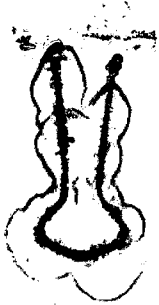


file. no. ~~8280~~ 828044. 1990-4-30. state st-kit box.  
tunnel lab analysis. P & G

# Monroe County

THOMAS R. FREY  
COUNTY EXECUTIVE



JOHN M. DAVIS, P.E.  
DIRECTOR  
716 • 274-7630

## Department of Engineering 350 East Henrietta Road • Rochester, N.Y. 14620

April 30, 1990

Mr. George Harris  
Chief, Remedial Action Section C  
Division of Hazardous Waste Remediation  
New York State  
Department of Environmental Conservation  
Room 222  
50 Wolf Road  
Albany, NY 12233-7010

RE: STATE - MT. HOPE TUNNEL  
C-36-745-10  
ROCHESTER PURE WATERS DISTRICT

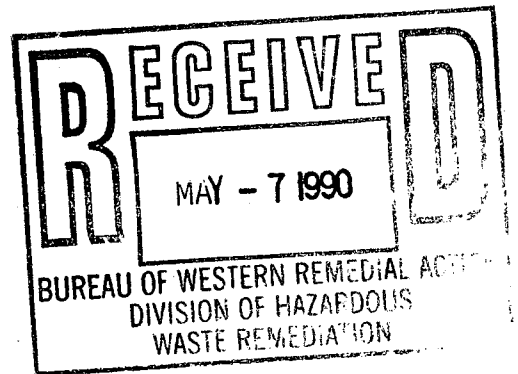
Data from the analysis of air, liquid, soil and muck samples for the period from April 16, 1990 to April 20, 1990 are enclosed for your information and use.

Sincerely,

Philip W. Steinfeldt  
Associate Engineer

/td  
Enclosures

cc: Mr. Mike Khalil, DEC, Avon, W/enclosure  
Mr. Jim Smith, H & A of New York



  
DAILY FIELD REPORT

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PROJECT:	STATE ST. - MT. HOPE TUNNEL Rochester, New York	DATE:	16 Apr. 1990
CLIENT:	STV/Seelye Stevenson Value & Knecht	PAGE:	1 of 2
CONTRACTOR:	GCF Constructors	FILE:	7433-82
WEATHER:	Clear-partly cloudy		55°

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**CONTRACTOR ACTIVITIES:**

Mined TBM tunnel from Station 47+57 to Station 48+15 (day shift), from 48+15 to 48+88 (swing shift), and from 48+88 to 49+55 (graveyard shift).

Hauled tunnel muck intermittently during the day shift. Dumped tunnel muck on spoil pile adjacent to Control Structure 41 during all three shifts.

**FIELD REPRESENTATIVE ACTIVITIES:**

S. Parker (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 1013 to 1441 hrs. The exhaust turbine was not operating from approximately 0700 to 1000 hrs. Conducted seven tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and one sample of soil excavated from the 8-ft. diameter access manhole at Site 15, and performed headspace screening using the same instrument.

P. Micciche (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 1537 to 2224 hrs. Conducted 13 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and performed headspace screening using the same instrument.

W. Lanik (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 2301 to 0630 hrs. Conducted 16 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and performed headspace screening using the same instrument.

PROJECT: STATE ST. - MT. HOPE TUNNEL  
 Rochester, New York  
 CLIENT: STV/Seelye Stevenson Value &  
 Knecht

DATE: 16 Apr. 1990  
 PAGE: 2 of 2  
 FILE: 7433-82

TEST DATA SUMMARY:

None of the action threshold levels for the targeted compounds referenced in the 1 March 1990 workplan (benzene, toluene, 1,2-DCE, methylene chloride, and vinyl chloride) were exceeded during the monitoring periods.


FIELD REPRESENTATIVE

TIME ON SITE

S. Parker	0700-1500 (8.0 hrs.)
P. Micciche	1500-2300 (8.0 hrs.)
W. Lanik	2300-0700 (8.0 hrs.)

DISTRIBUTION

STV/Seelye Stevenson: Mr. Richard Richter  
 Mr. Suki Suresh  
 Mr. Phil Steinfeldt

  
 H&A OF NEW YORK

# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: S. Parker  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 47 + 57  
 END: 48 + 15  
 ADVANCE: 58

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 16 April 1990  
 SHIFT: Day  
 DFR NO.: 39

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN*	
1013	--	--	--	--	0.04	0.08	--	--	0.05	0.23	0.19	0.51
1033	--	--	--	0.04	0.10	0.08	--	--	0.07	0.68	1.67	2.56
1113	--	--	--	--	0.05	0.07	--	--	0.04	0.32	0.16	0.57
1201	--	--	--	--	0.03	0.05	--	--	0.04	0.04	0.07	0.18
1244	--	--	--	0.03	0.07	0.03	--	0.04	0.10	0.32	0.78	1.34
1321	--	--	--	--	0.02	0.03	--	--	--	0.24	--	0.26
1441	--	--	--	0.03	0.07	0.03	--	--	0.04	0.29	1.77	2.20
0902aa	--	--	--	--	0.08	--	--	0.04	0.07	0.15	0.01	0.35

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	TCE	PCE	M-XYLENE	STYRENE	UNKNOWN*	
TM/0830	--	--	--	0.03	0.07	--	--	--	0.09	0.01	0.98	1.18
SM15/1140	--	--	--	--	--	--	--	--	--	--	--	--
TM/1320	--	--	--	--	0.14	--	--	--	0.08	0.02	3.06	3.30

**REMARKS/ VISITORS:**

Tunnel muck dumped intermittently during day shift.

Tunnel muck hauled from site intermittently until approximately 1230 hrs. during day shift.

Collected sample of soil excavated from 8 ft. diameter access manhole at Site 15 at 1140 hrs.

Sample obtained from stockpile of excavated soils adjacent to the manhole. Excavation advanced to

approximately 28.5 ft. below ground surface at time of sampling. Sample consisted of brown silty

CLAY and coarse to fine SAND, with trace cinders, trace brick fragments.

**ABBREVIATIONS:****SAMPLE TYPE:**

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

- NOTES:**
- (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
  - COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
  - (aa) INDICATES AMBIENT AIR BLANK ANALYSIS
  - METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.
  - TCE = TRICHLOROETHYLENE  
PCE = PERCHLOROETHYLENE

# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: P. Micciche  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 48 + 15  
 END: 48 + 88  
 ADVANCE: 73

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 16 April 1990  
 SHIFT: Swing  
 DFR NO.: 39

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN*	TOTAL DETECTED
1537	--	--	--	--	--	tr	--	--	0.04	0.18	--	0.22
1611	--	--	--	--	0.05	0.02	--	--	0.05	0.20	0.53	0.83
1634	--	--	--	--	--	tr	--	--	--	0.18	--	0.18
1717	--	--	--	0.03	0.07	0.03	--	0.04	0.12	--	0.82	1.08
1738	--	--	--	--	0.05	0.03	--	0.04	0.04	--	0.31	0.44
1812	--	--	--	--	--	0.02	--	--	--	--	--	--
1847	--	--	--	--	0.05	0.01	--	--	0.06	0.44	0.65	1.20
1922	--	--	--	--	0.05	0.02	--	--	0.04	0.40	0.61	1.10
2016	--	--	--	--	0.06	0.02	--	--	--	0.19	0.69	0.94
2056	--	--	--	--	0.07	0.02	--	--	0.05	0.22	0.73	1.07
2131	--	--	--	--	0.04	0.02	--	0.09	0.05	0.28	0.06	0.52
2150	--	--	--	0.02	0.07	0.02	--	--	0.07	0.43	0.90	1.49
2224	--	--	--	0.02	0.06	0.02	--	--	0.05	0.39	0.84	1.36
1754cg	--	--	--	--	--	--	--	--	--	0.12	--	0.12
2001cg	--	--	--	--	--	--	--	--	--	--	--	--
2207aa	--	--	--	--	0.09	--	--	--	--	--	--	0.09

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	M-XYLENE	O-XYLENE	STYRENE	UNKNOWN*	TOTAL DETECTED
TM/1630	--	--	--	0.16	0.18	--	--	0.11	0.14	0.14	4.17	4.90
TM/1915	--	--	--	0.13	0.10	--	--	0.08	--	0.03	3.47	3.81

REMARKS/ VISITORS:

Tunnel muck dumped intermittently throughout swing shift.

No tunnel muck hauled from site during swing shift.

No visitors to trailer during swing shift.

ABBREVIATIONS:

SAMPLE TYPE:

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

- NOTES:
1. (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
  2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
  3. (cg) INDICATES CARRIER GAS BLANK ANALYSIS.
  4. (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
  5. (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
  6. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.



# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: W. Lanik  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 48 + 88  
 END: 49 + 55  
 ADVANCE: 67

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 16-17 April 1990  
 SHIFT: Graveyard  
 DFR NO.: 39

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	
2301	--	--	--	--	0.03	0.02	--	--	0.04	0.31	0.03	0.41
2331	--	--	--	--	0.04	0.02	--	--	0.06	0.26	0.03	0.39
0002	--	--	--	--	0.03	0.03	--	--	0.03	--	0.08	0.14
0035	--	--	--	--	0.02	0.01	--	--	0.02	0.17	--	0.21
0105	--	--	--	0.02	0.07	0.02	--	--	0.05	0.20	0.96	1.30
0135	--	--	--	0.02	0.06	0.02	--	--	0.05	0.29	0.83	1.25
0205	--	--	--	0.02	0.07	0.02	--	--	0.04	0.23	0.96	1.32
0235	--	--	--	--	0.03	0.02	--	--	0.03	0.24	0.06	0.36
0305	--	--	--	--	0.07	0.01	--	--	--	0.17	0.09	0.33
0335	--	--	--	0.02	0.06	0.02	--	--	0.04	0.20	1.10	1.42
0405	--	--	--	--	0.03	0.02	--	--	--	0.15	0.06	0.24
0435	--	--	--	--	0.02	tr	--	--	--	0.14	--	0.16
0505	--	--	--	0.02	0.05	0.02	--	--	0.05	0.26	0.71	1.09
0535	--	--	--	--	0.02	0.01	--	--	--	0.09	--	0.11
0606	--	--	--	--	0.04	0.02	--	--	--	0.15	0.07	0.26
0630	--	--	--	0.02	0.06	0.03	--	--	0.05	0.12	0.84	1.09

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	
TM/2330	--	--	--	0.07	0.13	--	--	--	0.10	--	2.20	2.50
TM/0500	--	--	--	0.08	0.08	--	--	--	0.06	0.02	1.43	1.67
2348aa	--	--	--	--	0.09	--	--	--	--	--	--	0.09

REMARKS/ VISITORS:

Tunnel muck dumped intermittently throughout graveyard shift.

No tunnel muck hauled from site during graveyard shift.

No visitors to trailer during graveyard shift.

ABBREVIATIONS:

SAMPLE TYPE:

- TM TUNNEL MUCK
- TS TUNNEL SEEP
- SM# SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

NOTES:

1. (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
3. (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
4. (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
5. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.

DAILY FIELD REPORT

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<b>PROJECT:</b>	STATE ST. - MT. HOPE TUNNEL Rochester, New York	<b>DATE:</b> 17 Apr. 1990
<b>CLIENT:</b>	STV/Seelye Stevenson Value & Knecht	<b>PAGE:</b> 1 of 2
<b>CONTRACTOR:</b>	GCF Constructors	<b>FILE:</b> 7433-82
<b>WEATHER:</b>	Mostly cloudy 34°	

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CONTRACTOR ACTIVITIES:

Mined TBM tunnel from Station 49+55 to Station 49+98 (day shift), from 49+98 to 50+52 (swing shift), and from 50+52 to 51+25 (graveyard shift).

Hauled tunnel muck intermittently during the day shift and until approximately 1615 hrs. during the swing shift. Dumped tunnel muck on the spoil pile adjacent to Control Structure 41 during all three shifts.

FIELD REPRESENTATIVE ACTIVITIES:

S. Parker (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 0701 to 1415 hrs. Conducted 13 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and one sample of soil excavated from the 8-ft. diameter access manhole at Site 15, and performed headspace screening using the same instrument.

P. Micciche (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 1513 to 2234 hrs. Conducted 14 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and performed headspace screening using the same instrument.

W. Lanik (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 2308 to 0605 hrs. Conducted 15 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and performed headspace screening using the same instrument.

PROJECT: STATE ST. - MT. HOPE TUNNEL DATE: 17 Apr. 1990  
Rochester, New York PAGE: 2 of 2  
CLIENT: STV/Seelye Stevenson Value & FILE: 7433-82  
Knecht

**TEST DATA SUMMARY:**

None of the action threshold levels for the targeted compounds referenced in the 1 March 1990 workplan (benzene, toluene, 1,2-DCE, methylene chloride, and vinyl chloride) were exceeded during the monitoring periods.

**FIELD REPRESENTATIVE**

**TIME ON SITE**

S. Parker	0700-1515 (8.25 hrs.)
P. Micciche	1500-2300 (8.0 hrs.)
W. Lanik	2300-0700 (8.0 hrs.)

**DISTRIBUTION**

STV/Seelye Stevenson: Mr. Richard Richter  
Mr. Suki Suresh  
Mr. Phil Steinfeldt

  
H&A OF NEW YORK

# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: S. Parker  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 49 + 55  
 END: 49 + 98  
 ADVANCE: 43

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 17 April 1990  
 SHIFT: Day  
 DFR NO.: 40

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	TOTAL DETECTED
0706	--	--	--	--	0.04	0.02	--	--	0.02	0.16	0.03	0.25
0758	--	--	--	--	0.03	0.02	--	--	0.04	0.24	--	0.31
0844	--	--	--	--	0.02	0.02	--	--	0.03	0.18	--	0.23
0924	--	--	--	0.02	0.05	0.04	--	--	--	0.20	0.90	1.17
1002	--	--	--	--	0.02	0.03	--	--	--	--	--	0.02
1038	--	--	--	0.02	0.06	0.04	--	--	0.05	0.15	1.13	1.41
1131	--	--	--	--	--	0.02	--	--	--	0.16	0.08	0.24
1152	--	--	--	--	0.01	0.01	--	--	0.05	0.02	0.26	0.34
1210	--	--	--	--	--	0.03	--	--	--	0.09	--	0.09
1244	--	--	--	--	--	0.04	--	--	--	--	--	--
1302	--	--	--	--	0.03	tr	--	--	--	0.11	0.03	0.17
1329	--	--	--	--	--	0.02	--	--	--	0.06	0.02	0.08
1415	--	--	--	--	--	0.02	--	--	--	0.11	--	0.11
1022aa	--	--	--	--	0.02	--	--	--	--	0.10	0.08	0.20
1227cg	--	--	--	--	--	--	--	--	0.04	0.05	--	0.09

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	TCE	PCE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	TOTAL DETECTED
TM/0905	--	--	--	0.09	0.11	--	--	--	0.06	--	1.49	1.75
SM15/1425	--	--	--	--	--	--	0.09	--	--	--	--	0.09
TM/1435	--	--	--	--	--	--	--	--	--	--	0.02	0.02

REMARKS/ VISITORS:

Tunnel muck dumped intermittently throughout day shift.

Tunnel muck hauled from site throughout day shift.

Collected sample of soil excavated from 8 ft. diameter access manhole at Site 15 at 1425 hrs. Sample obtained from stockpile of excavated soil adjacent to the manhole. Excavation advanced to approximately 30 ft. below ground surface at time of sampling. Sample consisted of brown moist fill visually classified as silty medium to fine SAND, with trace clay, trace brick fragments.

ABBREVIATIONS:

SAMPLE TYPE:

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

NOTES:

1. (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
3. (cg) INDICATES CARRIER GAS BLANK ANALYSIS.
4. (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
5. (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
6. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.
7. TCE = TRICHLOROETHYLENE  
PCE = PERCHLOROETHYLENE

# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: P. Micciche  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 49 + 98  
 END: 50 + 52  
 ADVANCE: 54

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 17 April 1990  
 SHIFT: Swing  
 DFR NO.: 40

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	
1513	--	--	--	0.02	0.07	0.01	--	--	0.04	0.14	0.87	1.14
1607	--	--	--	--	--	0.02	--	--	--	--	--	--
1622	--	--	--	--	--	0.02	--	--	--	0.14	--	0.14
1703	--	--	--	--	0.05	0.04	--	--	0.05	--	0.45	0.55
1747	--	--	--	--	0.09	0.03	--	--	--	--	0.75	0.84
1825	--	--	--	--	--	0.03	--	--	--	0.17	--	0.17
1852	--	--	--	--	0.08	0.03	--	--	--	0.15	0.05	0.28
1915	--	--	--	--	0.05	0.03	--	--	--	0.22	0.80	1.07
1935	--	--	--	--	--	--	--	--	--	--	--	--
2041	--	--	--	--	--	0.03	--	--	--	0.11	--	0.11
2119	--	--	--	--	--	0.02	--	--	--	--	--	--
2141	--	--	--	--	--	0.01	--	0.05	--	0.10	--	0.15
2216	--	--	--	--	0.04	tr	--	0.07	0.06	0.19	--	0.36
2234	--	--	--	--	--	0.01	--	--	--	0.30	0.13	0.43
1551cg	--	--	0.06	0.03	0.08	--	--	0.08	0.05	--	--	0.30
2016aa	--	--	--	--	0.03	--	--	--	--	--	--	0.03

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	
TM/1630	--	--	--	0.11	0.12	--	--	--	0.07	0.06	2.81	3.17
TM/1920	--	--	--	0.11	0.11	--	--	--	0.07	0.07	3.23	3.59

REMARKS/ VISITORS:

Dumped tunnel muck intermittently until approximately 2100 hrs. during swing shift.

Hauled tunnel muck from site intermittently until approximately 1615 hrs. during swing shift.

No visitors to trailer during swing shift.

ABBREVIATIONS:

SAMPLE TYPE:

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

NOTES:

1. (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
3. (cg) INDICATES CARRIER GAS BLANK ANALYSIS.
4. (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
5. (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
6. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.



# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: W. Lanik  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 50 + 52  
 END: 51 + 25  
 ADVANCE: 73

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 17-18 April 1990  
 SHIFT: Graveyard  
 DFR NO.: 40

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN*	TOTAL DETECTED
2308	--	--	--	--	0.08	0.01	--	--	--	0.29	0.69	1.06
2336	--	--	--	0.02	0.06	0.02	--	--	--	0.19	0.83	1.10
0035	--	--	--	--	0.09	0.02	--	--	--	0.15	0.20	0.44
0105	--	--	--	--	0.02	0.01	--	--	--	0.17	0.02	0.21
0135	--	--	--	0.02	0.06	0.02	--	--	--	0.23	0.85	1.16
0205	--	--	--	--	0.05	0.01	--	--	0.04	0.24	0.82	1.15
0235	--	--	--	0.02	0.05	0.02	--	--	--	0.24	0.92	1.23
0305	--	--	--	--	0.01	tr	--	--	--	0.09	0.01	0.11
0335	--	--	--	--	0.03	0.01	--	--	--	0.13	0.02	0.18
0405	--	--	--	--	0.01	0.01	--	--	--	0.11	--	0.12
0433	--	--	--	--	0.01	0.01	--	--	--	0.14	--	0.15
0505	--	--	--	0.02	0.05	0.01	--	--	0.05	0.29	0.69	1.10
0535	--	--	--	--	0.01	tr	--	--	--	0.10	--	0.11
0605	--	--	--	0.02	0.06	0.01	--	--	--	0.09	0.81	0.98
0635	--	--	--	--	0.03	0.01	--	--	--	0.12	0.02	0.17
0350aa	--	--	--	--	0.03	--	--	--	--	--	--	0.03

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN*	TOTAL DETECTED
TM/2345	--	--	--	0.03	0.05	--	--	--	0.03	--	0.62	0.73
TM/0415	--	--	--	0.07	0.10	--	--	--	0.06	0.08	1.46	1.77

REMARKS/ VISITORS:

Tunnel muck dumped intermittently throughout graveyard shift.

No tunnel muck hauled from site during graveyard shift.

No visitors to trailer during graveyard shift.

ABBREVIATIONS:

SAMPLE TYPE:

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

- NOTES:
1. (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
  2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
  3. (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
  4. (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
  5. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.

DAILY FIELD REPORT

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<b>PROJECT:</b>	STATE ST. - MT. HOPE TUNNEL Rochester, New York	<b>DATE:</b>	18 Apr. 1990
<b>CLIENT:</b>	STV/Seelye Stevenson Value & Knecht	<b>PAGE:</b>	1 of 2
<b>CONTRACTOR:</b>	GCF Constructors	<b>FILE:</b>	7433-82
<b>WEATHER:</b>	Mostly cloudy 38°		

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CONTRACTOR ACTIVITIES:

Mined TBM tunnel from Station 51+25 to Station 51+49 (day shift), from 51+49 to 52+27 (swing shift), and from 52+27 to 52+93 (graveyard shift).

Hauled tunnel muck intermittently during the day shift. Dumped tunnel muck on the spoil pile adjacent to Control Structure 41 during all three shifts.

FIELD REPRESENTATIVE ACTIVITIES:

P. Micciche (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 0701 to 1458 hrs. Conducted 15 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and performed headspace screening using the same instrument. No soil samples were obtained from Site 15 as no excavation was performed.

S. Parker (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 1550 to 2251 hrs. Conducted 13 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and performed headspace screening using the same instrument.

W. Lanik (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 2311 to 0630 hrs. Conducted 16 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and performed headspace screening using the same instrument.

PROJECT: STATE ST. - MT. HOPE TUNNEL DATE: 18 Apr. 1990  
Rochester, New York PAGE: 2 of 2  
CLIENT: STV/Seelye Stevenson Value & FILE: 7433-82  
Knecht

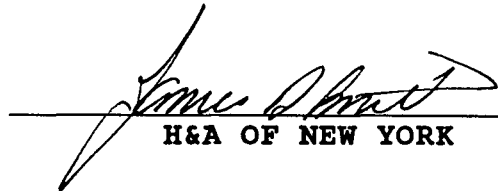
TEST DATA SUMMARY:

None of the action threshold levels for the targeted compounds referenced in the 1 March 1990 workplan (benzene, toluene, 1,2-DCE, methylene chloride, and vinyl chloride) were exceeded during the monitoring periods.

<u>FIELD REPRESENTATIVE</u>	<u>TIME ON SITE</u>
P. Micciche	0700-1500 (8.0 hrs.)
S. Parker	1500-2300 (8.0 hrs.)
W. Lanik	2300-0700 (8.0 hrs.)

DISTRIBUTION

STV/Seelye Stevenson: Mr. Richard Richter  
Mr. Suki Suresh  
Mr. Phil Steinfeldt

  
H&A OF NEW YORK

# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: P. Micciche  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 51 + 25  
 END: 51 + 49  
 ADVANCE: 24

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 18 April 1990  
 SHIFT: Day  
 DFR NO.: 41

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWNNS*	
0701	—	—	—	—	0.03	tr	—	—	—	—	—	0.03
0758	—	—	—	0.02	0.06	0.01	—	—	0.06	0.22	0.87	1.23
0831	—	—	—	—	0.06	0.02	—	—	—	—	0.62	0.68
0910	—	—	—	—	—	0.01	—	—	—	0.13	—	0.13
0928	—	—	—	—	0.05	0.02	—	—	—	—	0.74	0.79
0959	—	—	—	—	0.04	0.02	—	—	—	—	0.07	0.11
1023	—	—	—	—	—	tr	—	—	—	—	0.07	0.07
1106	—	—	—	—	—	tr	—	—	—	—	—	—
1143	—	—	—	—	—	0.01	—	—	—	0.13	—	0.13
1234	—	—	—	—	—	0.01	—	—	—	—	—	—
1252	—	—	—	—	0.03	0.01	—	—	—	0.11	0.34	0.48
1325	—	—	—	—	—	0.01	—	—	—	0.13	—	0.13
1353	—	—	—	—	—	0.01	—	—	—	—	—	—
1422	—	—	—	—	—	0.02	—	—	—	—	0.04	0.04
1458	—	—	—	—	—	0.01	—	—	—	0.13	—	0.13

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE	TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
		VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWNNS*	
TM/0745		—	—	—	0.07	0.07	—	—	—	0.04	—	2.25	2.43
TM/1340		—	—	—	0.05	0.07	—	—	—	0.04	—	1.04	1.20
0742cg		—	—	—	—	0.03	—	—	0.10	0.05	0.14	—	0.32
0814aa		—	—	—	—	0.03	—	—	—	—	0.17	—	0.20

REMARKS/ VISITORS:

Tunnel muck dumped on spoil pile and hauled from site intermittently during the day shift.

No soil samples were obtained from Site 15 as no excavation was performed during the day shift.

ABBREVIATIONS:

SAMPLE TYPE:

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

NOTES:

1. (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
3. (cg) INDICATES CARRIER GAS BLANK ANALYSIS.
4. (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
5. (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
6. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.

# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: S. Parker  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 51 + 49  
 END: 52 + 27  
 ADVANCE: 78

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 18 April 1990  
 SHIFT: Swing  
 DFR NO.: 41

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	
1550	—	—	—	0.01	0.08	0.01	—	0.03	0.06	0.29	0.31	0.78
1638	—	—	—	0.02	0.06	0.02	—	—	0.24	0.26	0.75	1.33
1723	—	—	—	—	0.03	tr	—	—	0.04	0.33	0.02	0.42
1801	—	—	—	0.02	0.05	0.02	—	—	0.04	0.46	0.95	1.52
1910	—	—	—	—	0.04	0.01	—	—	—	0.29	—	0.33
1927	—	—	—	0.02	0.05	0.02	—	—	0.05	0.39	0.70	1.21
2018	—	—	—	0.02	0.05	0.01	—	—	0.03	0.22	0.84	1.16
2033	—	—	—	0.02	0.09	—	—	—	—	0.23	0.85	1.19
2107	—	—	—	0.03	0.11	—	—	—	0.06	—	0.83	1.03
2143	—	—	—	—	0.02	0.02	—	—	—	0.19	0.04	0.25
2200	—	—	—	—	0.04	tr	—	—	0.03	0.18	0.06	0.31
2218	—	—	—	0.02	0.05	0.01	—	—	0.04	—	0.88	0.99
2251	—	—	—	—	—	0.01	—	—	—	0.22	0.03	0.25
2236cg	—	—	—	—	0.07	—	—	—	0.16	0.16	0.02	0.41

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	
TM/1700	—	—	—	0.16	0.19	—	—	—	0.11	0.04	4.57	5.07
TM/2045	—	—	—	0.06	0.09	—	—	—	0.07	—	0.98	1.20

REMARKS/ VISITORS:

Tunnel muck dumped intermittently during swing shift.

No tunnel muck hauled from site during swing shift.

No visitors to trailer during swing shift.

ABBREVIATIONS:

SAMPLE TYPE:

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

- NOTES:
1. (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
  2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
  3. (cg) INDICATES CARRIER GAS BLANK ANALYSIS.
  4. (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
  5. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.



# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: W. Lanik  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 52 + 27  
 END: 52 + 93  
 ADVANCE: 66

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 18-19 April 1990  
 SHIFT: Graveyard  
 DFR NO.: 41

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	TOTAL DETECTED
2311	—	—	—	0.02	0.05	0.01	—	—	—	0.48	0.67	1.22
2335	—	—	—	0.02	0.05	0.02	—	—	0.04	0.18	0.74	1.03
0006	—	—	—	0.03	0.08	0.02	—	0.04	0.10	0.58	0.82	1.65
0037	—	—	—	—	0.02	0.01	—	0.05	0.05	0.44	—	0.56
0105	—	—	—	—	—	tr	—	—	—	0.22	—	0.22
0135	—	—	—	—	0.02	0.01	—	—	—	0.17	—	0.19
0205	—	—	—	0.02	0.06	0.01	—	—	0.06	0.24	0.76	1.14
0235	—	—	—	0.02	0.06	0.01	—	—	0.06	0.37	0.81	1.32
0305	—	—	—	—	0.04	0.02	—	0.04	0.04	0.18	0.02	0.32
0335	—	—	—	—	0.02	0.01	—	—	—	0.17	—	0.19
0405	—	—	—	—	0.04	0.02	—	—	—	0.17	0.08	0.29
0435	—	—	—	0.02	0.08	0.02	—	—	0.06	0.30	0.88	1.34
0505	—	—	—	0.03	0.02	0.02	—	—	0.02	0.22	0.06	0.35
0536	—	—	—	0.02	0.05	0.02	—	—	0.05	0.31	0.68	1.11
0600	—	—	—	0.02	0.05	0.01	—	—	0.02	0.29	0.70	1.08
0630	—	—	—	0.02	0.06	0.02	—	—	0.06	0.26	0.88	1.28

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	TOTAL DETECTED
TM/2345	—	—	—	0.07	0.12	—	—	—	0.09	0.03	1.14	1.45
TM/0410	—	—	—	0.18	0.29	—	—	—	0.18	0.03	5.88**	6.56
TM/0410D	—	—	—	0.10	0.13	—	—	—	0.08	—	2.12	2.43
0046aa	—	—	—	—	0.05	—	—	—	—	0.08	—	0.13

**REMARKS/ VISITORS:**

Tunnel muck dumped intermittently during graveyard shift.

No tunnel muck hauled from site during graveyard shift.

No visitors to trailer during graveyard shift.

**ABBREVIATIONS:****SAMPLE TYPE:**

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

- NOTES:**
- (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
  - COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
  - (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
  - (D) INDICATES DUPLICATE ANALYSIS.
  - (\*\*) INDICATES IMPRECISE RESULT DUE TO OFF-SCALE CHROMATOGRAM PEAKS FOR UNKNOWN COMPOUNDS. SEE DUPLICATE ANALYSIS FOR MORE PRECISE CONCENTRATION OF UNKNOWNNS. ALL OTHER CONCENTRATIONS REPORTED IN THE ORIGINAL ANALYSIS ARE BASED ON ON-SCALE CHROMATOGRAM PEAKS, AND THEREFORE ARE MORE PRECISE THAN THOSE IN THE DUPLICATE ANALYSIS.
  - (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
  - METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.

DAILY FIELD REPORT

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PROJECT:	STATE ST. - MT. HOPE TUNNEL Rochester, New York	DATE:	19 Apr. 1990
CLIENT:	STV/Seelye Stevenson Value & Knecht	PAGE:	1 of 2
CONTRACTOR:	GCF Constructors	FILE:	7433-82
WEATHER:	Clear 60°		

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CONTRACTOR ACTIVITIES:

Mined TBM tunnel from Station 52+93 to Station 53+33 (day shift), from 53+33 to 54+13 (swing shift), and from 54+13 to 54+84 (graveyard shift).

Hauled tunnel muck intermittently during the day shift and until approximately 1630 hrs. during the swing shift. Dumped tunnel muck on the spoil pile adjacent to Control Structure 41 during all three shifts.

FIELD REPRESENTATIVE ACTIVITIES:

P. Micciche (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 0712 to 1440 hrs. Conducted 16 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and one sample of soil excavated from the 8-ft. diameter access manhole at Site 15, and performed headspace screening using the same instrument.

S. Parker (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 53+33 to 54+13 hrs. Conducted 15 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and performed headspace screening using the same instrument.

W. Lanik (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 2305 to 0630 hrs. Conducted 16 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and performed headspace screening using the same instrument.

PROJECT: STATE ST. - MT. HOPE TUNNEL  
Rochester, New York  
CLIENT: STV/Seelye Stevenson Value &  
Knecht

DATE: 19 Apr. 1990  
PAGE: 2 of 2  
FILE: 7433-82

**TEST DATA SUMMARY:**

None of the action threshold levels for the targeted compounds referenced in the 1 March 1990 workplan (benzene, toluene, 1,2-DCE, methylene chloride, and vinyl chloride) were exceeded during the monitoring periods.

**FIELD REPRESENTATIVE**

P. Micciche

S. Parker

W. Lanik

**TIME ON SITE**

0700-1500

(8.0 hrs.)

1500-2315

(8.25 hrs.)

2300-0700

(8.0 hrs.)

**DISTRIBUTION**

STV/Seelye Stevenson: Mr. Richard Richter  
Mr. Suki Suresh  
Mr. Phil Steinfeldt

  
H&A OF NEW YORK

# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: P. Micciche  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 52 + 93  
 END: 53 + 33  
 ADVANCE: 40

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 19 April 1990  
 SHIFT: Day  
 DFR NO.: 42

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN'S*	
0712	—	—	—	0.02	0.06	0.02	—	—	0.05	0.43	0.94	1.50
0814	—	—	—	—	0.03	0.02	—	—	0.06	0.24	—	0.33
0848	—	—	—	—	0.03	tr	—	—	—	0.17	—	0.20
0907	—	—	—	—	—	0.01	—	—	—	0.17	—	0.17
0929	—	—	—	—	—	tr	—	—	—	0.16	—	0.16
0954	—	—	—	—	—	0.01	—	—	—	0.24	—	0.24
1031	—	—	—	—	0.05	0.01	—	—	—	0.25	0.37	0.67
1051	—	—	—	—	0.03	0.02	—	—	—	—	—	0.03
1112	—	—	—	—	0.07	0.02	—	—	—	0.31	0.74	1.12
1143	—	—	—	—	0.05	0.02	—	—	0.05	—	0.51	0.61
1217	—	—	—	—	—	tr	—	—	—	0.16	—	0.16
1255	—	—	—	—	0.05	0.01	—	—	0.04	0.29	0.62	1.00
1331	—	—	—	—	0.05	0.02	—	—	0.04	0.40	0.52	1.01
1354	—	—	—	—	0.05	0.01	—	—	—	0.23	0.59	0.87
1421	—	—	—	—	0.16	0.01	—	—	—	0.22	0.67	1.05
1440	—	—	—	—	0.20	tr	—	—	0.05	—	0.98	1.23

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	TCE	PCE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN'S*	
TM/0935	—	—	—	0.04	0.07	—	—	—	0.05	—	1.10	1.26
TM/1145	—	—	—	0.09	0.12	—	—	—	0.06	—	1.69	2.16
SM15/1100	—	—	—	—	—	0.04	—	—	—	—	—	0.04
0755cg	—	—	0.03	0.03	0.07	—	—	0.08	0.08	—	—	0.29
0830aa	—	—	—	—	0.12	—	—	—	—	—	—	0.12

REMARKS/ VISITORS:

Tunnel muck dumped and hauled from site intermittently during day shift.

Collected sample of soil excavated from 8-ft. diameter access manhole at Site 15 at 1100 hrs. Sample obtained

from stockpile of excavated soils adjacent to the manhole. Excavation advanced to approximately 32.5 ft.

below ground surface at time of sampling. Sample consisted of brown FILL, comprised of cinders and slag,

with some fine gravel, little clay, trace brick fragments.

No visitors to trailer during day shift.

ABBREVIATIONS:

SAMPLE TYPE:

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

NOTES:

1. (") UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
3. (cg) INDICATES CARRIER GAS BLANK ANALYSIS.
4. (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
5. (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
6. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.
7. TCE = TRICHLOROETHYLENE  
PCE = PERCHLOROETHYLENE

# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: S. Parker  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 53 + 33  
 END: 54 + 13  
 ADVANCE: 80

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 19 April 1990  
 SHIFT: Swing  
 DFR NO.: 42

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN*	TOTAL DETECTED
1501	--	--	--	--	--	0.01	--	--	--	0.17	--	0.17
1538	--	--	--	--	0.03	0.01	--	0.04	0.08	0.18	--	0.33
1554	--	--	--	--	0.06	0.01	--	--	--	0.33	0.42	0.81
1618	--	--	--	--	0.05	0.01	--	--	0.04	0.34	0.43	0.86
1705	--	--	--	--	0.03	0.02	--	--	--	0.34	0.70	1.07
1726	--	--	--	--	0.05	0.01	--	--	0.05	0.48	0.44	1.02
1753	--	--	--	--	0.06	0.01	--	--	--	0.80	0.48	1.34
1829	--	--	--	0.02	0.07	0.01	--	0.06	0.11	0.46	0.47	1.19
1856	--	--	--	--	0.05	0.01	--	--	0.07	0.32	0.50	0.94
1944	--	--	--	--	0.05	0.01	--	--	0.05	0.25	0.55	0.90
2027	--	--	--	--	0.05	0.01	--	--	0.06	0.32	0.63	1.06
2114	--	--	--	0.02	0.09	0.02	--	--	0.11	0.36	0.67	1.25
2156	--	--	--	--	--	tr	--	--	0.05	0.24	--	0.29
2228	--	--	--	--	--	tr	--	--	0.05	0.20	--	0.25
2247	--	--	--	--	0.05	0.01	--	--	0.08	0.22	0.62	0.95
2213cg	--	--	--	--	--	--	--	--	--	0.09	--	0.09

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN*	TOTAL DETECTED
TM/1550	--	--	--	0.11	0.17	--	--	--	0.08	--	2.35	2.71
TM/2050	--	--	--	0.09	0.12	--	--	--	0.09	0.07	2.92	3.29

REMARKS/ VISITORS:

Tunnel muck dumped intermittently during swing shift.

Tunnel muck hauled from site intermittently until approximately 1630 hrs. during swing shift.

No visitors to trailer during swing shift.

ABBREVIATIONS:

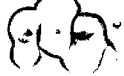
SAMPLE TYPE:

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

NOTES:

1. (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
3. (cg) INDICATES CARRIER GAS BLANK ANALYSIS.
4. (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
5. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.





# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL

TUNNEL HEADINGS AT

FILE: 7433-82

CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT

START: 54 + 13

PAGE: 1 OF 2

H&A REPRESENTATIVE: W. Lanik

END: 54 + 84

DATE: 19-20 April 1990

CHECKED BY: P. Micciche

ADVANCE: 71

SHIFT: Graveyard

DFR NO.: 42

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN*	
2305	--	--	--	--	0.05	0.01	--	--	0.05	0.34	0.54	0.98
2331	--	--	--	--	0.07	0.01	--	--	--	0.27	0.60	0.94
0001	--	--	--	--	0.01	0.01	--	--	--	0.12	--	0.13
0031	--	--	--	0.02	0.05	0.01	--	--	0.04	0.22	0.58	0.91
0100	--	--	--	0.02	0.05	0.01	--	--	0.06	0.31	0.73	1.17
0130	--	--	--	0.02	0.06	0.02	--	--	0.08	0.30	0.77	1.21
0200	--	--	--	0.02	0.05	0.02	--	--	0.05	0.28	0.73	1.13
0230	--	--	--	0.02	0.07	0.02	--	--	0.04	0.21	0.83	1.17
0300	--	--	--	--	0.03	0.01	--	--	--	--	--	0.03
0330	--	--	--	--	0.04	0.01	--	--	0.03	0.17	0.08	0.32
0400	--	--	--	0.02	0.05	0.02	--	--	0.04	0.22	0.65	0.98
0430	--	--	--	0.02	0.06	0.02	--	--	0.04	0.31	0.79	1.22
0500	--	--	--	--	0.04	0.02	--	--	0.03	0.28	0.33	0.68
0530	--	--	--	--	0.02	0.02	--	--	--	0.07	0.09	0.18
0600	--	--	--	0.02	0.05	0.02	--	--	--	0.24	0.77	1.08
0630	--	--	--	0.02	0.07	0.02	--	--	--	0.20	0.82	1.11

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN*	
TM/0005	--	--	--	0.04	0.11	--	--	--	0.07	--	0.96	1.18
TM/0500	--	--	--	0.06	0.14	--	--	--	0.10	0.12	0.91	1.33
2344aa	--	--	--	--	0.10	--	--	--	--	--	--	0.10



**REMARKS/ VISITORS:**

Tunnel muck dumped intermittently during graveyard shift.

No tunnel muck hauled from site during graveyard shift.

No visitors to trailer during graveyard shift.

**ABBREVIATIONS:**

**SAMPLE TYPE:**

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

**NOTES:**

1. (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
3. (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
4. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.

DAILY FIELD REPORT

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<b>PROJECT:</b>	STATE ST. - MT. HOPE TUNNEL Rochester, New York	<b>DATE:</b>	20 Apr. 1990
<b>CLIENT:</b>	STV/Seelye Stevenson Value & Knecht	<b>PAGE:</b>	1 of 2
<b>CONTRACTOR:</b>	GCF Constructors	<b>FILE:</b>	7433-82
<b>WEATHER:</b>	Cloudy, occasional showers		50°

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CONTRACTOR ACTIVITIES:

Mined TBM tunnel from Station 54+85 to Station 55+24 (graveyard shift). No mining activity was conducted during the day or swing shifts.

Hauled tunnel muck intermittently during the day shift and until approximately 1530 hrs. during the swing shift. Dumped tunnel muck on the spoil pile adjacent to Control Structure 41 during the day and graveyard shifts. No tunnel muck was dumped during the swing shift.

FIELD REPRESENTATIVE ACTIVITIES:

P. Micciche (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 0700 to 1405 hrs. Conducted 14 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained one tunnel muck sample from the spoil pile and one sample of soil excavated from the 8-ft. diameter access manhole at Site 15, and performed headspace screening using the same instrument.

Obtained routine weekly tunnel muck sample in accordance with the 1 March 1990 workplan, and delivered to General Testing Co. for analysis.

S. Parker (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 1512 to 2245 hrs. Conducted 15 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

No tunnel muck samples were obtained as no muck was dumped during the swing shift.

W. Lanik (H&A) performed routine air monitoring of the tunnel ventilation exhaust from 2310 to 0630 hrs. Conducted 16 tunnel exhaust air screenings using the Photovac 10s70 gas chromatograph.

Obtained two tunnel muck samples from the spoil pile and performed headspace screening using the same instrument.

PROJECT: STATE ST. - MT. HOPE TUNNEL DATE: 20 Apr. 1990  
Rochester, New York PAGE: 2 of 2  
CLIENT: STV/Seelye Stevenson Value & FILE: 7433-82  
Knecht

**TEST DATA SUMMARY**

None of the action threshold levels for the targeted compounds referenced in the 1 March 1990 workplan (benzene, toluene, 1,2-DCE, methylene chloride, and vinyl chloride) were exceeded during the monitoring periods.

**FIELD REPRESENTATIVE****TIME ON SITE**

P. Micciche	0700-1430 (7.5 hrs.)
S. Parker	1500-2300 (8.0 hrs.)
W. Lanik	2300-0700 (8.0 hrs.)

**DISTRIBUTION**

STV/Seelye Stevenson: Mr. Richard Richter  
Mr. Suki Suresh  
Mr. Phil Steinfeldt

  
H&A OF NEW YORK

# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: P. Micciche  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 54 + 84  
 END: 54 + 84  
 ADVANCE: 0

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 20 April 1990  
 SHIFT: Day  
 DFR NO.: 43

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	TOTAL DETECTED
0700	—	—	—	0.02	0.06	0.02	—	—	0.06	0.29	0.93	1.36
0729	—	—	—	—	—	tr	—	—	0.02	0.13	—	0.15
0801	—	—	—	—	—	tr	—	—	—	—	—	—
0833	—	—	—	—	—	tr	—	—	—	0.09	—	0.09
0857	—	—	—	—	—	tr	—	—	—	0.09	—	0.09
0939	—	—	—	—	—	tr	—	—	—	0.19	—	0.19
1000	—	—	—	—	—	0.02	—	—	—	0.12	0.02	0.14
1032	—	—	—	—	—	0.01	—	—	—	0.14	0.03	0.17
1058	—	—	—	—	—	tr	—	—	—	0.10	—	0.10
1207	—	—	—	—	—	0.01	—	—	—	0.11	—	0.11
1230	—	—	—	—	—	tr	—	—	—	0.12	0.03	0.15
1300	—	—	—	—	—	tr	—	—	—	—	—	—
1330	—	—	—	—	—	tr	—	—	—	0.09	—	0.09
1405	—	—	—	—	—	tr	—	—	—	—	—	—
1115aa	—	—	—	—	0.06	—	—	—	—	—	—	0.06

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	TCE	PCE	M-XYLENE	O-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	TOTAL DETECTED
TM/0755	—	—	—	0.09	0.12	—	—	0.07	0.05	0.11	2.87	3.31
SM15/1300	—	—	—	—	—	0.03	—	—	—	—	—	0.03
TS/0910	—	—	—	—	—	—	—	—	—	—	0.03	0.03

**REMARKS/ VISITORS:**

Tunnel muck dumped intermittently until 1130 hrs. during day shift.

Tunnel muck hauled from site intermittently during day shift.

Collected sample of soil excavated from 8-ft. diameter access manhole at Site 15 at 1300 hrs. Sample

obtained from stockpile adjacent to the manhole. Excavation advanced to approximately 35.3 ft.

below ground surface at the time of sampling. Sample consisted of brown fill, visually classified as

GRAVEL, with some cinders and slag, little clay, trace sand and brick fragments.

Obtained routine weekly tunnel muck sample TM/0755 and delivered to General Testing for analysis.

S. DeMeo (H&A) visited trailer at 0810 hrs. to obtain 2 VOA vials and metal scoop prior to entering

tunnel for geologic mapping and seep sampling.

F. Amos (H&A) visited trailer at 1100 hrs. to deliver tunnel seep sample TS/0910, obtained from

right side (west) seepage in the fault at Station 37 + 65.

**ABBREVIATIONS:****SAMPLE TYPE:**

TM	TUNNEL MUCK
TS	TUNNEL SEEP
SM#	SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

**NOTES:**

- (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
- COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
- (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
- (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
- METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.
- TCE = TRICHLOROETHYLENE  
PCE = PERCHLOROETHYLENE

# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: S. Parker  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 54 + 84  
 END: 54 + 84  
 ADVANCE: 0

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 20 April 1990  
 SHIFT: Swing  
 DFR NO.: 43

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	TOTAL DETECTED
1512	--	--	--	--	--	tr	--	--	--	0.06	--	0.06
1530	--	--	--	--	--	tr	--	--	--	0.08	--	0.08
1600	--	--	--	--	--	tr	--	--	--	--	0.02	0.02
1640	--	--	--	--	--	tr	--	--	0.05	0.21	0.03	0.29
1720	--	--	--	--	--	0.02	--	--	--	0.16	0.02	0.18
1745	--	--	--	--	--	tr	--	--	--	0.14	0.02	0.16
1810	--	--	--	--	--	tr	--	--	--	0.13	--	0.13
1916	--	--	--	--	0.02	0.01	--	--	--	--	0.02	0.04
1940	--	--	--	--	0.06	tr	--	--	--	0.13	0.08	0.27
2020	--	--	--	--	--	0.01	--	--	--	--	--	--
2050	--	--	--	--	--	0.01	--	--	--	--	--	--
2120	--	--	--	--	--	tr	--	--	--	0.08	--	0.08
2150	--	--	--	--	--	tr	--	--	--	--	--	--
2224	--	--	--	--	--	tr	--	--	--	0.09	--	0.09
2245	--	--	--	--	0.02	0.01	--	--	--	0.14	0.02	0.18

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE TIME	TARGET COMPOUNDS					OTHERS						
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	TOTAL DETECTED
1853aa	--	--	--	--	0.06	--	--	--	--	--	0.03	0.09
2003cg	--	0.70	--	--	--	--	--	0.03	--	--	0.02	0.75

REMARKS/ VISITORS:

No tunnel muck dumped during swing shift.

Tunnel muck hauled from site until 1530 hrs.

No visitors to trailer during swing shift.

ABBREVIATIONS:

SAMPLE TYPE:

TM TUNNEL MUCK  
TS TUNNEL SEEP  
SM# SHAFT MUCK FROM SITE 15, 27, OR 28

NOTES:

1. (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
3. (cg) INDICATES CARRIER GAS BLANK ANALYSIS.
4. (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
5. (tr) INDICATES METHANE DETECTED AT CONCENTRATIONS LESS THAN 0.01 PERCENT.
6. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.



# SHIFT DATA TABLE

PROJECT: STATE ST. MT. HOPE AVE TUNNEL  
 CLIENT: STV/ SEELYE STEVENSON VALUE & KNECHT  
 H&A REPRESENTATIVE: W. Lanik  
 CHECKED BY: P. Micciche

TUNNEL HEADINGS AT  
 START: 54 + 84  
 END: 55 + 24  
 ADVANCE: 40

FILE: 7433-82  
 PAGE: 1 OF 2  
 DATE: 20-21 April 1990  
 SHIFT: Graveyard  
 DFR NO.: 43

## TUNNEL AIR SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	
2310	--	--	--	--	--	0.01	--	--	--	--	0.02	0.02
2343	--	--	--	--	--	0.01	--	--	--	--	--	--
0012	--	--	--	--	--	0.02	--	--	--	--	--	--
0038	--	--	--	--	--	0.01	--	--	--	0.10	0.02	0.12
0103	--	--	--	0.02	0.04	0.01	--	--	0.03	0.26	0.52	0.87
0131	--	--	--	--	0.02	0.01	--	--	--	0.12	0.24	0.38
0200	--	--	--	0.01	0.03	0.03	--	--	0.04	0.14	0.33	0.55
0230	--	--	--	0.01	0.04	0.02	--	--	--	0.19	0.54	0.78
0300	--	--	--	0.02	0.04	0.01	--	--	0.02	0.21	0.63	0.92
0331	--	--	--	--	--	0.01	--	--	--	0.12	0.01	0.13
0400	--	--	--	--	--	0.01	--	--	--	--	--	--
0430	--	--	--	--	--	0.01	--	--	--	0.07	--	0.07
0500	--	--	--	0.02	0.04	0.02	--	--	--	0.12	0.53	0.71
0530	--	--	--	0.02	0.04	0.02	--	--	--	0.14	0.47	0.67
0600	--	--	--	0.02	0.04	0.02	--	--	0.03	0.09	0.54	0.72
0630	--	--	--	0.02	0.05	0.01	--	--	0.03	0.17	0.64	0.91

## TUNNEL MUCK/ SHAFT/ GROUNDWATER SAMPLES

### APPARENT VOLATILE ORGANIC COMPOUNDS DETECTED IN PPM

SAMPLE TYPE TIME	TARGET COMPOUNDS					OTHERS						TOTAL DETECTED
	VINYL CHLORIDE	METHYLENE CHLORIDE	1,2-DCE	BENZENE	TOLUENE	METHANE (PERCENT)	HYDROGEN SULFIDE	ETHYL BENZENE	M-XYLENE	STYRENE	UNKNOWN <sup>s</sup> *	
TM/0220	--	--	--	0.11	0.13	--	--	--	0.08	0.06	3.35	3.73
TM/0510	--	--	--	0.02	0.06	--	--	--	0.06	--	0.52	0.66
0614aa	--	--	--	--	0.10	--	--	--	--	--	0.03	0.13

REMARKS/ VISITORS:

Tunnel muck dumped intermittently after 0145 hrs. during graveyard shift.

No tunnel muck hauled from site during graveyard shift.

No visitors to trailer during graveyard shift.

ABBREVIATIONS:

SAMPLE TYPE:

- TM TUNNEL MUCK
- TS TUNNEL SEEP
- SM# SHAFT SOIL OR MUCK FROM SITE 15, 27, OR 28

NOTES:

1. (\*) UNIDENTIFIED CHROMATOGRAM PEAKS EXPRESSED IN TOLUENE EQUIVALENTS.
2. COMPOUNDS LESS THAN 10 PPB NOT REPORTED.
3. (aa) INDICATES AMBIENT AIR BLANK ANALYSIS.
4. METHANE CONCENTRATIONS EXPRESSED IN PERCENT BY VOLUME. METHANE CONCENTRATION VALUES NOT INCLUDED IN TOTAL DETECTED COLUMN.