New York State Department of Environmental Conservation
Division of Environmental Remediation, Region One
Building 40 - SUNY, Stony Brook, New York 11790-2356
Phone: (631) 444-0240 • **FAX:** (631) 444-0248
Website: www.dec.state.ny.us

Denise M. Sheehan
Acting Commissioner

October 18, 2005

Mr. Glenn Netuschil, P.E.
Roux Associates, Inc.
209 Shafter Street
Islandia, NY 11749

Re: Former Thypin Steel Site #V00336
Proposed SVE/AS Expansion Plan: September 2005

Dear Mr. Netuschil,

The New York State Department of Environmental Conservation (NYSDEC) has reviewed the referenced plan and conditionally approves it pending the following revision:

- Page 4: Per New York State Department of Health (NYSDOH) guidance, a tracer gas must be utilized to verify that infiltration of outdoor air is not occurring during soil gas sampling. The acceptable sampling methodology and protocol is available in the NYSDOH guidance document entitled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" and can be found on the NYSDOH website at www.health.state.ny.us/nysdoh/gas/svi_guidance/toc.htm.

Please incorporate this revision into the plan and re-submit four copies of the plan for NYSDEC distribution. If you should have any questions, please feel free to contact me at (631) 444-0246.

Sincerely,

Jamie Ascher
Engineering Geologist 2

cc: W. Parish
M. Menetti

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES INC

209 SHAFTER STREET
ISLANDIA, NEW YORK 11749-5074 TEL: 631-232-2600 FAX: 631-232-9898

September 20, 2005

Mr. Jamie Ascher
Engineering Geologist 2
New York State Department of Environmental Conservation
Division of Environmental Remediation
Region One
Building 40 SUNY
Stony Brook, New York 11790-2356

Re: Expansion of the Existing SVE/AS System
Former Thypin Steel, Inc. Facility, Manorhaven, New York
Agreement Index Number: V00336-1

Dear Mr. Ascher:

On behalf of MBA-Manorhaven, LLC, Roux Associates, Inc. and Remedial Engineering, P.C. (Remedial Engineering) have prepared this letter to describe the proposed expansion of the existing soil vapor extraction/air sparging (SVE/AS) system at the former Thypin Steel, Inc. facility in Manorhaven, New York (Site). Based on the results of a limited shallow groundwater investigation conducted at the Site during the months of June and July 2005, the existing SVE/AS system will be expanded to address additional areas of concern found in shallow groundwater adjacent to existing system. This letter provides a brief summary of the limited shallow groundwater investigation, description of the expanded SVE/AS system and procedures for data collection, monitoring and shutdown of the SVE/AS system.

Limited Shallow Groundwater Investigation

A limited shallow groundwater investigation was conducted at the Site during the months of June and July 2005. The limited shallow groundwater investigation consisted of the collection of groundwater samples for volatile organic compounds (VOC) analysis from existing shallow monitoring wells and Geoprobe™ groundwater sampling. Groundwater samples were collected from existing shallow monitoring wells MW-2, MW-21, MW-24, MW-25, MW-26, MW-28, MW-29S, MW-30S, MW-31S, MW-33S, MW-34S, and MW-35S. The VOC groundwater monitoring data from MW-21, MW-24, MW-25, MW-26, MW-29S, and MW-30S were non-detectable or below the ambient water quality standards. The VOC groundwater monitoring data from MW-31S, MW-33S, and MW-35S were above the ambient water quality standards. The results of the groundwater monitoring are summarized on Plate 1.

Based upon the results of the VOC groundwater samples from MW-31S, MW-33S, and MW-35S, ten Geoprobe™ locations (SB-75 to SB-84) were selected for VOC analysis. One groundwater sample was collected at each of the ten locations at the five feet below the water table interval and ten feet below water table interval. The VOC groundwater monitoring data from Geoprobe™ locations SB-75, SB-77, SB-79, and SB-84 were non-detectable or below the ambient water quality standards. The VOC groundwater monitoring data from Geoprobe™ locations SB-76, SB-78, SB-80, SB-81, SB-82, and SB-83 were above the ambient water quality standards. The results of the Geoprobe™ groundwater monitoring are summarized on Plate 1. Based on these results, the existing SVE/AS system will expanded to the area of existing monitoring well MW-35S and, to a limited extent, to the area north of MW-33S and south of existing well SVE-1 as shown on Figure 1.

Expanded SVE/AS System

The expansion of the SVE/AS system will consist of 17 proposed AS wells (AS-14 to AS-30) and four proposed SVE wells (SVE-5 to SVE-8) as shown on Figure 1. All equipment from the existing SVE/AS system will be used and the expansion only requires the addition of the 17 AS and 4 SVE wells, aboveground piping, fittings, gauges, etc. The use of the existing equipment assumes that the existing AS and SVE wells will be operated in a limited pulse mode based on the most recent operational data.

AS System

Seventeen additional AS wells will be installed at the Site. The wells will be constructed of 19 feet of 1-inch diameter Schedule 80 polyvinyl chloride (PVC) casing and one foot of number 10 slot well screen (screened interval from 19 to 20 feet below land surface [bls]), to a total depth of 20 feet bls. The AS well depths may be adjusted slightly based on field geology observation during installation. Each AS well will be equipped with manual control valves and gauges to allow for air flow and pressure adjustments to optimize the operation of the system. The AS wells will be connected to the existing aboveground 2-inch diameter Schedule 80 PVC header pipe which connects directly to the AS blower.

SVE System

Four additional SVE wells will be installed at the site. The wells will be constructed of 4-inch diameter Schedule 40 PVC to a depth of 10 feet bls. The screened interval of the SVE well will be from 5 to 10 feet bls. Each SVE well will be equipped with valves and gauges to control the vacuum and flow to each well. The SVE wells will be connected to the existing aboveground four-inch diameter Schedule 40 PVC header pipe that connects directly to the SVE blower. The discharge from the blower will continue to be treated with vapor phase carbon before discharging to the atmosphere. The vapor phase carbon consists of the existing four-200 pound vapor phase carbon vessels in series.

Expanded System Design Considerations

During the operation of the existing SVE/AS system, the radius of influence of the AS wells and SVE wells were determined. The placement of the new AS and SVE wells was

based on a 20-feet radius of influence for the AS wells and 40-feet radius of influence for the SVE wells.

During the past operation of the existing SVE/AS system, the influent to the SVE system was sampled for laboratory analysis. The results of the last influent sampling conducted on July 21, 2004 as part of the post-remedial monitoring were non-detect for VOCs. The total amount of trichloroethene (TCE) removed by the existing SVE/AS system was approximately 2 pounds, therefore, the VOC loading to the vapor phase carbon units has been very low. As a result, it is not anticipated that new vapor phase carbon units will be required. In addition, a NYSDEC Minor Air Facility Registration Form was submitted in October 2002 for the existing SVE/AS system.

Data Collection and Monitoring

The expanded SVE/AS system will be monitored following the same procedures and data collection activities conducted for the existing SVE/AS system except that the influent air to each leg of the SVE system will be monitored with a PID and additional groundwater monitoring wells will be sampled. Existing monitoring wells MW-35S, MW-2, MW-24, MW-31S, and MW-33S will be sampled for CVOCs using USEPA Method 8260. The monitoring wells will be sampled at start-up (baseline) and every two months of full-time system operation. Based on the groundwater data, the monitoring frequency for wells that continue to have consistent VOC levels below the ambient groundwater water standards may be reduced.

It is estimated that the expanded SVE/AS system will be operated in a combination of full and pulsed modes (as required) for approximately four months. The vacuum at each new SVE well, the air flow to the SVE blower, the pressure at each new AS well, and pressure at the AS blower will also be recorded.

SVE/AS System Shutdown

The expanded SVE/AS system will be shutdown when the New York State Department of Environmental Conservation (NYSDEC) Class GA standards have been met for MW-31S, MW-33S, and MW-35S, to the extent practicable. In addition, the post-remedial soil gas monitoring conducted for the existing SVE/AS system will also be conducted in the area of the expanded SVE/AS system. This soil gas post-remedial monitoring consisted of shutting down the SVE/AS system for two weeks and collecting soil gas samples from the same locations as the November 2003 and February 2004 soil gas surveys after the two-week shutdown period. One round of soil gas samples will be collected from 3 of the previous soil gas sample locations (SG-22, SG-23, and SG-24) and the four proposed additional soil gas survey points (SG-31 to SG-34) as shown on Figure 1.

The soil gas monitoring will be performed to confirm the completion of the expanded SVE/AS system but no soil gas cleanup value will be established. Based on a review of multiple previous soil gas rounds at this Site, sampling at two depth intervals (3 and 6-foot depth intervals) is not warranted. The soil gas samples will be collected from the

6-foot intervals. According to the draft "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" from the NYSDOH dated February 2005, collecting soil vapor samples at depths shallower than 5 feet below grade may be prone to negative bias due to infiltration of outdoor air. One outdoor air sample will be collected concurrently with one of the soil gas samples collected at the 6-foot interval instead of a tracer gas to verify that infiltration of outdoor is not occurring.

Please call if you have any questions or require additional information.

Sincerely,

ROUX ASSOCIATES, INC.

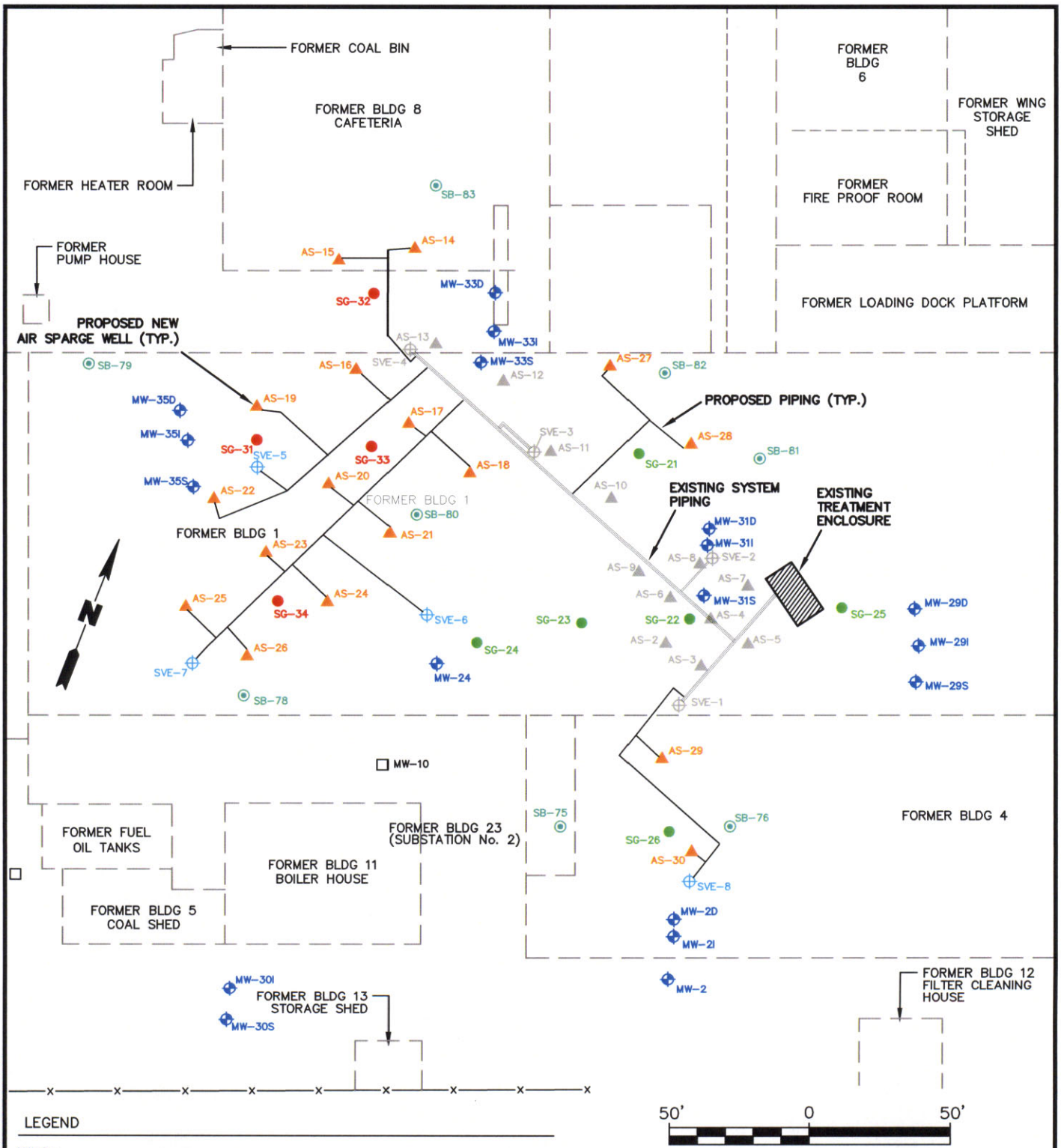
Glenn Netuschil, P.E.
Senior Engineer

REMEDIAL ENGINEERING, P.C.

Charles J. McGuckin, P.E.
Principal Engineer

Enclosure

cc: Richard Thypin, MBA–Manorhaven, LLC
Andrew A. Giaccia, Esq., Chadbourne & Parke, LLP



LEGEND

- MW-2 — LOCATION AND DESIGNATION OF EXISTING MONITORING WELL
- AS-1 — LOCATION AND DESIGNATION OF PROPOSED AIR SPARGE WELL
- SVE-1 — LOCATION AND DESIGNATION OF PROPOSED SOIL VAPOR EXTRACTION WELL

WELL DEPTH DESIGNATIONS

- D – DEEP
- I – INTERMEDIATE
- S – SHALLOW

- AS-2 — LOCATION AND DESIGNATION OF EXISTING AS WELL
- SVE-2 — LOCATION AND DESIGNATION OF EXISTING SOIL VAPOR EXTRACTION WELL
- SB-82 — LOCATION AND DESIGNATION OF GEOPROBE™ SAMPLE
- SG-23 — LOCATION AND DESIGNATION OF PREVIOUS SOIL GAS POINTS
- SG-34 — LOCATION AND DESIGNATION OF PROPOSED SOIL GAS POINT

Title:

PROPOSED SVE/AS SYSTEM EXPANSION

FORMER THYPIN STEEL FACILITY
MANORHAVEN, NEW YORK

Prepared For:

MBA MANORHAVEN, LLC
PRINCETON, NEW JERSEY

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: G.N.	Date: 09SEP05	FIGURE
Prepared by: R.K.	Scale: AS SHOWN	1
Project Mgr: G.N.	Office: NY	
File No: MBA0124201	Project: 77101Y	

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