

# Transmittal Letter



**TO**  
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34990 Beacon  
Livonia, MI 48150

**FROM**  
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**DATE**  
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**PROJECT NUMBER**  
30146655

**SUBJECT**  
Operation, Monitoring, and  
Maintenance Field Notes - 34990 Beacon

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## We are sending you:

Copies	Delivery Date	Description
1	10/11/2022	Operation, monitoring, and maintenance field notes.

## Action\*

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## Comments:

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Attached are the interim preemptive mitigation (IPM) system Operation, Monitoring, and Maintenance (OM&M) field notes. These field notes were recorded during OM&M visits at the property between November 30, 2020 and March 31, 2022. Please let me know if you have any questions.

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## 34990 Beacon, 2021-03-01, Full System Inspection

Created	2021-03-01 13:53:01 UTC by Seth Turner
Updated	2021-03-01 15:16:20 UTC by Andrew Banitt

### General Information

System Inspector	Seth Turner
Date	2021-03-01
Time	09:00
System Details Link	34990 Beacon
Property Address	34990 Beacon
Check Inspection(s) to be Completed	Full System Inspection
Get weather data from National Weather Service Website for your current location?	N/A
Weather	35F, sunny
Ambient Temperature	35F
Barometric Pressure	29.95
Indoor Temperature	70

### Design Components

Does the house have a basement?	Yes
Does the house have a sump?	No
Does the house have garage retrocoat?	No
Does the house have shed retrocoat?	Yes
Does the house have basement retrocoat?	Yes
Does the house have a crawlspace barrier?	Yes
Does the house have an inaccessible crawlspace?	No
Does the house have a water sensor?	Yes

### System Inspection

#### Fan

Fan(s) operating?	Yes
Are there any unusual fan noises?	No

#### Piping

Is any caulking required around pipe penetrations, slab cracks, expansion joints, or foundation walls?	No
Are piping, piping joints, and brackets intact and secure?	Yes
Is the insulation and insulation jacket damaged or missing in garage or exterior piping?	No

#### Valves

Upon arrival, are all valves in the same position as the prior visit (reference Power BI)?	Yes
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#### Drains

Do any drain seals need to be repaired or replaced? No

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### Basement

Is water present in the basement? No

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### Shed Retrocoat

Is retrocoat damaged or missing? No

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### Basement Retrocoat

Is retrocoat damaged or missing? No

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### Crawlspace Barrier

Is water present on the vapor barrier? No

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### Water Sensor

Last Battery Replacement Date 2021-03-01

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### Labels

Are labels present at the pipe, control panel, u-tube, and breaker? Yes

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Common Label Photos



Are labels present at the basement retrocoat? Yes

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Basement Retrocoat Label Photos



Are labels present at the shed retrocoat?

Yes

Shed Retrocoat Label Photos



Are labels present at the crawlspace barrier?

Yes

Barrier Label Photos



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**Vacuum Monitoring**

Is the u-tube accurate (test with micromanometer/manometer, rezero/replace as needed)?	Yes
Is the vacuum switch accurate (test with micromanometer)?	Yes
Do any monitoring points (MP/SSMP) need to be repaired or replaced?	No
If multiple systems are present, were both inspected?	N/A

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**Inspection Measurements**

**Pre-Measurement Conditions**

Are vacuum readings being taken under closed building conditions?	Yes
Do any monitoring points have transmitters?	Yes

**Mp-7**

Monitoring Point with Transmitter?	Mp-7
Transmitter Ambient Reading (iwc, transmitter inlet tubing disconnected)	0
Transmitter Reading (iwc, with fan operating)	-0.017
Micromanometer Ambient Reading (iwc, transmitter inlet tubing disconnected)	0

Micromanometer Fan Reading (iwc, with fan operating)	-0.016
Calibration Calc	0.001
Transmitter off by >0.0003, recalibrate/fix transmitter	

## Measurements and Valve Positions

### U-Tube Manometer, 09:06, -0.8

Vacuum ID Link	34990 Beacon, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2021-03-01
Time	09:06
Vacuum Reading (in. w.c.)	-0.8
Number Vacuum Reading	-0.8

### MP-5, 09:06, -0.043

Vacuum ID Link	34990 Beacon, MP-5
Vacuum ID	MP-5
Date	2021-03-01
Time	09:06
Vacuum Reading (in. w.c.)	-0.043
Number Vacuum Reading	-0.043

### MP-6, 09:07, -0.081

Vacuum ID Link	34990 Beacon, MP-6
Vacuum ID	MP-6
Date	2021-03-01
Time	09:07
Vacuum Reading (in. w.c.)	-0.081
Number Vacuum Reading	-0.081

### MP-4, 09:07, -0.022

Vacuum ID Link	34990 Beacon, MP-4
Vacuum ID	MP-4
Date	2021-03-01
Time	09:07
Vacuum Reading (in. w.c.)	-0.022
Number Vacuum Reading	-0.022

### MP-7, 09:08, -0.020

Vacuum ID Link	34990 Beacon, MP-7
Vacuum ID	MP-7
Date	2021-03-01
Time	09:08
Vacuum Reading (in. w.c.)	-0.020
Number Vacuum Reading	-0.02

**MP-3, 09:14, -0.053**

Vacuum ID Link	34990 Beacon, MP-3
Vacuum ID	MP-3
Date	2021-03-01
Time	09:14
Vacuum Reading (in. w.c.)	-0.053
Number Vacuum Reading	-0.053

**MP-1, 09:14, -0.018**

Vacuum ID Link	34990 Beacon, MP-1
Vacuum ID	MP-1
Date	2021-03-01
Time	09:14
Vacuum Reading (in. w.c.)	-0.018
Number Vacuum Reading	-0.018

**MP-2, 09:14, -0.038**

Vacuum ID Link	34990 Beacon, MP-2
Vacuum ID	MP-2
Date	2021-03-01
Time	09:14
Vacuum Reading (in. w.c.)	-0.038
Number Vacuum Reading	-0.038

**MP-7, 09:21, -0.015**

Vacuum ID Link	34990 Beacon, MP-7
Vacuum ID	MP-7
Date	2021-03-01
Time	09:21
Vacuum Reading (in. w.c.)	-0.015
Number Vacuum Reading	-0.015

**MP-1, 09:22, -0.022**

Vacuum ID Link	34990 Beacon, MP-1
Vacuum ID	MP-1
Date	2021-03-01
Time	09:22
Vacuum Reading (in. w.c.)	-0.022
Number Vacuum Reading	-0.022

**MP-5, 09:24, -0.042**

Vacuum ID Link	34990 Beacon, MP-5
Vacuum ID	MP-5
Date	2021-03-01
Time	09:24
Vacuum Reading (in. w.c.)	-0.042

Number Vacuum Reading	-0.042
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**MP-4, 09:24, -0.024**

Vacuum ID Link	34990 Beacon, MP-4
Vacuum ID	MP-4
Date	2021-03-01
Time	09:24
Vacuum Reading (in. w.c.)	-0.024
Number Vacuum Reading	-0.024

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**MP-6, 09:25, -0.083**

Vacuum ID Link	34990 Beacon, MP-6
Vacuum ID	MP-6
Date	2021-03-01
Time	09:25
Vacuum Reading (in. w.c.)	-0.083
Number Vacuum Reading	-0.083

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**MP-7, 09:25, -0.016**

Vacuum ID Link	34990 Beacon, MP-7
Vacuum ID	MP-7
Date	2021-03-01
Time	09:25
Vacuum Reading (in. w.c.)	-0.016
Number Vacuum Reading	-0.016

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**MP-3, 09:26, -0.054**

Vacuum ID Link	34990 Beacon, MP-3
Vacuum ID	MP-3
Date	2021-03-01
Time	09:26
Vacuum Reading (in. w.c.)	-0.054
Number Vacuum Reading	-0.054

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**MP-2, 09:28, -0.039**

Vacuum ID Link	34990 Beacon, MP-2
Vacuum ID	MP-2
Date	2021-03-01
Time	09:28
Vacuum Reading (in. w.c.)	-0.039
Number Vacuum Reading	-0.039

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**U-Tube Manometer, 09:29, -0.9**

Vacuum ID Link	34990 Beacon, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2021-03-01



Time	09:29
Vacuum Reading (in. w.c.)	-0.9
Number Vacuum Reading	-0.9

#### **BV-4, 09:09, 100**

Valve ID Link	34990 Beacon, BV-4
Valve ID	BV-4
Date	2021-03-01
Time	09:09
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

#### **BV-5, 09:10, 80**

Valve ID Link	34990 Beacon, BV-5
Valve ID	BV-5
Date	2021-03-01
Time	09:10
Valve Position at Arrival (% Open)	80
Valve Position at Departure (% Open)	80

#### **BV-6, 09:11, 100**

Valve ID Link	34990 Beacon, BV-6
Valve ID	BV-6
Date	2021-03-01
Time	09:11
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

#### **BV-3, 09:12, 10**

Valve ID Link	34990 Beacon, BV-3
Valve ID	BV-3
Date	2021-03-01
Time	09:12
Valve Position at Arrival (% Open)	10
Valve Position at Departure (% Open)	10

#### **BV-2, 09:15, 80**

Valve ID Link	34990 Beacon, BV-2
Valve ID	BV-2
Date	2021-03-01
Time	09:15
Valve Position at Arrival (% Open)	80
Valve Position at Departure (% Open)	80

#### **BV-1, 09:17, 100**

Valve ID Link	34990 Beacon, BV-1
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Valve ID	BV-1
Date	2021-03-01
Time	09:17
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100
Were interim vacuum readings taken between initial and final vacuum readings?	No

## Inspection Reading Analysis

### Manometer

Is the system manometer steady?	Yes
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### SSMP/MPs

Were any vacuum monitoring points not accessible? Please specify.	No
Do all vacuum monitoring points meet -0.02 in w.c. threshold?	Yes
Were any ball valve positions changed?	Yes
Did you take final readings?	Yes

### Alarm Testing

Sensaphone Link	N/A
Does the vacuum switch alarm work? Test the alarm condition and verify an alarm registers.	Yes
Does the fan disconnect alarm work? Test the alarm condition and verify an alarm registers.	Yes
Does the transmitter alarm work? Test the alarm condition and verify an alarm registers.	Yes
Check the alarm history on the disconnect for the fan. Was it off for any length of time?	No
Is the cloud logging vacuum readings properly (log in to check)?	Yes

### Repairs

#### Sample Delay

Send Sample Delay Email email body	N/A
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#### Repair Completion

Were seam repairs completed during this visit?	No
Were system repairs completed during this visit?	No
Are there outstanding repairs to be completed?	No

#### Owner/Tenant Observations

Have there been any changes to the fan noise level or vibration?	No
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Have any structures been built or modified that require vapor mitigation? No

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### Engineer Notification

Send Inspection Completion Email N/A

email body

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### Engineer Notification

Send Inspection Completion Email - add any repairs, repair needs, or critical communications in email text N/A

email body

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### Additional Notes and Photos

Notes BV-7 not on fulcrum, turned from 100% to 75%.

Photos



## 34990 Beacon, 2022-01-20, Full System Inspection

Created	2022-01-20 12:54:17 UTC by Seth Turner
Updated	2022-01-20 14:06:41 UTC by Seth Turner

### General Information

System Inspector	Seth Turner
Date	2022-01-20
Time	07:54
System Details Link	34990 Beacon
Property Address	34990 Beacon
Check Inspection(s) to be Completed	Full System Inspection
Get weather data from National Weather Service Website for your current location?	N/A
Weather	17F, clear
Ambient Temperature	17F
Barometric Pressure	29.72
Indoor Temperature	70

### Design Components

Does the house have a basement?	Yes
Does the house have a sump?	No
Does the house have garage retrocoat?	No
Does the house have shed retrocoat?	Yes
Does the house have basement retrocoat?	Yes
Does the house have a crawlspace barrier?	Yes
Does the house have an inaccessible crawlspace?	No
Does the house have a water sensor?	Yes

### System Inspection

#### Fan

Fan(s) operating?	Yes
Are there any unusual fan noises?	No

#### Piping

Is any caulking required around pipe penetrations, slab cracks, expansion joints, or foundation walls?	No
Are piping, piping joints, and brackets intact and secure?	Yes
Is the insulation and insulation jacket damaged or missing in garage or exterior piping?	No

#### Valves

Upon arrival, are all valves in the same position as the prior visit (reference Power BI)?	Yes
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#### Drains

Do any drain seals need to be repaired or replaced? No

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### Basement

Is water present in the basement? No

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### Shed Retrocoat

Is retrocoat damaged or missing? No

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### Basement Retrocoat

Is retrocoat damaged or missing? No

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### Crawlspace Barrier

Is water present on the vapor barrier? No

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### Water Sensor

Last Battery Replacement Date 2022-01-20

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### Labels

Are labels present at the pipe, control panel, u-tube, and breaker? Yes

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Common Label Photos



Are labels present at the basement retrocoat? Yes

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Basement Retrocoat Label Photos



Are labels present at the shed retrocoat?

Yes

Shed Retrocoat Label Photos



Are labels present at the crawlspace barrier?

Yes

Barrier Label Photos



**Vacuum Monitoring**

Is the u-tube accurate (test with micromanometer/manometer, rezero/replace as needed)?	Yes
Is the vacuum switch accurate (test with micromanometer)?	Yes
Do any monitoring points (MP/SSMP) need to be repaired or replaced?	No
If multiple systems are present, were both inspected?	N/A

**Inspection Measurements**

**Pre-Measurement Conditions**

Are vacuum readings being taken under closed building conditions?	Yes
Do any monitoring points have transmitters?	Yes

**MP-7**

Monitoring Point with Transmitter?	MP-7
Transmitter Ambient Reading (iwc, transmitter inlet tubing disconnected)	0
Transmitter Reading (iwc, with fan operating)	-0.017
Micromanometer Ambient Reading (iwc, transmitter inlet tubing disconnected)	0

Micromanometer Fan Reading (iwc, with fan operating)	-0.017
Calibration Calc	0
Transmitter off by >0.0003, recalibrate/fix transmitter	

## Measurements and Valve Positions

### MP-5, 08:10, -0.038

Vacuum ID Link	34990 Beacon, MP-5
Vacuum ID	MP-5
Date	2022-01-20
Time	08:10
Vacuum Reading (in. w.c.)	-0.038
Number Vacuum Reading	-0.038

### MP-4, 08:12, -0.025

Vacuum ID Link	34990 Beacon, MP-4
Vacuum ID	MP-4
Date	2022-01-20
Time	08:12
Vacuum Reading (in. w.c.)	-0.025
Number Vacuum Reading	-0.025

### MP-6, 08:14, -0.087

Vacuum ID Link	34990 Beacon, MP-6
Vacuum ID	MP-6
Date	2022-01-20
Time	08:14
Vacuum Reading (in. w.c.)	-0.087
Number Vacuum Reading	-0.087

### U-Tube Manometer, 08:15, -1.1

Vacuum ID Link	34990 Beacon, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2022-01-20
Time	08:15
Vacuum Reading (in. w.c.)	-1.1
Number Vacuum Reading	-1.1

### MP-7, 08:15, -0.016

Vacuum ID Link	34990 Beacon, MP-7
Vacuum ID	MP-7
Date	2022-01-20
Time	08:15
Vacuum Reading (in. w.c.)	-0.016
Number Vacuum Reading	-0.016



**MP-1, 08:17, -0.021**

Vacuum ID Link	34990 Beacon, MP-1
Vacuum ID	MP-1
Date	2022-01-20
Time	08:17
Vacuum Reading (in. w.c.)	-0.021
Number Vacuum Reading	-0.021

**MP-2, 08:21, -0.037**

Vacuum ID Link	34990 Beacon, MP-2
Vacuum ID	MP-2
Date	2022-01-20
Time	08:21
Vacuum Reading (in. w.c.)	-0.037
Number Vacuum Reading	-0.037

**MP-3, 08:22, -0.053**

Vacuum ID Link	34990 Beacon, MP-3
Vacuum ID	MP-3
Date	2022-01-20
Time	08:22
Vacuum Reading (in. w.c.)	-0.053
Number Vacuum Reading	-0.053

**MP-5, 08:34, -0.037**

Vacuum ID Link	34990 Beacon, MP-5
Vacuum ID	MP-5
Date	2022-01-20
Time	08:34
Vacuum Reading (in. w.c.)	-0.037
Number Vacuum Reading	-0.037

**MP-4, 08:34, -0.027**

Vacuum ID Link	34990 Beacon, MP-4
Vacuum ID	MP-4
Date	2022-01-20
Time	08:34
Vacuum Reading (in. w.c.)	-0.027
Number Vacuum Reading	-0.027

**MP-6, 08:34, -0.086**

Vacuum ID Link	34990 Beacon, MP-6
Vacuum ID	MP-6
Date	2022-01-20
Time	08:34
Vacuum Reading (in. w.c.)	-0.086

Number Vacuum Reading	-0.086
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**U-Tube Manometer, 08:35, -1.1**

Vacuum ID Link	34990 Beacon, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2022-01-20
Time	08:35
Vacuum Reading (in. w.c.)	-1.1
Number Vacuum Reading	-1.1

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**MP-7, 08:35, -0.017**

Vacuum ID Link	34990 Beacon, MP-7
Vacuum ID	MP-7
Date	2022-01-20
Time	08:35
Vacuum Reading (in. w.c.)	-0.017
Number Vacuum Reading	-0.017

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**MP-1, 08:35, -0.024**

Vacuum ID Link	34990 Beacon, MP-1
Vacuum ID	MP-1
Date	2022-01-20
Time	08:35
Vacuum Reading (in. w.c.)	-0.024
Number Vacuum Reading	-0.024

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**MP-2, 08:36, -0.038**

Vacuum ID Link	34990 Beacon, MP-2
Vacuum ID	MP-2
Date	2022-01-20
Time	08:36
Vacuum Reading (in. w.c.)	-0.038
Number Vacuum Reading	-0.038

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**MP-3, 08:36, -0.055**

Vacuum ID Link	34990 Beacon, MP-3
Vacuum ID	MP-3
Date	2022-01-20
Time	08:36
Vacuum Reading (in. w.c.)	-0.055
Number Vacuum Reading	-0.055

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**BV-4, 08:25, 100**

Valve ID Link	34990 Beacon, BV-4
Valve ID	BV-4
Date	2022-01-20

Time	08:25
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

### **BV-5, 08:26, 80**

Valve ID Link	34990 Beacon, BV-5
Valve ID	BV-5
Date	2022-01-20
Time	08:26
Valve Position at Arrival (% Open)	80
Valve Position at Departure (% Open)	80

### **BV-6, 08:27, 100**

Valve ID Link	34990 Beacon, BV-6
Valve ID	BV-6
Date	2022-01-20
Time	08:27
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

### **BV-3, 08:30, 10**

Valve ID Link	34990 Beacon, BV-3
Valve ID	BV-3
Date	2022-01-20
Time	08:30
Valve Position at Arrival (% Open)	10
Valve Position at Departure (% Open)	10

### **BV-2, 08:31, 80**

Valve ID Link	34990 Beacon, BV-2
Valve ID	BV-2
Date	2022-01-20
Time	08:31
Valve Position at Arrival (% Open)	80
Valve Position at Departure (% Open)	80

### **BV-1, 09:35, 100**

Valve ID Link	34990 Beacon, BV-1
Valve ID	BV-1
Date	2022-01-20
Time	09:35
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100
Were interim vacuum readings taken between initial and final vacuum readings?	No

## **Inspection Reading Analysis**

## Manometer

Is the system manometer steady?	Yes
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## SSMP/MPs

Were any vacuum monitoring points not accessible? Please specify.	No
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Do all vacuum monitoring points meet -0.02 in w.c. threshold?	No
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Which ones don't and why?	MP-7, has a transmitter.
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Proposed modifications to address vacuum?	Transmitter is installed on MP-7.
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Were any ball valve positions changed?	No
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## Alarm Testing

Sensaphone Link	N/A
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Does the vacuum switch alarm work? Test the alarm condition and verify an alarm registers.	Yes
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Does the fan disconnect alarm work? Test the alarm condition and verify an alarm registers.	Yes
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Does the transmitter alarm work? Test the alarm condition and verify an alarm registers.	Yes
--	-----

Check the alarm history on the disconnect for the fan. Was it off for any length of time?	No
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Is the cloud logging vacuum readings properly (log in to check)?	N/A
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## Repairs

### Sample Delay

Send Sample Delay Email email body	N/A
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### Repair Completion

Were seam repairs completed during this visit?	Yes
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Were system repairs completed during this visit?	No
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Additional sealing completed:	Seams were repaired where tape was lifting.
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Sealing Completion Date	2022-01-20
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Sealing Repair Photos



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Are there outstanding repairs to be completed? No

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**Owner/Tenant Observations**

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Have there been any changes to the fan noise level or vibration? No

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Have any structures been built or modified that require vapor mitigation? No

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**Engineer Notification**

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Send Inspection Completion Email N/A

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email body

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**Engineer Notification**

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Send Inspection Completion Email - add any repairs, repair needs, or critical communications in email text N/A

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email body

## Additional Notes and Photos

Photos



