# **Transmittal Letter**



**TO** Suzanne Voytovich 34644 Beacon Livonia, MI 48150

ELECTRONIC COPIES TO Jeanne Schlaufman (EGLE) Todd Walton (Ford) Chuck Pinter (Ford)

PROJECT NUMBER 30146655 FROM Kristoffer Hinskey 248-994-2240 <u>kristoffer.hinskey@arcadis.com</u>

DATE October 5, 2022

**SUBJECT** Operation, Monitoring, and Maintenance Field Notes - 34644 Beacon

#### We are sending you:

Copies	Delivery Date	Description
1	10/6/2022	Operation, monitoring, and maintenance field notes.

#### Action\*

<ul> <li>A Approved</li> <li>AN Approved as Noted</li> <li>AS As Requested</li> <li>Other:</li></ul>	☐ CR ☐ F ☐ FA	Correct and Resubmit File For Approval	Rete	ubmit Copies urn Copies riew and Comment
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<ul> <li>□ U.S. Postal Service 1<sup>st</sup> Class</li> <li>□ Certified/Registered Mail</li> <li>☑ Other: Email</li> </ul>		livery  ☐ FedEx rvice (UPS)  ☐ FedEx	, 0	<ul> <li>FedEx 2-Day Delivery</li> <li>FedEx Economy</li> </ul>

#### **Comments:**

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 October 31, 2020 and April 22, 2022. Please let me know if you have any questions.

## 34644 Beacon, 2020-11-16, Full System Inspection

Created	2020-11-16 19:57:47 UTC by Seth Turner
Updated	2020-11-16 20:12:07 UTC by Seth Turner

### General Information

System Inspector	Seth Turner
Date	2020-11-16
Time	14:57
System Details Link	34644 Beacon
Property Address	34644 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	Mostly Cloudy
Ambient Temperature	39.02
Barometric Pressure	30.04
Indoor Temperature	70

## Design Components

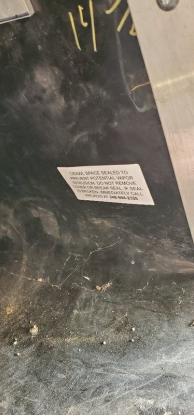
Does the house have a basement?	No
Does the house have a sump?	No
Does the house have garage retrocoat?	No
Does the house have shed retrocoat?	No
Does the house have basement retrocoat?	No
Does the house have a crawlspace barrier?	Yes
Does the house have an inaccessible crawlspace?	Yes
Does the house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

## System Inspection

Fan	
Fan(s) operating?	Yes
Are there any unusual fan noises?	No
Fan Comments	No unusual noises observed.
Piping	
ls 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 Bl)?	Yes

### Drains

Do any drain seals need to be repaired or replaced?	No
Crawlspace Barrier	
ls water present on the vapor barrier?	No
Inaccessible Crawlspace	
Are all entry points, vents, cracks, or other opening to crawlspaces being depressurized sealed?	Yes
Labels	
Are labels present at the pipe, control panel, u- tube, and breaker?	Yes
Are labels present at the crawlspace barrier?	Yes
Barrier Label Photos	



Are labels present at the inaccessible crawlspace? Yes

Inaccessible Crawlspace Label Photos



### Vacuum Monitoring

Yes
Yes
No
N/A

## **Inspection Measurements**

## **Pre-Measurement Conditions**

Are vacuum readings being taken under closed building conditions?	Yes
Do any monitoring points have transmitters?	No

### **Measurements and Valve Positions**

### MP-2, 15:01, -0.059

34644 Beacon, MP-2
MP-2
2020-11-16
15:01
-0.059
-0.059
-

### MP-4, 15:04, -0.060

Vacuum ID Link	34644 Beacon, MP-4
Vacuum ID	MP-4

Date	2020-11-16
Time	15:04
Vacuum Reading (in. w.c.)	-0.060
Number Vacuum Reading	-0.06

### MP-1, 15:05, -0.052

Vacuum ID Link	34644 Beacon, MP-1
Vacuum ID	MP-1
Date	2020-11-16
Time	15:05
Vacuum Reading (in. w.c.)	-0.052
Number Vacuum Reading	-0.052

## MP-3, 15:06, -0.063

Vacuum ID Link	34644 Beacon, MP-3
Vacuum ID	MP-3
Date	2020-11-16
Time	15:06
Vacuum Reading (in. w.c.)	-0.063
Number Vacuum Reading	-0.063

## U-Tube Manometer, 15:06, -1.2

Vacuum ID Link	34644 Beacon, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2020-11-16
Time	15:06
Vacuum Reading (in. w.c.)	-1.2
Number Vacuum Reading	-1.2

### BV-1, 14:59, 100

Valve ID Link	34644 Beacon, BV-1
Valve ID	BV-1
Date	2020-11-16
Time	14:59
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

## BV-3, 15:00, 25

Valve ID Link	34644 Beacon, BV-3
Valve ID	BV-3
Date	2020-11-16
Time	15:00
Valve Position at Arrival (% Open)	25
Valve Position at Departure (% Open)	25

## BV-2, 15:00, 100

Valve ID Link	34644 Beacon, BV-2
Valve ID	BV-2
Date	2020-11-16
Time	15:00
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
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?	No
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.	N/A
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)?	N/A
Repairs	
Sample Delay	
Send Sample Delay Email	N/A
email body	
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
Explain changes	No changes have been observed.
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Have any structures been built or modified that No require vapor mitigation?

Engineer Notification	
Send Inspection Completion Email	N/A
email body	
Engineer Notification	

email body

## 34644 Beacon, 2020-09-10, Full System Inspection

Created	2020-11-23 12:57:15 UTC by Quinn Carnahan
Updated	2020-11-23 12:57:15 UTC by Quinn Carnahan

### General Information

System Inspector	Quinn Carnahan
Date	2020-09-10
Time	17:10
System Details Link	34644 Beacon
Property Address	34644 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	Fog/Mist
Ambient Temperature	35.06
Barometric Pressure	30.16
Indoor Temperature	70

## **Design Components**

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

## System Inspection

Yes
No
No
Yes
No
Yes

#### Drains

Do any drain seals need to be repaired or replaced?	No
Garage Retrocoat	
Is retrocoat damaged or missing?	No
Crawlspace Barrier	
Is water present on the vapor barrier?	No
Inaccessible Crawlspace	
Are all entry points, vents, cracks, or other opening to crawlspaces being depressurized sealed?	Yes
Labels	

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

Common Label Photos



Are labels present at the garage retrocoat?

No

Garage Retrocoat Label Photos

No Retro-coat



#### Are labels present at the inaccessible crawlspace?

Inaccessible Crawlspace Label Photos

No



#### Vacuum Monitoring

Tacaann monitoring	
ls 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	

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#### **Pre-Measurement Conditions**

Are vacuum readings being taken under closed building conditions?	Yes
Do any monitoring points have transmitters?	No

### Measurements and Valve Positions

### MP-1, 17:15, -0.076

Vacuum ID Link	34644 Beacon, MP-1
Vacuum ID	MP-1
Date	2020-09-10
Time	17:15
Vacuum Reading (in. w.c.)	-0.076
Number Vacuum Reading	-0.076

#### MP-2, 17:16, -0.084

Vacuum ID Link	34644 Beacon, MP-2
Vacuum ID	MP-2
Date	2020-09-10
Time	17:16
Vacuum Reading (in. w.c.)	-0.084
Number Vacuum Reading	-0.084

### MP-3, 17:17, -0.084

Vacuum ID Link	34644 Beacon, MP-3
Vacuum ID	MP-3
Date	2020-09-10
Time	17:17
Vacuum Reading (in. w.c.)	-0.084
Number Vacuum Reading	-0.084

### MP-4, 17:18, -0.073

Vacuum ID Link	34644 Beacon, MP-4
Vacuum ID	MP-4
Date	2020-09-10
Time	17:18
Vacuum Reading (in. w.c.)	-0.073
Number Vacuum Reading	-0.073

### U-Tube Manometer, 17:19, -1.1

Vacuum ID Link	34644 Beacon, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2020-09-10
Time	17:19
Vacuum Reading (in. w.c.)	-1.1
Number Vacuum Reading	-1.1

## BV-1, 17:20, 100

Valve ID Link	34644 Beacon, BV-1
Valve ID	BV-1
Date	2020-09-10
Time	17:20
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

## BV-2, 17:21, 100

Valve ID Link	34644 Beacon, BV-2
Valve ID	BV-2
Date	2020-09-10
Time	17:21
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

## BV-3, 17:22, 15

Valve ID Link	34644 Beacon, BV-3
Valve ID	BV-3
Date	2020-09-10
Time	17:22
Valve Position at Arrival (% Open)	15
Valve Position at Departure (% Open)	15
Were interim vacuum readings taken between initial and final vacuum readings?	No

## Inspection Reading Analysis

Manometer	
Is the system manometer steady?	Yes
SSMP/MPs	
Were any vacuum monitoring points not accessible? Please specify.	None.
Do all vacuum monitoring points meet -0.02 in w.c. threshold?	Yes
Were any ball valve positions changed?	No

## 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.	N/A

Νο
Yes
Sensaphone alarms received for vacuum switch and disconnect switch.
N/A
No
No
No
No
No
N/A
N/A

## 34644 Beacon, 2021-03-17, Full System Inspection

Created	2021-03-17 16:30:00 UTC by Andrew Banitt
Updated	2021-03-17 17:15:13 UTC by Andrew Banitt

## General Information

System Inspector	Andrew Banitt
Date	2021-03-17
Time	13:00
System Details Link	34644 Beacon
Property Address	34644 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	Partly Cloudy
Ambient Temperature	46.04
Barometric Pressure	30.04
Indoor Temperature	70

## Design Components

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

## 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 Bl)?	Yes

#### Drains

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

Crawlspace Barrier			
Is water present on the vapor barrier?	No		

#### Inaccessible Crawlspace

Are all entry points, vents, cracks, or other opening Yes to crawlspaces being depressurized sealed?

#### Labels

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

Common Label Photos





Are labels present at the inaccessible crawlspace?

Inaccessible Crawlspace Label Photos

Yes



#### Vacuum Monitoring

ls the u-tube accurate (test with micromanometer/manometer, rezero/replace as needed)?	Yes
ls 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?	No

### Measurements and Valve Positions

### MP-4, 13:05, -0.078

Vacuum ID Link	34644 Beacon, MP-4
Vacuum ID	MP-4
Date	2021-03-17
Time	13:05
Vacuum Reading (in. w.c.)	-0.078
Number Vacuum Reading	-0.078

#### MP-2, 13:06, -0.066

Vacuum ID Link	34644 Beacon, MP-2
Vacuum ID	MP-2
Date	2021-03-17
Time	13:06
Vacuum Reading (in. w.c.)	-0.066
Number Vacuum Reading	-0.066

## MP-1, 13:06, -0.064

Vacuum ID Link	34644 Beacon, MP-1
Vacuum ID	MP-1
Date	2021-03-17
Time	13:06
Vacuum Reading (in. w.c.)	-0.064
Number Vacuum Reading	-0.064

### MP-3, 13:07, -0.074

,

### U-Tube Manometer, 13:07, -1.1

lanometer

## BV-1, 13:08, 100

Valve ID Link	34644 Beacon, BV-1
Valve ID	BV-1
Date	2021-03-17
Time	13:08
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

## BV-2, 13:08, 100

Valve ID Link	34644 Beacon, BV-2
Valve ID	BV-2
Date	2021-03-17
Time	13:08
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

## BV-3, 13:08, 25

Valve ID Link	34644 Beacon, BV-3
Valve ID	BV-3
Date	2021-03-17
Time	13:08
Valve Position at Arrival (% Open)	25
Valve Position at Departure (% Open)	25
Were interim vacuum readings taken between initial and final vacuum readings?	No

## Inspection Reading Analysis

Manometer	
Is the system manometer steady?	Yes
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?	No

## Alarm Testing

N/A
Yes
Yes
N/A

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)?	N/A
Repairs	
Sample Delay	
Send Sample Delay Email	N/A
email body	
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
Have any structures been built or modified that require vapor mitigation?	No
Engineer Notification	
Send Inspection Completion Email	N/A
email body	
Engineer Notification	
Send Inspection Completion Email - add any repairs, repair needs, or critical communications in email text	N/A
email body	
-	

## 34644 Beacon, 2022-04-22, Full System Inspection

Created	2022-04-22 19:41:59 UTC by Seth Turner
Updated	2022-04-22 19:53:00 UTC by Seth Turner

### General Information

System Inspector	Seth Turner
Date	2022-04-22
Time	15:41
System Details Link	34644 Beacon
Property Address	34644 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	53F, rainy
Ambient Temperature	53F
Barometric Pressure	30.12
Indoor Temperature	70

## Design Components

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

## System Inspection

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

#### Drains

Do any drain seals need to be repaired or replaced?	No
Crawlspace Barrier	
Is water present on the vapor barrier?	No
Inaccessible Crawlspace	
Are all entry points, vents, cracks, or other opening to crawlspaces being depressurized sealed?	Yes

## Labels

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

Common Label Photos



Are labels present at the crawlspace barrier?

Yes



Are labels present at the inaccessible crawlspace? Yes

Inaccessible Crawlspace Label Photos



## Vacuum Monitoring

ls the u-tube accurate (test with micromanometer/manometer, rezero/replace as needed)?	Yes
ls 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?	No	

#### **Measurements and Valve Positions**

#### U-Tube Manometer, 15:44, -1.2

Vacuum ID Link	34644 Beacon, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2022-04-22
Time	15:44
Vacuum Reading (in. w.c.)	-1.2
Number Vacuum Reading	-1.2

#### MP-4, 15:44, -0.073

Vacuum ID Link	34644 Beacon, MP-4
Vacuum ID	MP-4
Date	2022-04-22
Time	15:44
Vacuum Reading (in. w.c.)	-0.073
Number Vacuum Reading	-0.073

## MP-2, 15:45, -0.071

Vacuum ID Link	34644 Beacon, MP-2
Vacuum ID	MP-2
Date	2022-04-22
Time	15:45
Vacuum Reading (in. w.c.)	-0.071
Number Vacuum Reading	-0.071

#### MP-1, 15:45, -0.069

Vacuum ID Link	34644 Beacon, MP-1
Vacuum ID	MP-1
Date	2022-04-22
Time	15:45
Vacuum Reading (in. w.c.)	-0.069
Number Vacuum Reading	-0.069

#### MP-3, 15:45, -0.074

Vacuum ID	MP-3
Date	2022-04-22
Time	15:45
Vacuum Reading (in. w.c.)	-0.074
Number Vacuum Reading	-0.074

## BV-1, 15:49, 100

Valve ID Link	34644 Beacon, BV-1
Valve ID	BV-1
Date	2022-04-22
Time	15:49
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

# BV-2, 15:49, 100

Valve ID Link	34644 Beacon, BV-2
Valve ID	BV-2
Date	2022-04-22
Time	15:49
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

## BV-3, 15:49, 25

Valve ID Link	34644 Beacon, BV-3
Valve ID	BV-3
Date	2022-04-22
Time	15:49
Valve Position at Arrival (% Open)	25
Valve Position at Departure (% Open)	25
Were interim vacuum readings taken between initial and final vacuum readings?	No

# Inspection Reading Analysis

#### Manometer

Is the system manometer steady?	Yes
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?	No

### Alarm Testing

Sensaphone Link

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.	N/A
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)?	N/A
Repairs	
Sample Delay	
Send Sample Delay Email	N/A
email body	
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
Have any structures been built or modified that require vapor mitigation?	No
Engineer Notification	
Send Inspection Completion Email	N/A
email body	
Engineer Notification	
Send Inspection Completion Email - add any repairs, repair needs, or critical communications in email text	N/A
email body	