



May 28, 2015

To: AQMD Executive Officer
21865 Copley Drive
Diamond Bar, CA 91765-4178

Re: Report on Equipment Failure, May 1, 2015, Soil Vapor Extraction System, Permit No. 568793, Facility ID 108124; 15306 Norwalk Blvd, Norwalk, CA

On May 1, 2015, The Source Group, Inc (SGI), operator of the soil vapor extraction (SVE) system at the Former Norwalk tank farm located at 15306 Norwalk Boulevard in Norwalk, CA, reported an equipment failure by calling Mr. Mike Haynes, the AQMD inspector assigned to the project, and by also calling 1-800-CUTSMOG. This report further documents the investigation of the equipment failure, its root causes and presents the project modifications implemented following the incident.

The SVE equipment operated for several years by extraction of vapors from vapor extraction wells. In March 2015, following AQMD's issuance of updated permit No.108124 to allow for extraction of vapor from excavated and treated stockpiles, SGI initiated soil excavation and on-site treatment. The initial excavations encountered low-VOCs soil. During the few days preceding May 1, 2015, higher-VOC soil was encountered, and carbon usage apparently accelerated.

We have attached the SVE monitoring sheet applicable to the reported incident, which list the inlet PID concentrations into the Granular Activated Carbon (GAC) #1, GAC #2, GAC #3, and from the outlet past GAC #3, labeled "exhaust".

Summary of the Incident

SGI's monitoring on April 24 and 27 indicated exhaust PID concentrations of 0.7 and 7.1 ppm, indicating an increased carbon usage. The technician (Glen Androsko) informed the project engineer, Aaron Disman, who was at SGI for his last week as he was moving to another position, and was transitioning the Norwalk project to another SGI engineer.

On Wednesday April 29, an exhaust PID concentration of 29.2 ppm was recorded by the field technician, over the 10 ppm compliance limit. Though the technician was aware of the limit, he left the equipment operating because of his the understanding that the extraction from the stockpile required continued extraction. Carbon change-out was scheduled for Friday May 1, 2015.

On May 1, the site excavation project manager, Ken Wall, was informed of the April 29 recorded exhaust value, and Mr. Wall ordered the system shut down, contacted Inspector Haynes and called the 800-CUTSMOG line to report the equipment failure (Notification number 396616, logged with Operator #9 at 14:21). The carbon was replaced on that day (May 1) and the system was restarted.

The table below lists the PID readings of the system during the period leading to the incident.

Date	Inlet GAC 1 (ppm)	Inlet GAC 2 (ppm)	Inlet GAC 3 (ppm)	Exhaust (ppm)	Comments
4/27/15	398.2	98.1	11.0	7.0	
4/28/15	No Reading	No Reading	No Reading	No Reading	
4/29/15	458.3	327.6	25.9	29.2	
4/30/15	No Reading	No Reading	No Reading	No Reading	
5/1/15	399.3	0.2	2.3	0.0	Carbon change

Root Causes and Actions Taken

The incident was caused by the lack of clarity in responsibility during this temporary period of personnel change and uncertainties in the need to maintain extraction from the soil stockpiles.

The incident resulted in enhanced scrutiny of the system monitoring and of existing internal and external reporting requirements, and SGI strengthened the communication and responsibilities to ensure the proper operation and monitoring of the SVE system. SGI management met with project personnel to discuss the conditions of the permit, stressed the critical nature of compliance with all conditions of the permit, and fully authorized all employees to deactivate equipment in the event of equipment failure or discharge exceedance.

Sincerely,

The Source Group, Inc.



Paul Parmentier, Principal Hydrogeologist, PG 3915.

Cc: Michael Haynes, AQMD

Nick Caros, Defense Logistics Agency- Energy

Neil Irish, SGI

Attachments:

Field logs, April 24 - May 1, 2015

VES Daily O&M Worksheets

Time/Date <u>Fri 4-24-15 0915</u>	Operator <u>Glenn Androsko</u>
Blower Outlet Pressure, " w.c. <u>47</u>	Company ID # _____
Blower Temperature, °F <u>92</u>	Inlet Valve Position <u>100% Open</u>
Blower Inlet Pressure, "Hg H ₂ O <u>11</u>	Dilution valve Position <u>Closed</u>
Blower Oil Level, L-M-H <u>MM</u>	

Sample System

Vapor Extraction Wells:			<i>inH₂O</i> <i>inH₂O</i> °F				Treatment Pile Headers (4" Pipe):			
Well ID	Pipe D (in)	% Open	Vac	dP	PID	Temp	Pile ID	PID	dP	Flow
VEW-32	2	100					Powerline-D-01	0.0	0.13	>50
VEW-33	2	100					C-01	64.4	0.04	45
VEW-34	2	100					B-01	8.7	0.093	40
VEW-35	2	0					A-01	0.0	0.02	33
VEW-36	2	0								
VEW-37	2	0								
HW-1	6	100	8.4	0.01	5700	68				
HW-3	6	↓		0.02	3700	68				
HW-5	6	↓		0.0	1600	70				
HW-7	6	↓		0.12	1248	70				

Control Panel:
Inline Anemometer:(Kanomax)
 Flow, m/s 10.4
 Temp, °C 28.5
Recorder:(Monarch)
 Flow, cfm 390
 Temp, °F 106.9
 Chart Recording? (Y/N) Y
 (Download every Friday Morning)
 Date/Time Stamp: 4-24-15 9:18

Hobb's Meter Reading : 28496.0 Hrs.

Sample Line to GAC's and exhaust:
Inlet to GAC 1
 Pressure, "w.c. 34 PID Reading, ppm 288.1
 Temp, °F 86
Inlet to GAC 2
 Pressure, "w.c. 31 PID Reading, ppm 83.6
 Temp, °F 80
Inlet to GAC 3 (Parallel Vessels)
 Pressure, "w.c. 18 PID Reading, ppm 8.0
 Temp, °F 78
Exhaust
 Pressure, "w.c. 0 PID Reading, ppm 0.7
 Temp, °F 72

Lights and switch Positions (On/Off)

	Off	On
No or Low Flow	x	
Out of Range	x	
Flow		x
High Water	x	
System		x

Controls:

	Auto	Off	Manual
Blower	x		
A.W.S. Pump	x		
CH		x	
Select Main/Back up	N/A		

Comments _____

VES Daily O&M Worksheets

Time/Date Mon 4-27-15 0745 Operator Glenn Androsko
 Blower Outlet Pressure, " w.c. 48 Company ID # —
 Blower Temperature, °F 94 Inlet Valve Position 100% Open
 Blower Inlet Pressure, "Hg 12 Dilution valve Position Closed
 Blower Oil Level, L-M-H M

Sample System

Vapor Extraction Wells:							Treatment Pile Headers (4" Pipe):			
Well ID	Pipe D (in)	% Open	Vac	dP	PID	Temp °F	Pile ID	PID (ppm)	dP (in H ₂ O)	Flow scfm
VEW-32	2	100	10	0.08	210.2	82	Powerline-D-01	0.2	0.15	>50
VEW-33	2	↓	10	0.04	323.9	82	↓ C-01	26.2	0.04	45
VEW-34	2	↓	10	0.08	115.1	84	↓ B-01	3.7	0.06	>50
VEW-35	2	Closed	10	0.06	4.8	90	↓ A-01	0.2	0.05	50
VEW-36	2	↓	10	0.04	5.7	98				
VEW-37	2	↓	10	0.05	2.4	95				
HW-1	6	100	10	0.01	436.4	70				
HW-3	6	↓	10	0.03	243.2	70				
HW-5	6	↓	10	0.02	120.2	70				
HW-7	6	↓	10	0.16	137.7	71				

1005
 1016
 1027
 1042
 1052
 1227
 0829
 0832
 0835
 0836

Control Panel:
Inline Anemometer:(Kanomax)
 Flow, m/s 10.4
 Temp, °C 30.8
Recorder:(Monarch)
 Flow, cfm 394
 Temp, °F 109.4
 Chart Recording? (Y/N) Y
 (Download every Friday Morning)
 Date/Time Stamp: 4-27-15 / 7:47
Hobb's Meter Reading : 28566.5 Hrs.

Sample Line to GAC's and exhaust:
Inlet to GAC 1
 Pressure, "w.c. 35 PID Reading, ppm 398.2 0809
 Temp, °F 85
Inlet to GAC 2
 Pressure, "w.c. 32 PID Reading, ppm 98.1 0805
 Temp, °F 78
Inlet to GAC 3 (Parallel Vessels)
 Pressure, "w.c. 18 PID Reading, ppm 11.0 0803
 Temp, °F 74
Exhaust
 Pressure, "w.c. 0 PID Reading, ppm 7.1 0800
 Temp, °F 67

Lights and switch Positions (On/Off)

	Off	On
No or Low Flow	X	
Out of Range Flow	X	
High Water	X	X
System		>

Controls:

	Auto	Off	Manual
Blower	X		
A.W.S. Pump	X		
CI		X	
Select Main/Back up	N/A		

Comments

VES Daily O&M Worksheets

Time/Date <u>W 4-29-15 1510</u>	Operator <u>Glenn Androsko</u>
Blower Outlet Pressure, " w.c. <u>46</u>	Company ID # <u> </u>
Blower Temperature, °F <u>120</u>	Inlet Valve Position <u>100% Open</u>
Blower Inlet Pressure, "Hg <u>-</u>	Dilution valve Position <u>-</u>
Blower Oil Level, L-M-H <u>M</u>	

Sample System

Vapor Extraction Wells:							Treatment Pile Headers (4" Pipe):			
Well ID	Pipe D (in)	% Open	Vac	dP	PID	Temp	Pile ID	PID	dP	Flow
VEW-32	2	100								
VEW-33	2	100								
VEW-34	2	100								
VEW-35	2	Closed								
VEW-36	2	↓								
VEW-37	2	↓								
HW-1	6	100								
HW-3	6	↓								
HW-5	6	↓								
HW-7	6	↓								

Control Panel:

Inline Anemometer: (Kanomax)
 Flow, m/s 10.7
 Temp, °C 46.0

Recorder: (Monarch)
 Flow, cfm 412
 Temp, °F 133
 Chart Recording? (Y/N) Y
 (Download every Friday Morning)
 Date/Time Stamp: 4/27/15 3:12

Hobb's Meter Reading : 28621.9 Hrs.

Sample Line to GAC's and exhaust:

Inlet to GAC 1
 Pressure, "w.c. 35 PID Reading, ppm 458.3
 Temp, °F 114

Inlet to GAC 2
 Pressure, "w.c. 32 PID Reading, ppm 327.6
 Temp, °F 104

Inlet to GAC 3 (Parallel Vessels)
 Pressure, "w.c. 17 PID Reading, ppm 25.9
 Temp, °F 100

Exhaust
 Pressure, "w.c. 0 PID Reading, ppm 29.2
 Temp, °F 96

Lights and switch Positions (On/Off)

	Off	On
No or Low Flow	x	
Out of Range Flow	x	
High Water		x
System		x

Controls:

	Auto	Off	Manual
Blower	x		
A.W.S. Pump	x		
CI		x	
Select Main/Back up	N/A		

Comments

VES Daily O&M Worksheets

Time/Date <u>Fri 5-1-15 1055</u>	Operator <u>Glenn Androsko</u>
Blower Outlet Pressure, " w.c. <u>48</u>	Company ID # <u> </u>
Blower Temperature, °F <u>104</u>	Inlet Valve Position <u>100% Open</u>
Blower Inlet Pressure, "Hg H ₂ O <u>9</u>	Dilution valve Position <u>Close</u>
Blower Oil Level, L-M-H <u>M</u>	

Sample System

Vapor Extraction Wells:						Treatment Pile Headers (4" Pipe):				
Well ID	Pipe D (in)	% Open	Vac	dP	PID	Temp	Pile ID	PID	dP	Flow
VEW-32	2	100					Powerline D-01	1.1	0.08	>50
VEW-33	2	↓					↓ C-01	23.4	0.05	50
VEW-34	2	↓					↓ B-01	4.8	0.04	>50
VEW-35	2	Closed					↓ A-01	0.5	0.05	50
VEW-36	2	↓								
VEW-37	2	↓								
HW-1	6	100								
HW-3	6	↓								
HW-5	6	↓								
HW-7	6	↓								

Control Panel:

Inline Anemometer:(Kanomax)

Flow, m/s 10.5

Temp, °C 39.1

Recorder:(Monarch)

Flow, cfm 394

Temp, °F 122.4

Chart Recording? (Y/N) Y

(Download every Friday Morning)

Date/Time Stamp: 5/1/15 1055

Hobb's Meter Reading : 28662.5 Hrs.

Sample Line to GAC's and exhaust:

Inlet to GAC 1

Pressure, "w.c. 35 PID Reading, ppm 399.3

Temp, °F 104

Inlet to GAC 2

Pressure, "w.c. 27 PID Reading, ppm 0.2

Temp, °F 94

Inlet to GAC 3 (Parallel Vessels)

Pressure, "w.c. 17 PID Reading, ppm 2.3

Temp, °F 84

Exhaust

Pressure, "w.c. 0 PID Reading, ppm 0.0

Temp, °F 90

Lights and switch Positions (On/Off)

	Lights and switch Positions (On/Off)		Controls:			
	Off	On		Auto	Off	Manual
No or Low Flow	x		Blower	x		
Out of Range	x		A.W.S. Pump	x		
Flow		x	CI		x	
High Water	x		Select Main/Back up	N/A		
System		x				

Comments Pure Efler on site. Removed carbon from GAC-1 and replaced with the carbon in GAC-3 plus 1000lbs new carbon. Replaced carbon in GAC-3 with new carbon before recording PID readings.