

Transmittal Letter



TO
Casey & Michelle Nelson
34424 Capitol
Livonia, MI 48150

FROM
Kristoffer Hinskey
248-994-2240
kristoffer.hinskey@arcadis.com

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

DATE
October 5, 2022

PROJECT NUMBER
30146655

SUBJECT
Operation, Monitoring, and
Maintenance Field Notes - 34424 Capitol

We are sending you:

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

Action*

- | | | |
|---|--|---|
| <input type="checkbox"/> A Approved | <input type="checkbox"/> CR Correct and Resubmit | <input type="checkbox"/> Resubmit ____ Copies |
| <input type="checkbox"/> AN Approved as Noted | <input type="checkbox"/> F File | <input type="checkbox"/> Return ____ Copies |
| <input type="checkbox"/> AS As Requested | <input type="checkbox"/> FA For Approval | <input type="checkbox"/> Review and Comment |
| <input type="checkbox"/> Other: _____ | | |

Mailing Method

- | | | | |
|--|--|--|---|
| <input type="checkbox"/> U.S. Postal Service 1 st Class | <input type="checkbox"/> Courier/Hand Delivery | <input type="checkbox"/> FedEx Priority Overnight | <input type="checkbox"/> FedEx 2-Day Delivery |
| <input type="checkbox"/> Certified/Registered Mail | <input type="checkbox"/> United Parcel Service (UPS) | <input checked="" type="checkbox"/> FedEx Standard Overnight | <input type="checkbox"/> FedEx Economy |
| <input checked="" type="checkbox"/> Other: <u>Email</u> | | | |

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 November 30, 2020 and March 31, 2022. Please let me know if you have any questions.

34424 Capitol, 2021-02-17, Full System Inspection

Created	2021-02-17 12:25:32 UTC by Seth Turner
Updated	2021-02-18 16:29:57 UTC by Andrew Banitt

General Information

System Inspector	Seth Turner
Date	2021-02-17
Time	08:00
System Details Link	34424 Capitol
Property Address	34424 Capitol
Check Inspection(s) to be Completed	Full System Inspection
Get weather data from National Weather Service Website for your current location?	N/A
Weather	-2F, clear
Ambient Temperature	-2F
Barometric Pressure	-28.97
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?	No
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 BI)?	Yes
--	-----

Drains

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

Crawlspace Barrier

Is water present on the vapor barrier? No

Labels

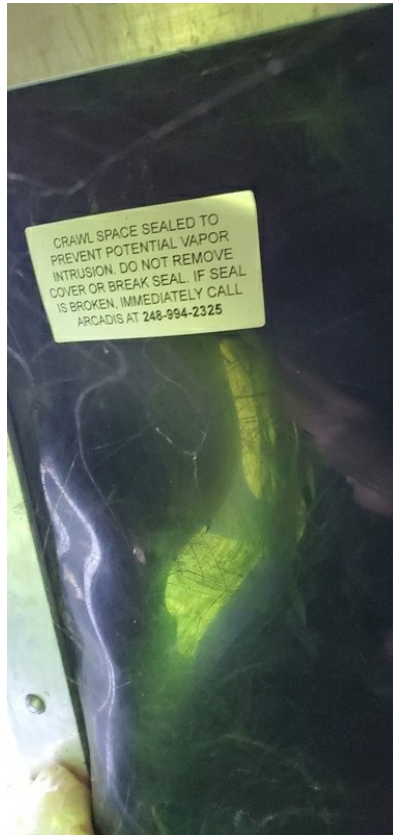
Are labels present at the pipe, control panel, u-tube, and breaker? Yes

Common 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?	No

Measurements and Valve Positions

MP-4, 08:02, -0.044

Vacuum ID Link	34424 Capitol, MP-4
Vacuum ID	MP-4
Date	2021-02-17
Time	08:02
Vacuum Reading (in. w.c.)	-0.044

Number Vacuum Reading	-0.044
-----------------------	--------

MP-3, 08:03, -0.056

Vacuum ID Link	34424 Capitol, MP-3
Vacuum ID	MP-3
Date	2021-02-17
Time	08:03
Vacuum Reading (in. w.c.)	-0.056
Number Vacuum Reading	-0.056

MP-1, 08:03, -0.048

Vacuum ID Link	34424 Capitol, MP-1
Vacuum ID	MP-1
Date	2021-02-17
Time	08:03
Vacuum Reading (in. w.c.)	-0.048
Number Vacuum Reading	-0.048

MP-2, 08:04, -0.048

Vacuum ID Link	34424 Capitol, MP-2
Vacuum ID	MP-2
Date	2021-02-17
Time	08:04
Vacuum Reading (in. w.c.)	-0.048
Number Vacuum Reading	-0.048

SSMP-1, 08:04, -0.002

Vacuum ID Link	34424 Capitol, SSMP-1
Vacuum ID	SSMP-1
Date	2021-02-17
Time	08:04
Vacuum Reading (in. w.c.)	-0.002
Number Vacuum Reading	-0.002

U-Tube Manometer, 08:08, -2.4

Vacuum ID Link	34424 Capitol, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2021-02-17
Time	08:08
Vacuum Reading (in. w.c.)	-2.4
Number Vacuum Reading	-2.4

MP-3, 08:33, -0.057

Vacuum ID Link	34424 Capitol, MP-3
Vacuum ID	MP-3
Date	2021-02-17

Time	08:33
Vacuum Reading (in. w.c.)	-0.057
Number Vacuum Reading	-0.057

MP-4, 08:34, -0.047

Vacuum ID Link	34424 Capitol, MP-4
Vacuum ID	MP-4
Date	2021-02-17
Time	08:34
Vacuum Reading (in. w.c.)	-0.047
Number Vacuum Reading	-0.047

MP-2, 08:34, -0.052

Vacuum ID Link	34424 Capitol, MP-2
Vacuum ID	MP-2
Date	2021-02-17
Time	08:34
Vacuum Reading (in. w.c.)	-0.052
Number Vacuum Reading	-0.052

MP-1, 08:34, -0.053

Vacuum ID Link	34424 Capitol, MP-1
Vacuum ID	MP-1
Date	2021-02-17
Time	08:34
Vacuum Reading (in. w.c.)	-0.053
Number Vacuum Reading	-0.053

SSMP-1, 08:34, -0.002

Vacuum ID Link	34424 Capitol, SSMP-1
Vacuum ID	SSMP-1
Date	2021-02-17
Time	08:34
Vacuum Reading (in. w.c.)	-0.002
Number Vacuum Reading	-0.002

U-Tube Manometer, 08:35, -2.4

Vacuum ID Link	34424 Capitol, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2021-02-17
Time	08:35
Vacuum Reading (in. w.c.)	-2.4
Number Vacuum Reading	-2.4

BV-1, 08:06, 75

Valve ID Link	34424 Capitol, BV-1
---------------	---------------------

Valve ID	BV-1
Date	2021-02-17
Time	08:06
Valve Position at Arrival (% Open)	75
Valve Position at Departure (% Open)	75

BV-2, 08:06, 50

Valve ID Link	34424 Capitol, BV-2
Valve ID	BV-2
Date	2021-02-17
Time	08:06
Valve Position at Arrival (% Open)	50
Valve Position at Departure (% Open)	50

BV-3, 08:08, 100

Valve ID Link	34424 Capitol, BV-3
Valve ID	BV-3
Date	2021-02-17
Time	08:08
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

BV-4, 08:09, 100

Valve ID Link	34424 Capitol, BV-4
Valve ID	BV-4
Date	2021-02-17
Time	08:09
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?	No
Which ones don't and why?	Ssmp-01
Proposed modifications to address vacuum?	N/A
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?	Yes
Were system repairs completed during this visit?	No
Additional sealing completed:	Taped hole in liner
Sealing Completion Date	2021-02-17

Sealing Repair Photos



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

34424 Capitol, 2021-08-26, System Check

Created	2021-08-26 20:42:45 UTC by Seth Turner
Updated	2021-08-26 22:09:58 UTC by Seth Turner

General Information

System Inspector	Seth Turner
Date	2021-08-26
Time	16:42
System Details Link	34424 Capitol
Property Address	34424 Capitol
Check Inspection(s) to be Completed	System Check
Get weather data from National Weather Service Website for your current location?	N/A
Weather	sunny, humid
Ambient Temperature	90F
Barometric Pressure	29.29
Indoor Temperature	70

Inspection Measurements

Pre-Measurement Conditions

Are vacuum readings being taken under closed building conditions?	Yes
---	-----

Measurements and Valve Positions

U-Tube Manometer, 17:48, -2.5

Vacuum ID Link	34424 Capitol, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2021-08-26
Time	17:48
Vacuum Reading (in. w.c.)	-2.5
Number Vacuum Reading	-2.5

MP-1, 17:48, -0.042

Vacuum ID Link	34424 Capitol, MP-1
Vacuum ID	MP-1
Date	2021-08-26
Time	17:48
Vacuum Reading (in. w.c.)	-0.042
Number Vacuum Reading	-0.042

SSMP-1, 17:49, -0.000

Vacuum ID Link	34424 Capitol, SSMP-1
Vacuum ID	SSMP-1
Date	2021-08-26
Time	17:49

Vacuum Reading (in. w.c.)	-0.000
Number Vacuum Reading	0.0

MP-2, 17:49, -0.057

Vacuum ID Link	34424 Capitol, MP-2
Vacuum ID	MP-2
Date	2021-08-26
Time	17:49
Vacuum Reading (in. w.c.)	-0.057
Number Vacuum Reading	-0.057

MP-4, 17:49, -0.026

Vacuum ID Link	34424 Capitol, MP-4
Vacuum ID	MP-4
Date	2021-08-26
Time	17:49
Vacuum Reading (in. w.c.)	-0.026
Number Vacuum Reading	-0.026

MP-3, 17:50, -0.087

Vacuum ID Link	34424 Capitol, MP-3
Vacuum ID	MP-3
Date	2021-08-26
Time	17:50
Vacuum Reading (in. w.c.)	-0.087
Number Vacuum Reading	-0.087

MP-1, 17:54, -0.064

Vacuum ID Link	34424 Capitol, MP-1
Vacuum ID	MP-1
Date	2021-08-26
Time	17:54
Vacuum Reading (in. w.c.)	-0.064
Number Vacuum Reading	-0.064

SSMP-1, 17:54, 0.001

Vacuum ID Link	34424 Capitol, SSMP-1
Vacuum ID	SSMP-1
Date	2021-08-26
Time	17:54
Vacuum Reading (in. w.c.)	0.001
Number Vacuum Reading	0.001

MP-3, 17:54, -0.217

Vacuum ID Link	34424 Capitol, MP-3
Vacuum ID	MP-3

Date	2021-08-26
Time	17:54
Vacuum Reading (in. w.c.)	-0.217
Number Vacuum Reading	-0.217

MP-4, 17:55, -0.062

Vacuum ID Link	34424 Capitol, MP-4
Vacuum ID	MP-4
Date	2021-08-26
Time	17:55
Vacuum Reading (in. w.c.)	-0.062
Number Vacuum Reading	-0.062

MP-2, 17:55, -0.119

Vacuum ID Link	34424 Capitol, MP-2
Vacuum ID	MP-2
Date	2021-08-26
Time	17:55
Vacuum Reading (in. w.c.)	-0.119
Number Vacuum Reading	-0.119

U-Tube Manometer, 17:56, -2.8

Vacuum ID Link	34424 Capitol, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2021-08-26
Time	17:56
Vacuum Reading (in. w.c.)	-2.8
Number Vacuum Reading	-2.8

BV-1, 17:53, 100

Valve ID Link	34424 Capitol, BV-1
Valve ID	BV-1
Date	2021-08-26
Time	17:53
Valve Position at Departure (% Open)	100

BV-2, 17:53, 100

Valve ID Link	34424 Capitol, BV-2
Valve ID	BV-2
Date	2021-08-26
Time	17:53
Valve Position at Departure (% Open)	100

BV-3, 17:53, 0

Valve ID Link	34424 Capitol, BV-3
Valve ID	BV-3

Date	2021-08-26
Time	17:53
Valve Position at Departure (% Open)	0

BV-4, 17:53, 0

Valve ID Link	34424 Capitol, BV-4
Valve ID	BV-4
Date	2021-08-26
Time	17:53
Valve Position at Departure (% Open)	0

BV-1, 17:50, 75

Valve ID Link	34424 Capitol, BV-1
Valve ID	BV-1
Date	2021-08-26
Time	17:50
Valve Position at Departure (% Open)	75

BV-2, 17:50, 50

Valve ID Link	34424 Capitol, BV-2
Valve ID	BV-2
Date	2021-08-26
Time	17:50
Valve Position at Departure (% Open)	50

BV-3, 17:50, 100

Valve ID Link	34424 Capitol, BV-3
Valve ID	BV-3
Date	2021-08-26
Time	17:50
Valve Position at Departure (% Open)	100

BV-4, 17:50, 100

Valve ID Link	34424 Capitol, BV-4
Valve ID	BV-4
Date	2021-08-26
Time	17:50
Valve Position at Departure (% Open)	100

Were interim vacuum readings taken between initial and final vacuum readings?	Yes
---	-----

Upload photo/screenshot of vacuum/valve position adjustments

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?	Yes
--	-----

Did you take final readings?	Yes
------------------------------	-----

Alarm Testing

Sensaphone Link	N/A
-----------------	-----

Repairs

Sample Delay

Send Sample Delay Email email body	N/A
---------------------------------------	-----

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
--	----

Engineer Notification

Send Inspection Completion Email email body	N/A
--	-----

Engineer Notification

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

email body

Additional Notes and Photos

Notes

SSMP-3: -0.667

34424 Capitol, 2022-01-31, Full System Inspection

Created	2022-01-31 21:50:36 UTC by Seth Turner
Updated	2022-01-31 22:53:47 UTC by Seth Turner

General Information

System Inspector	Seth Turner
Date	2022-01-31
Time	16:50
System Details Link	34424 Capitol
Property Address	34424 Capitol
Check Inspection(s) to be Completed	Full System Inspection
Get weather data from National Weather Service Website for your current location?	N/A
Weather	29F, sunny
Ambient Temperature	29F
Barometric Pressure	29.92
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?	No
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 BI)?	Yes
--	-----

Drains

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

Crawlspace Barrier

Is water present on the vapor barrier? No

Labels

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

Common 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?	No

Measurements and Valve Positions

U-Tube Manometer, 17:05, -2.4

Vacuum ID Link	34424 Capitol, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2022-01-31
Time	17:05
Vacuum Reading (in. w.c.)	-2.4

Number Vacuum Reading	-2.4
-----------------------	------

MP-1, 17:06, -0.078

Vacuum ID Link	34424 Capitol, MP-1
Vacuum ID	MP-1
Date	2022-01-31
Time	17:06
Vacuum Reading (in. w.c.)	-0.078
Number Vacuum Reading	-0.078

MP-2, 17:06, -0.111

Vacuum ID Link	34424 Capitol, MP-2
Vacuum ID	MP-2
Date	2022-01-31
Time	17:06
Vacuum Reading (in. w.c.)	-0.111
Number Vacuum Reading	-0.111

MP-3, 17:06, -0.155

Vacuum ID Link	34424 Capitol, MP-3
Vacuum ID	MP-3
Date	2022-01-31
Time	17:06
Vacuum Reading (in. w.c.)	-0.155
Number Vacuum Reading	-0.155

MP-4, 17:07, -0.075

Vacuum ID Link	34424 Capitol, MP-4
Vacuum ID	MP-4
Date	2022-01-31
Time	17:07
Vacuum Reading (in. w.c.)	-0.075
Number Vacuum Reading	-0.075

U-Tube Manometer, 17:37, -2.4

Vacuum ID Link	34424 Capitol, U-Tube Manometer
Vacuum ID	U-Tube Manometer
Date	2022-01-31
Time	17:37
Vacuum Reading (in. w.c.)	-2.4
Number Vacuum Reading	-2.4

MP-1, 17:37, -0.079

Vacuum ID Link	34424 Capitol, MP-1
Vacuum ID	MP-1
Date	2022-01-31

Time	17:37
Vacuum Reading (in. w.c.)	-0.079
Number Vacuum Reading	-0.079

MP-2, 17:38, -0.110

Vacuum ID Link	34424 Capitol, MP-2
Vacuum ID	MP-2
Date	2022-01-31
Time	17:38
Vacuum Reading (in. w.c.)	-0.110
Number Vacuum Reading	-0.11

MP-3, 17:38, -0.157

Vacuum ID Link	34424 Capitol, MP-3
Vacuum ID	MP-3
Date	2022-01-31
Time	17:38
Vacuum Reading (in. w.c.)	-0.157
Number Vacuum Reading	-0.157

MP-4, 17:38, -0.075

Vacuum ID Link	34424 Capitol, MP-4
Vacuum ID	MP-4
Date	2022-01-31
Time	17:38
Vacuum Reading (in. w.c.)	-0.075
Number Vacuum Reading	-0.075

BV-1, 17:33, 100

Valve ID Link	34424 Capitol, BV-1
Valve ID	BV-1
Date	2022-01-31
Time	17:33
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

BV-2, 17:33, 100

Valve ID Link	34424 Capitol, BV-2
Valve ID	BV-2
Date	2022-01-31
Time	17:33
Valve Position at Arrival (% Open)	100
Valve Position at Departure (% Open)	100

BV-3, 17:33, 0

Valve ID Link	34424 Capitol, BV-3
---------------	---------------------

Valve ID	BV-3
Date	2022-01-31
Time	17:33
Valve Position at Arrival (% Open)	0
Valve Position at Departure (% Open)	0

BV-4, 17:33, 0

Valve ID Link	34424 Capitol, BV-4
Valve ID	BV-4
Date	2022-01-31
Time	17:33
Valve Position at Arrival (% Open)	0
Valve Position at Departure (% Open)	0
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
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	

Additional Notes and Photos

Notes	Ssmp-3: -0.659. BV-3 and BV-4 have been closed since the last annual system check event.
-------	--