TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM -- FUGITIVE DUST SUPRESSION AND PARTICULATE MONITORING PROGRAM AT INACTIVE HAZARDOUS WASTE SITES

**DATE:** Oct 27, 1989

Michael J. O'Toole, Jr. (signed)

## 1. Introduction

Fugitive dust suppression, particulate monitoring, and subsequent action levels for such must be used and applied consistently during remedial activities at hazardous waste sites. This guidance provides a basis for developing and implementing a fugitive dust suppression and particulate monitoring program as an element of a hazardous waste site's health and safety program.

## 2. Background

Fugitive dust is particulate matter--a generic term for a broad class of chemically and physically diverse substances that exist as

discrete particles, liquid droplets or solids, over a wide range of sizes--which becomes airborne and contributes to air quality as a nuisance and threat to human health and the environment.

On July 1, 1987, the United States Environmental Protection Agency (USEPA) revised the ambient air quality standard for particulates so as to reflect direct impact on human health by setting the standard for particulate matter less than ten microns in diameter ($PM_{10}$); this involves fugitive dust whether contaminated or not. Based upon an examination of air quality composition, respiratory tract deposition, and health effects, $PM_{10}$ is considered conservative for the primary standard--that requisite to protect public health with an adequate margin of safety. The primary standards are 150 ug/$m^3$ over a 24-hour averaging time and 50 ug/$m^3$ over an annual averaging time. Both of these standards are to be averaged arithmetically.

There exists real-time monitoring equipment available to measure $PM_{10}$ and capable of integrating over a period of six seconds to ten hours. Combined with an adequate fugitive dust suppression program, such equipment will aid in preventing the off-site migration of contaminated soil. It will also protect both on-site personnel from exposure to high levels of dust and the public around the site from any exposure to any dust. While specifically intended for the protection of on-site personnel as well as the public, this program is not meant to replace long-term monitoring which may be required given the contaminants inherent to the site and its air quality.

## 3. Guidance

A program for suppressing fugitive dust and monitoring particulate matter at hazardous waste sites can be developed without placing an undue burden on remedial activities while still being protective of health and environment. Since the responsibility for implementing this program ultimately will fall on the party performing the work, these procedures must be incorporated into appropriate work plans. The following fugitive dust suppression and particulate monitoring program will be employed at hazardous waste sites during construction and other activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Such activities shall also include the excavation, grading, or placement of clean fill, and control measures therefore should be considered.
3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns ($PM_{10}$) with the following minimum performance standards:

   Object to be measured: Dust, Mists, Aerosols
   Size range: <0.1 to 10 microns
   Sensitivity: 0.001 $mg/m^3$
   Range: 0.001 to 10 $mg/m^3$
   Overall Accuracy: ±10% as compared to gravimetric analysis of stearic acid or reference dust

   Operating Conditions:
   Temperature: 0 to 40°C
   Humidity: 10 to 99% Relative Humidity

   Power: Battery operated with a minimum capacity of eight hours continuous operation

   Automatic alarms are suggested.

   Particulate levels will be monitored immediately downwind at the working site and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task; the P-5 Digital Dust Indicator as manufactured by MDA Scientific, Inc. or similar is appropriate.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the entity operating the equipment to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.
5. The action level will be established at 150 $ug/m^3$ over the integrated period not to exceed 15 minutes. While conservative, this short-term interval will provide a real-time

assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/$m^3$, the upwind background level must be measured immediately using the same portable monitor. If the working site particulate measurement is greater than 100 ug/$m^3$ above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see Paragraph 7). Should the action level of 150 ug/$m^3$ be exceeded, the Division of Air Resources must be notified in writing within five working days; the notification shall include a description of the control measures implemented to prevent further exceedences.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure $PM_{10}$ at or above the action level. Since this situation has the potential to migrate contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.
7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:
    1. Applying water on haul roads.
    2. Wetting equipment and excavation faces.
    3. Spraying water on buckets during excavation and dumping.
    4. Hauling materials in properly tarped or watertight containers.
    5. Restricting vehicle speeds to 10 mph.
    6. Covering excavated areas and material after excavation activity ceases.
    7. Reducing the excavation size and/or number of

excavations.

Experience has shown that utilizing the above-mentioned dust suppression techniques, within reason as not to create excess water which would result in unacceptable wet conditions, the chance of exceeding the 150 ug/$m^3$ action level at hazardous waste site remediations is remote. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. If the dust suppression techniques being utilized at the site do not lower particulates to an acceptable level (that is, below 150 ug/$m^3$ and no visible dust), work must be suspended until appropriate corrective measures are approved to remedy the situation. Also, the evaluation of weather conditions will be necessary for proper fugitive dust control--when extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended.

There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require appropriate toxics monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

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# ATTACHMENT 2

NYSDOH
Generic Community Air Monitoring Plan

# New York State Department of Health
# Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

## Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

**Continuous monitoring** will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

**Periodic monitoring** for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

## VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

## Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter ($mcg/m^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 $mcg/m^3$ above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 $mcg/m^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 $mcg/m^3$ of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.