ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES, INC.

209 SHAFTER STREET
Islandia, New York 11749-5074 TEL 631-232-2600 FAX 631-232-9898

October 6, 2017

Girish Desai, P.E.
New York State Department of Environmental Conservation
50 Circle Road
Stony Brook, New York 11790

Re: SSDS Vacuum Monitoring Summary
Third Quarter of 2017
Bulova Watch Case Factory Site No. 152139
15 Church Street
Village of Sag Harbor, New York

Dear Mr. Desai:

On behalf of the Watchcase Factory Condominium, Roux Associates, Inc. (Roux Associates), is submitting this letter report summarizing the results of the sub-slab depressurization system (SSDS) monitoring activities performed at the Bulova Watch Case Factory Site No. 152139, 15 Church Street, Village of Sag Harbor, New York (Site) during the Third Quarter of 2017. SSDS monitoring activities were conducted to confirm that the system is performing as designed in accordance with the July 26, 2016 Site Management Plan (SMP) and the January 20, 2015 Operation, Maintenance, and Monitoring (OM&M) Plan submitted to the New York State Department of Environmental Conservation (NYSDEC). A brief description of SSDS operations and monitoring results during the reporting period are provided below.

SSDS

The SSDS consists of a two-blower system in the former factory building and a separate one-blower system in the garage. The SSDS services five vapor-collection piping legs beneath the factory building, one vapor-collection piping leg beneath the garage, and one vapor-collection piping leg around the perimeter of the garage. Vacuum readings for each piping leg were collected at the SSDS monitoring points. There are two monitoring points for each piping leg in the factory building, three monitoring points for the garage piping leg, and one monitoring point for the perimeter piping leg (Plates 1 and 2).

The factory and garage SSDSs are operated to maintain a minimum vacuum of -0.004 inches of water column (in. w.c.). The SSDSs are equipped with visual and electronic monitoring devices to verify performance within the required range of vacuum. Each individual SSDS leg is equipped with a vacuum gauge and a data logger, which record vacuum readings down to -0.001 in. w.c. Each data logger displays a digital readout to provide real-time indications that the system is operating properly, and records the most recent three months of vacuum readings for

reference, if necessary. An electronic autodialer will automatically contact Roux Associates personnel, building management, and/or maintenance staff in the event that a system failure occurs.

Quarterly SSDS Inspection and Monitoring

Quarterly SSDS inspection and monitoring activities were performed on July 21 and 28, 2017. In addition to visual inspections of the SSDS mechanical and above-grade piping components, several parameters were monitored, including the following:

- Vacuum/pressure and air flow readings at the blower inlet and outlet;
- Vacuum readings at the moisture separator tank;
- Vacuum readings at the SSDS monitoring points; and
- Photoionization detector (PID) readings at the blower outlets.

During the Site visit on July 21, 2017, vacuum readings were collected at each SSDS monitoring point using a handheld micromanometer, except for monitoring point MP6-3, which was inaccessible due to a parked car in the area. An additional Site visit was conducted on July 28, 2017, and a vacuum reading was collected at monitoring point MP6-3. Vacuum monitoring results from SSDS start-up through the Third Quarter of 2017 are summarized in Table 1 (attached). A review of Table 1 indicated that vacuum readings confirmed that the SSDS was operating properly at each leg (i.e., maintaining a minimum vacuum of -0.004 in. w.c.).

If you have any questions or require additional information regarding this monitoring summary, please feel free to contact the undersigned at 631-232-2600.

Sincerely,

ROUX ASSOCIATES, INC.

Nathan Epler
Principal Hydrogeologist

Attachments

Table 1. SSDS Monitoring Summary, Bulova Watch Case Factory Site No. 1-52-139

	Factory Building SSDS														
	SSDS Zones Inside Blower Room					Blower 1					Blower 2				
Date	Zone 1 (in. w.c.)	Zone 2 (in. w.c.)	Zone 3 (in. w.c.)	Zone 4 (in. w.c.)	Zone 5 (in. w.c.)	Runtime (hours)	Influent (in. w.c.)	K.O (in. w.c.)	Effluent (in. w.c.)	PID (ppm)	Runtime (hours)	Influent (in. w.c.)	K.O (in. w.c.)	Effluent (in. w.c.)	PID (ppm)
March 6, 2015	-2.50	-2.40	-1.90	-5.80	-6.50	--	-25	-31	--	--	--	-20	-8	--	--
March 12, 2015	-2.58	-2.06	-3.24	-5.93	-6.73	--	--	--	--	--	--	--	--	--	--
March 19, 2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
March 24, 2015	-6.38	-5.76	-3.15	-5.77	-6.46	--	--	--	--	--	--	--	--	--	--
April 2, 2015	-2.51	-2.06	-3.21	-5.81	-6.52	2,750.6	-22	-31	20	0.0	1,943.8	-20	-10	19	0.0
April 7, 2015	-2.44	-2.06	-3.3	-5.64	-6.47	2,871.4	-25	-32	20	0.0	2,064.4	-20	-19	20	0.0
April 14, 2015	-2.59	-1.97	-3.51	-5.38	-6.73	3,040.2	-32	-30	20	0.0	2,033.2	-20	-20	20	0.0
April 22, 2015	-2.48	-2.02	-3.24	-5.53	-6.46	3,231.2	-25	-31	20	0.0	2,424.1	-21	-10	18	0.0
May 5, 2015	-2.52	-2.03	-3.19	-5.78	-6.42	3,512.8	-18	-32	20	0.0	2,705.7	-21	-9	18	0.0
May 11, 2015	-2.54	-1.98	-3.28	-5.72	-6.53	3,621.5	-25	-31	20	0.0	2,814.4	-21	-10	17	0.0
May 27, 2015	-2.78	-2.26	-3.37	-0.31	-0.46	3,821.9	Blower 1 down since May 23, 2015				3,112.8	-29	-32	6	0.0
June 2, 2015	-2.78	-2.26	-3.40	-0.31	-0.43	3,821.9	Blower 1 down since May 23, 2015				3,256.6	-29	-38	6	0.0
June 9, 2015	-2.44	-2.07	-3.24	-5.66	-6.50	3,833.0	-20	-10	15	--	3,485.2	-24	-30	20	--
July 29, 2015	-2.61	-2.07	-3.24	-3.82	-6.59	4,853.2	-21	-10	19	0.0	4,288.2	-25	-20	20	0.0
August 6, 2015	-2.63	-2.17	-3.31	-5.72	-6.46	5,048.4	-21	-9	18	0.0	4,483.5	-25	-20	20	0.0
September 11, 2015	-2.62	-2.14	-3.30	-5.74	-6.55	5,910.9	-21	-10	19	0.0	5,340.0	-24	-20	19	0.0
December 31, 2015	-2.68	-2.02	-3.30	-5.76	-6.48	8,576.6	-22	-10	18	0.2	8,011.3	-21	-20	20	0.1
January 21, 2016	-2.62	-2.04	-3.25	-5.67	-6.45	9,078.4	-22	-10	18	0.2	8,513.5	-22	-19	19	0.1
March 22, 2016	-2.66	-1.98	-3.31	-5.78	-6.42	10,543.2	-25	-20	20	0.0	9,979.0	-21	-10	18	0.1
April 22, 2016	-2.60	-2.04	-3.26	-5.62	-6.37	11,286.5	-22	-20	20	0.1	10,721.4	-21	-9	18	0.0
May 27, 2016	-2.63	-2.05	-3.24	-5.61	-6.44	12,195.4	-22	-20	20	0.0	11,463.2	-21	-10	18	0.0
June 21, 2016	-2.68	-2.07	-3.20	-5.65	-6.42	12,724.4	-23	-20	20	0.0	12,159.4	-21	-9	18	0.0
March 22, 2017	-2.63	-2.09	-3.29	-5.69	-6.43	19,046.5	--	-20	20	0.0	18,481.0	-21	--	--	--
May 5, 2017	-2.62	-2.03	-2.99	-5.79	-6.47	20,105.3	-21	--	18	0.0	19,540.3	-27	-20	20	0.0
July 21, 2017	-2.68	-1.93	-3.01	-5.79	-5.72	21,953.8	-27	-10	18	0.0	21,388.1	-21	-20	19	0.0

Notes:

Blower 1: Rotron EN808, 7.5Hp, located in factory building blower room

Blower 2: Rotron EN808, 7.5Hp, located in factory building blower room

Garage Blower: Rotron EN909 15Hp, located in garage blower room

Zone 1: SSDS Green Line, Blower 2

Zone 2: SSDS Purple Line, Blower 2

Zone 3: SSDS Orange Line, Blower 2

Zone 4: SSDS Red Line, Blower 1

Zone 5: SSDS Blue Line, Blower 1

Perm. E.: SSDS Perimeter East Line, Garage Blower

Perm. W.: SSDS Perimeter West Line, Garage Blower

Garage: SSDS Garage Line, Garage Blower

Influent: Blower Influent Vacuum Gauge

K.O.: Blower Knockout Tank/Moisture Separator Vacuum Gauge

Effluent: Blower Effluent Pressure Gauge

PID: Photoionization Detector

in. w.c.: inches of water column

ppm: parts per million

--: measurement was not collected

Data loggers installed March 6, 2015

Data loggers downloaded June 9, 2015

Vacuum gauge for Blower 1 knockout tank was non-operational on May 5, 2017; gauge was replaced during Third Quarter of 2017

Table 1. SSDS Monitoring Summary, Bulova Watch Case Factory Site No. 1-52-139

	Garage & Perimeter SSDS							
	SSDS Zones Inside Blower Room			Garage Blower				
Date	Perm. E. (in. w.c.)	Perm. W. (in. w.c.)	Garage (in. w.c.)	Runtime (hours)	Influent (in. w.c.)	K.O. (in. w.c.)	Effluent (in. w.c.)	PID (ppm)
March 6, 2015	-2.20	-2.00	-0.90	--	-28	-19	--	--
March 12, 2015	-2.63	-2.34	-0.52	--	--	--	--	--
March 19, 2015	-2.57	-2.23	-0.56	--	--	--	--	--
March 24, 2015	-2.61	-2.17	-0.51	--	--	--	--	--
April 2, 2015	-2.52	-2.20	-0.51	2859.4	-24	-11	2.2	0.0
April 7, 2015	-2.67	-2.24	-0.53	2980.0	-24	-27	2.5	0.0
April 14, 2015	-2.88	-2.39	-0.57	3148.8	-27	-18	2	0.0
April 22, 2015	-2.89	-2.48	-0.58	3340.4	-27	-18	2	0.0
May 5, 2015	-2.72	-2.23	-0.61	3651.1	-27	-19	2	0.0
May 11, 2015	-2.61	-2.18	-0.51	3796.6	-27	-19	2	0.0
May 27, 2015	-2.59	-2.16	-0.57	4179.4	-27	-19	2	0.0
June 2, 2015	-2.70	-2.28	-0.68	43231.0	-28	-18	2	0.0
June 9, 2015	-2.72	-2.12	-0.57	44921.0	-28	-18	2	--
July 29, 2015	-2.48	-2.02	-0.66	55020.8	-27	-19	2	0.0
August 6, 2015	-2.45	-1.95	-0.56	56980.0	-27	-18	2	0.0
September 11, 2015	-2.88	-2.34	-0.52	6559.7	-27	-19	2	0.0
December 31, 2015	-2.94	-2.52	-0.64	9226.1	-27	-19	2	0.0
January 21, 2016	-2.68	-2.24	-0.56	9727.9	-27	-19	2	0.2
March 22, 2016	-2.79	-2.33	-0.62	11192.6	-27	-19	2	0.1
April 22, 2016	-2.68	-2.17	-0.57	11836.2	-27	-18	2	0.0
May 27, 2016	-2.72	-2.14	-0.63	12482.2	-27	-18	2	0.0
June 21, 2016	-2.65	-2.26	-0.59	13373.5	-27	-19	2	0.0
March 22, 2017	-2.71	-2.21	-0.61	--	-28	-18	2	0.0
May 5, 2017	-2.96	-2.55	-0.59	--	-27	-19	2	0.0
July 21, 2017	-2.62	-2.14	-0.68	22856.7	-25	-18	2	0.0

Notes:

Blower 1: Rotron EN808, 7.5Hp, located in factory building blower room
Blower 2: Rotron EN808, 7.5Hp, located in factory building blower room
Garage Blower: Rotron EN909 15Hp, located in garage blower room
Zone 1: SSDS Green Line, Blower 2
Zone 2: SSDS Purple Line, Blower 2
Zone 3: SSDS Orange Line, Blower 2
Zone 4: SSDS Red Line, Blower 1
Zone 5: SSDS Blue Line, Blower 1
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Perm. W.: SSDS Perimeter West Line, Garage Blower
Garage: SSDS Garage Line, Garage Blower
Influent: Blower Influent Vacuum Gauge
K.O.: Blower Knockout Tank/Moisture Separator Vacuum Gauge
Effluent: Blower Effluent Pressure Gauge
PID: Photoionization Detector
in. w.c.: inches of water column
ppm: parts per million
--: measurement was not collected
Data loggers installed March 6, 2015
Data loggers downloaded June 9, 2015

Table 1. SSDS Monitoring Summary, Bulova Watch Case Factory Site No. 1-52-139

	SSDS Monitoring Points													
	Factory Building										Garage & Perimeter			
Date	MP1-1 (in. w.c.)	MP1-2 (in. w.c.)	MP2-1 (in. w.c.)	MP2-2 (in. w.c.)	MP3-1 (in. w.c.)	MP3-2 (in. w.c.)	MP4-1 (in. w.c.)	MP4-2 (in. w.c.)	MP5-1 (in. w.c.)	MP5-2 (in. w.c.)	MP6-1 (in. w.c.)	MP6-2 (in. w.c.)	MP6-3 (in. w.c.)	MP7-1 (in. w.c.)
June 9, 2015	N/A	-0.030	0.000	-0.367	-0.110	N/A	-0.007	-1.155	-0.017	-0.010	-0.164	-0.084	N/A	-1.978
July 29, 2015	-0.042	-0.042	-0.009	-0.135	-0.034	-0.019	N/A	-1.178	N/A	-0.012	-0.129	-0.094	-0.038	-1.838
August 6, 2015	-0.119	-0.041	-0.009	-0.386	-0.032	-0.008	-0.030	-1.168	-0.021	-0.118	-0.131	-0.092	-0.039	-1.808
September 11, 2015	-0.111	-0.049	-0.008	-0.393	-0.035	-0.010	-0.035	-1.177	-0.019	-0.120	-0.129	-0.040	-0.090	-1.799
December 31, 2015	-0.123	-0.031	-0.008	N/A	-0.024	-0.010	-0.025	-0.991	-0.008	-0.189	-0.124	-0.266	-0.011	-2.259
January 21, 2016	-0.112	-0.020	-0.008	N/A	-0.013	-0.013	-0.023	-0.915	-0.021	-0.278	-0.105	-0.230	-0.066	-1.963
March 22, 2016	-0.104	-0.024	-0.007	-0.025	-0.023	-0.014	-0.020	-0.891	-0.011	-0.375	-0.114	-0.252	-0.075	-2.112
April 22, 2016	-0.155	-0.026	-0.004	-0.759	-0.015	-0.012	-0.017	-0.898	-0.017	-0.098	-0.117	-0.258	-0.076	-5.733
May 27, 2016	-0.109	-0.034	-0.006	-0.549	-0.021	-0.010	-0.025	-0.912	-0.022	-0.205	-0.131	-0.267	-0.081	-2.064
June 21, 2016	-0.122	-0.030	-0.009	-0.261	-0.019	-0.012	-0.022	-0.940	-0.014	-0.240	-0.128	-0.269	-0.086	-2.021
March 22, 2017	-0.087	-0.019	-0.021	-0.219	-0.007	-0.010	-0.014	-0.847	-0.004	-0.401	-0.125	-0.246	-0.083	-2.014
May 5, 2017	-0.101	-0.021	-0.006	-0.205	-0.005	-0.011	-0.019	-0.889	-0.026	-0.071	-0.191	-0.254	N/A	-2.309
July 21, 2017	-0.118	-0.036	-0.012	-0.236	-0.007	-0.014	-0.020	-0.938	-0.008	-0.101	-0.128	-0.244	-0.082	-1.944

Notes:

Zone 1: SSDS Green Line, Blower 2

Zone 2: SSDS Purple Line, Blower 2

Zone 3: SSDS Orange Line, Blower 2

Zone 4: SSDS Red Line, Blower 1

Zone 5: SSDS Blue Line, Blower 1

Zone 6: SSDS Garage Line, Garage Blower

Zone 7: SSDS Perimeter East/West Line, Garage Blower

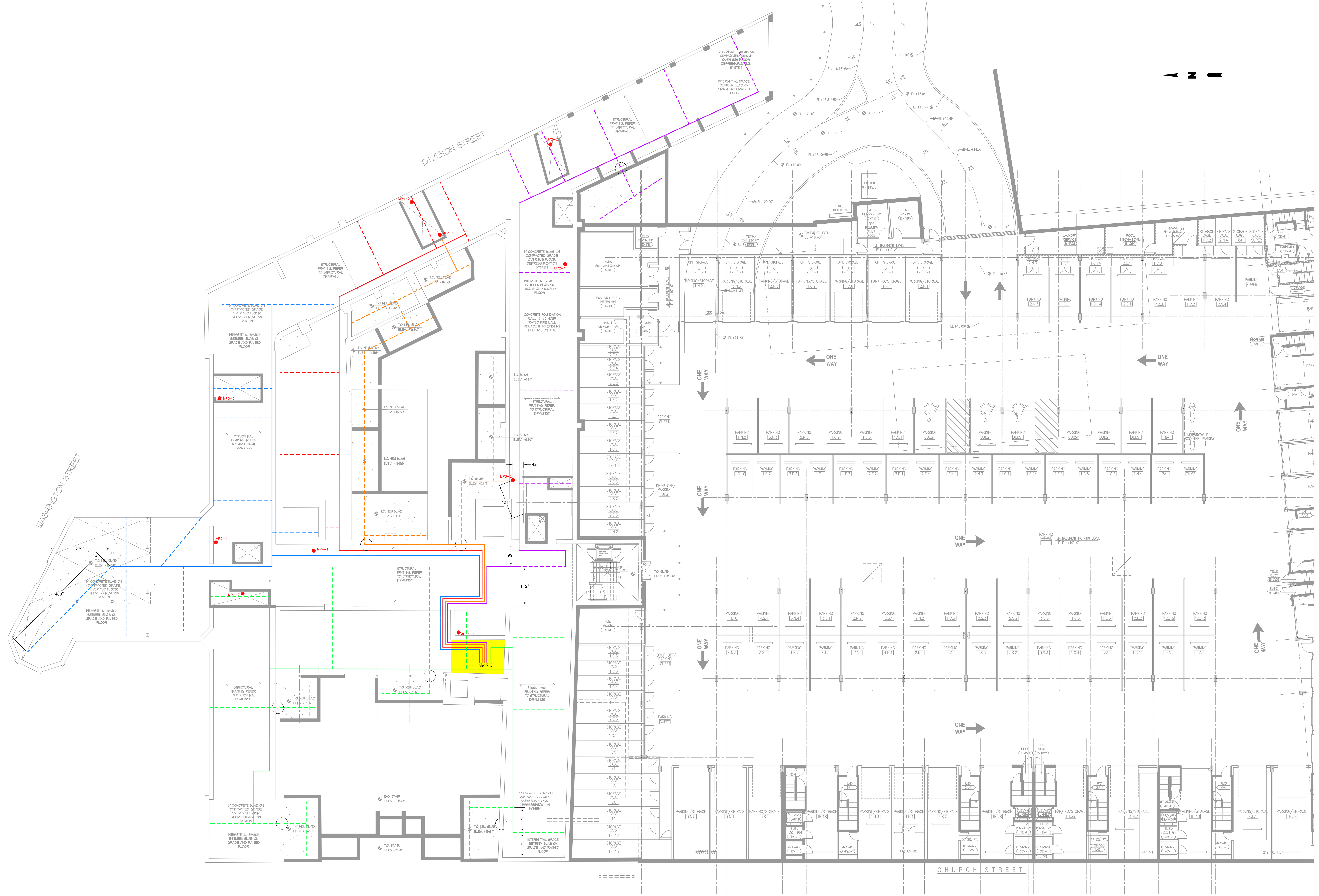
MP2-1 possibly installed incorrectly. Corrected on July 7, 2015

MP6-1 located in private garage. Corrected on June 30, 2015

MP6-2 located in parking spot # 57

MP1-1 & MP3-2 became accessible on June 22, 2015

N/A: measurement was not collected, point inaccessible



LEGEND

- EXISTING 4" SOLID SCHEDULE 40 PVC PIPE (ZONE 1)
- EXISTING 4" SLOTTED SCHEDULE 40 PVC VAPOR COLLECTION PIPE (ZONE 1)
- EXISTING 4" SOLID SCHEDULE 40 PVC PIPE (ZONE 2)
- EXISTING 4" SLOTTED SCHEDULE 40 PVC VAPOR COLLECTION PIPE (ZONE 2)
- EXISTING 4" SOLID SCHEDULE 40 PVC PIPE (ZONE 3)
- EXISTING 4" SLOTTED SCHEDULE 40 PVC VAPOR COLLECTION PIPE (ZONE 3)
- EXISTING 4" SOLID SCHEDULE 40 PVC PIPE (ZONE 4)
- EXISTING 4" SLOTTED SCHEDULE 40 PVC VAPOR COLLECTION PIPE (ZONE 4)
- EXISTING 4" SOLID SCHEDULE 40 PVC PIPE (ZONE 5)
- EXISTING4" SLOTTED SCHEDULE 40 PVC VAPOR COLLECTION PIPE (ZONE 5)
- MP4-1 EXISTING VACUUM MONITORING POINT
- BLOWER LOCATION

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AS-BUILT DRAWINGS

10' 0 10'

NO.	DATE	REVISION DESCRIPTION	INT.
2	11/25/14	AS-BUILTS	C.P.
1	2/13/12	REVISED TO SHOW NEW SYSTEM LAYOUT	C.P.

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DESIGNED BY: C.P.	CHECKED BY: C.J.M.
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REMEDIAL ENGINEERING, P.C.
209 Shafter Street
Islandia, New York 11749 (631) 232-2600

PROJECT NAME:
FORMER BULOVA WATCHCASE FACILITY
SITE NO. 152139

PROJECT FOR:
WATCHCASE FACTORY CONDOMINIUM
SAG HARBOR, NEW YORK

TITLE:
FACTORY BUILDING SSDS
AS-BUILTS

PLATE
1

LEGEND

- EXISTING 6" SUB-SLAB VAPOR COLLECTION PIPE
- EXISTING 6" SOLID SUB-SLAB HEADER PIPE
- EXISTING 6" EXTERNAL VAPOR COLLECTION PIPE
- EXISTING 6" SOLID VAPOR COLLECTION PIPE HUNG FROM GARAGE CEILING
- MPG-1 EXISTING VACUUM MONITORING POINT
- BLOWER LOCATION

AS-BUILT DRAWINGS

10' 0 10'

NO.	DATE	REVISION DESCRIPTION	INT.
2	11/25/14	AS-BUILTS	C.P.
1	2/13/12	REVISED TO SHOW NEW SYSTEM LAYOUT	C.P.

PROJ. ENGINEER: C.P.		DRAWN BY: G.M.	
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Remedial
REMEDIAL ENGINEERING, P.C.
209 Shafter Street
Islandia, New York 11749 (631) 232-2600

PROJECT NAME:
FORMER BULOVA WATCHCASE FACILITY
SITE NO. 152139
PROJECT FOR:
WATCHCASE FACTORY CONDOMINIUM
SAG HARBOR, NEW YORK

TITLE:
NEW CONSTRUCTION
SSDS AS-BUILTS

PLATE
2

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