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*Conservation Director
and Counsel*

August 30, 2024

Sean Mahar
Interim Commissioner
New York State Department of Environmental Conservation
625 Broadway, 14th Floor
Albany, NY. 12233-1010

Re: Unlawful Air Emissions by WhistlePig Whiskey Mineville, Town of Moriah, Essex County

Dear Commissioner Mahar:

Protect the Adirondacks ("PROTECT") is writing to request that you revoke the recent approval by Department of Environmental Conservation ("DEC") Region 5 of a submission by WhistlePig Whiskey ("WhistlePig") purporting to address WhistlePig's continuing violations of 6 NYCRR § 211.1. As discussed below and confirmed by DEC sampling and analysis, Whistlepig has emitted and continues to emit ethanol vapor from its facilities that forms a black mold, known as "whiskey fungus," on nearby homes and property. DEC Region 5 concluded that WhistlePig's emissions unreasonably interfere with the comfortable enjoyment of life or property in violation of 6 NYCRR § 211.1 and required WhistlePig to submit a corrective action plan to address these ongoing violations.

In June 2024, WhistlePig submitted a proposed plan that was conditionally approved by DEC Region 5 on July 29, 2024. The plan does not include any measures to reduce or eliminate WhistlePig's mold-causing emissions; rather, it merely provides that the company will, once a year, power wash homes within a certain radius of the WhistlePig facilities. Because the WhistlePig plan is not a corrective action plan and fails to address the root cause of the company's regulatory violations, PROTECT asks that you revoke the Region's approval and require WhistlePig to submit a plan that reduces or eliminates its unlawful emissions.

WhistlePig's Operations

WhistlePig owns and operates thirteen (13) 14,000 square foot warehouses on property in Mineville, Town of Moriah, Essex County. The warehouses are

Protect the Adirondacks

PO Box 48, North Creek, NY 12853 518.251.2700

www.protectadks.org info@protectadks.org

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used to store and age the company's whiskey products, which emit vapors containing a fungus commonly referred to as "whiskey fungus," "warehouse staining fungus" and "distillery fungus." Its scientific name is *Baudonia compniacensis*. The vapors form as the whiskey ages. When the vapor escapes to the outdoors, it coats surfaces it contacts with a black mold, which is currently affecting homes, cars, signs, fenceposts and other property in Mineville. As reported in the *Adirondack Explorer*, "white and yellow houses [in Mineville] are turning gray, green metal roofs are turning brown and white gutters and fence posts are turning spotted black." See Gwendolyn Craig, As distilling business expands, so does black sheen on Mineville buildings, *Adirondack Explorer* (Nov. 29, 2023). Photographs of the whiskey fungus on homes and other property in Mineville are attached as Exhibit A. Additional photographs are available in an article published by the *Adirondack Explorer* available at <https://www.adirondackexplorer.org/stories/whiskey-fungus-plan>.

DEC's Investigation

In response to complaints from Mineville residents, DEC collected samples of the black mold in November 2023 from the WhistlePig warehouse and from several nearby residences. Subsequent laboratory analysis confirmed that the black mold was whiskey fungus originating from vapors emitted from the WhistlePig warehouses. As concluded in DEC's report on the sampling and analysis:

Based on all the available information, it is concluded that the fungus from the residences is consistent with that collected from the property of WhistlePig. The examination of the control sample shows evidence that the fungus material in the area is observed in greater quantities than what is naturally found in the environment.

NYSDEC Bureau of Air Quality Surveillance, Report for Mineville 2023 (2023) (attached as Exhibit B) at 9.

PROTECT was contacted by one of the Mineville residents whose home is impacted by the WhistlePig emissions. By letter dated March 8, 2024 (attached as Exhibit C), PROTECT requested that DEC Region 5 initiate an enforcement action against WhistlePig for violating 6 NYCRR § 211.1. Subsequently, DEC Region 5 sent a letter to WhistlePig dated March 21, 2024 (attached as Exhibit D), which stated:

[DEC] has determined that emissions of ethanol from WhistlePig's whiskey aging warehouses in the Town of Moriah, New York, appear to be contributing to the growth of unsightly black whiskey fungus on building exteriors near the facility. The spread of this fungus has led to an increasing number of public complaints to DEC, including five in the last 12 months . . . DEC has authority under New York Environmental Conservation Law Article 19, Section 19-0301, and Title 6 of the New York Codes, Rules, and Regulations, Part 211, to regulate emissions of air contaminants that "unreasonably interfere with the comfortable enjoyment of life or property." Without a protocol in place to neutralize emissions of ethanol or mitigate the growth of whiskey fungus, WhistlePig's operations are likely to contribute to an actionable interference under these provisions.

The letter required WhistlePig to submit a corrective action plan within 30 days.

WhistlePig's Plan

On or about June 13, 2024, WhistlePig submitted what it characterized as a “corrective action plan” to DEC. However, the plan does not include any actions by WhistlePig to control fungus-causing emissions from its warehouses. Instead, WhistlePig’s plan perpetuates the problematic vapor emissions and only requires the company to power wash homes located within 960 yards of its facilities once a year, after whiskey fungus has accumulated on homes. A copy of WhistlePig’s submission is attached as Exhibit E.

Despite the fact that WhistlePig’s submission does not include any measures to reduce or neutralize its emissions of ethanol, DEC Region 5 approved the submission on July 31, 2024. The region’s approval was conditioned upon WhistlePig providing an air dispersion analysis showing that its emissions do not impact residences located more than 960 yards from its facilities. A copy of the DEC Region 5 approval letter is attached as Exhibit F.

Approval of the Plan Should be Revoked

PROTECT urges you to revoke approval of WhistlePig’s submission for two reasons. First, the submission is not a “corrective action plan” because it does not require WhistlePig to take any corrective actions at its facilities to reduce or eliminate its unlawful emissions. The plan proposes no measures to “neutralize emissions of ethanol” as called for in DEC’s March 21, 2024 letter and instead allows the company to continue to plague the Mineville community with black mold in perpetuity.

Moreover, the March 21, 2024 letter states that “DEC anticipates that WhistlePig’s planned expansion of this facility is likely to cause additional fungus growth and lead to more complaints from community residents.” Thus, simply promising to power wash homes once a year is not an appropriate or long-term solution to the inundation of the Mineville community with black mold—a problem that DEC has acknowledged is likely to worsen with the company’s planned expansion. And power washing some (but not all) homes does not address the other types of property impacted by WhistlePigs emissions, such as cars, signs and fencing, and does not help homeowners whose property is located more than 960 yards from the WhistlePig warehouses.

Second, the WhistlePig submission utterly fails to address the company’s continuing violation of Part 211.1. Power washing homes once a year does not eliminate WhistlePig’s unreasonable interference with the comfortable enjoyment of life or property of Mineville residents. Forcing homeowners to live in houses contaminated and disfigured with black mold for most of the year, and to bear the near certain inability to sell their homes due to the presence of whiskey fungus, is a clear violation of Part 211.1. DEC Region 5’s approval of WhistlePig’s inadequate plan effectively condones, rather than puts an end to WhistlePig’s regulatory violations.

Conclusion

For the above reasons, PROTECT urges you to revoke the conditional approval of WhistlePig's submission and require the company to submit a corrective action plan that includes measures to reduce or eliminate its unlawful emissions.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Amato", with a stylized flourish at the end.

Christopher Amato
Conservation Director and Counsel
Protect the Adirondacks
P.O. Box 48
North Creek, NY 12853
(518) 860-3696
conservationdirector@protectadks.org

cc: Tom Berkman, Deputy Commissioner and General Counsel
Jon Binder, Deputy Commissioner for Air Resources
Aaron Love, Esq., DEC Regional Attorney, Region 5
James E. Hogan III, P.E., Regional Air Pollution Control Engineer, Region 5
Matthew Brassard, Supervisor, Town of Moriah

EXHIBIT A

02/06/2024



THIS PROPERTY PROTECTED BY
NEW YORK
FIRE & SECURITY
SECURITY & FIRE ALARM SYSTEMS



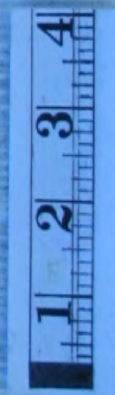
02/11/2024

02/04/2024



02/05/2024

08/29/2024





08/29/2024

1

2

3

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02/07/2024





02/04/2024

02/09/2024



02/09/2024

EXHIBIT B

REPORT for
Mineville 2023

Bureau of Air Quality Surveillance
Division of Air Resources
NYS Department of Environmental Conservation
Final 03/18/2024

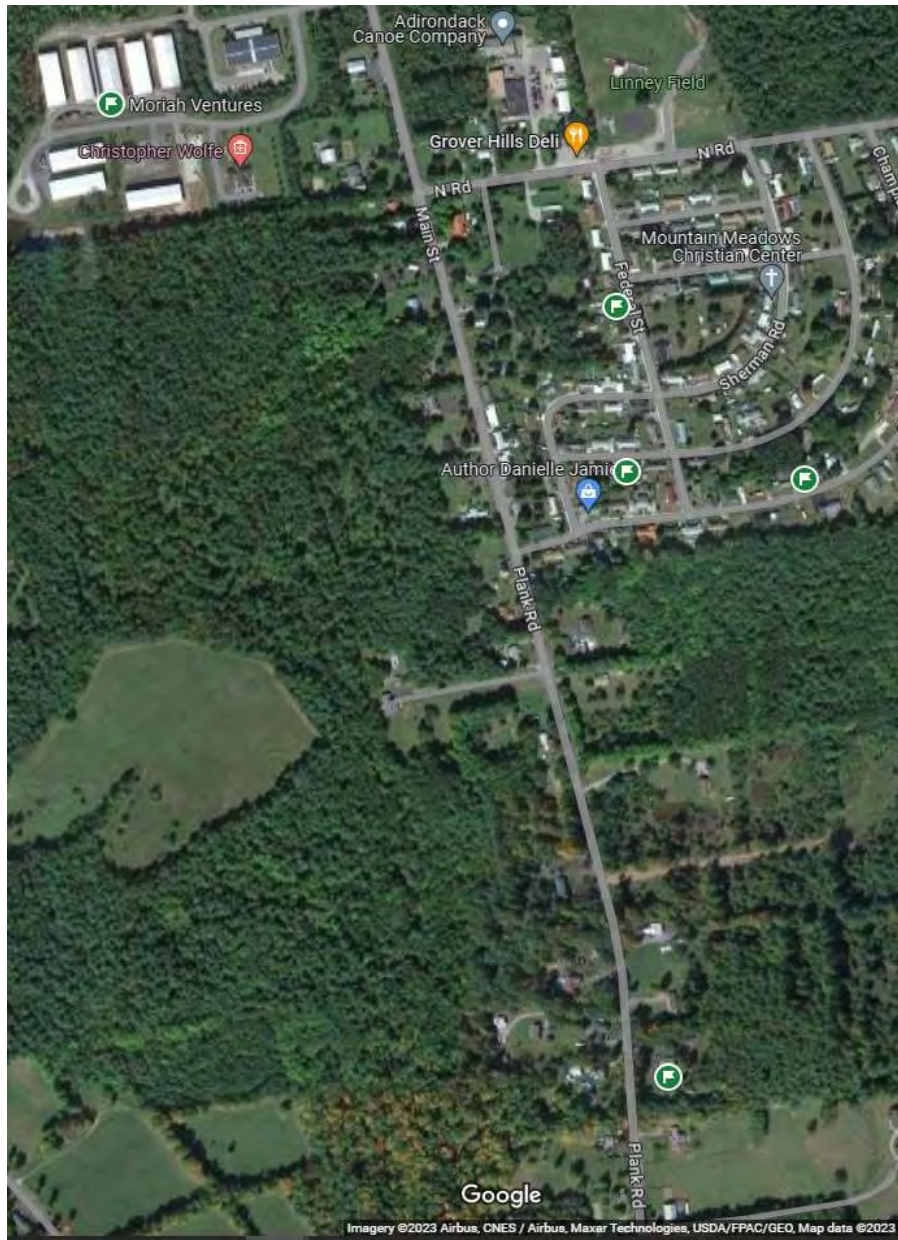
SUMMARY

A study into air pollution complaints in the vicinity of the WhistlePig Distillery has been completed. The WhistlePig facility in Mineville, New York is a spirits warehouse with processing and bottling operations. The complaints from nearby residents are regarding what appears to be a black fungus that has accumulated on their homes that they believe to be “Whiskey Fungus”. “Whiskey Fungus” is a common term used to describe the fungus *Baudoinia Compniacensis* that occurs naturally in the environment and has an affinity for ethanol exposed materials. The WhistlePig facility stores barrels of whiskey in warehouses for aging and ethanol emanates into the environment from the barrels as part of the aging process.

On November 9th, 2023, DEC staff visited the site of the WhistlePig operation in Mineville and collected samples for analysis. Several of the warehouses were examined and two samples were collected to be used as Source material for comparison in an analysis of the black material covering nearby buildings. The Source sample was collected directly from the warehouse where there was an observed concentrated amount of the black material. Onsite staff said the black material on the outside of the warehouses on site is *Baudoinia*. DEC staff then proceeded to the residences of the complainants and collected four samples. Many of the homes in the vicinity did appear to be impacted by a black substance that resembled a mold or fungus. A sample outside of the area where no known ethanol vapors are escaping was also collected.

The samples were analyzed by comparing the source sample collected from WhistlePig to the samples collected from the surface of the residential homes as well as the sample collected from outside the area. A scanning electron microscope (SEM) was used at 1000X to match the morphology of the source material to the morphology of the material collected at residences in the neighborhood. Fifty fields were examined across the SEM stub (the device each sample was collected on) and a percent match per sample analyzed was determined by matching morphology and size between source material and the receptor. This analysis does not positively identify the mold or fungus. The DEC Particle ID Laboratory does not have the capability at this time to analyze biological material with a transmitted light microscope. If positive identification of *Baudoinia* is necessary, samples will be sent out for mass spectrometry, PCR (polymerase chain reaction) or genome sequencing.

Sampling



Sample descriptions	Sample Location	Distance from WhistlePig Facility
R511923-1,	Source Sample WhistlePig	
R511923-2,	Source Sample WhistlePig	
R511923-3, 1A	Federal Street	663 Yards
R511923-4, 2A	Mineville Road	796 Yards
R511923-5, 3A	Champlain Drive	961 Yards
R511923-6, 4A	Plank Road	1379 Yards
R511923-7	Control (not on the map, Warrensburg Office)	

-The distance from WhistlePig facility was approximated by using tools available on Google Earth The map on the previous page marks the sampling locations with green flags. A total of seven samples were collected, six appear on the map above, the other was the background sample.

During the month of October, prevailing winds were coming from the WhistlePig facility to the sampled areas at an average of 7 mile per hour from the Northwest. Sample number 1A was closest to the facility, at approximately 663 yards. Sample number 2A approximately 796 yards, 3A approximately 961 yards, and 4A approximately 1379 yards, were collected at increasing distances from the facility. Sample number 7, the background sample, was collected near the DEC Warrensburg office. According to James Scott, a scientist and professor at Dalla Lana School of Public Health in Toronto, Baudoinia can be found 100 or 200 yards from distilleries with 20,000 to 30,000 barrels in storage.¹ DEC staff visited the WhistlePig facility in Mineville and had conversations regarding “Whiskey Fungus”, and transport of ethanol vapors. The staff at WhistlePig mentioned a study that determines how far the ethanol emanates from a given source point. A copy of this study has been requested. At the time of DEC’s site visit, WhistlePig had 11 of their 13 warehouses in use. While in the Mineville area, DEC staff visually examined the residential neighborhood as samples were collected.

Source Samples

Source samples from two warehouses were collected to determine the presence of matching black particulate in the residential samples. The Particle ID lab obtained two samples from the WhistlePig Facility. These samples were both collected from the exterior surface of the warehouses where there was a concentration of the black material.

Sample Analysis

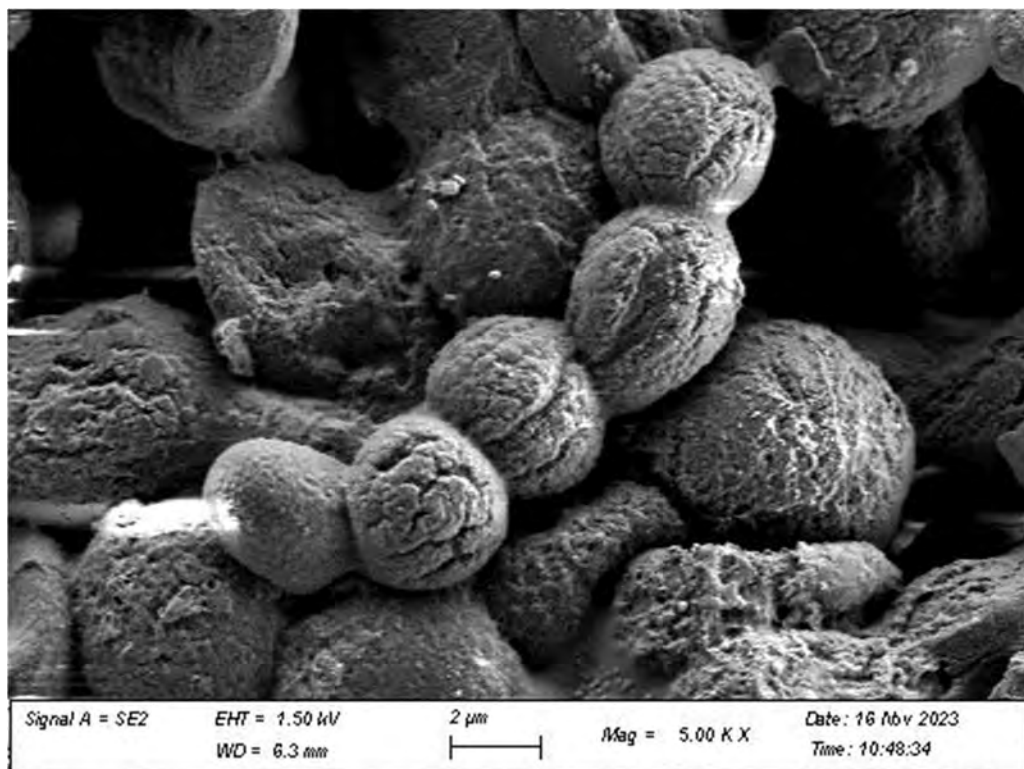
Samples were analyzed via direct examination with the following instrument: Scanning Electron Microscope. This report includes representative examples of what was observed. Many thousands of particles were analyzed for this investigation.

¹ Rackhousewhiskeyclub.com

RESULTS:

Scanning Electron Microscopy (SEM)

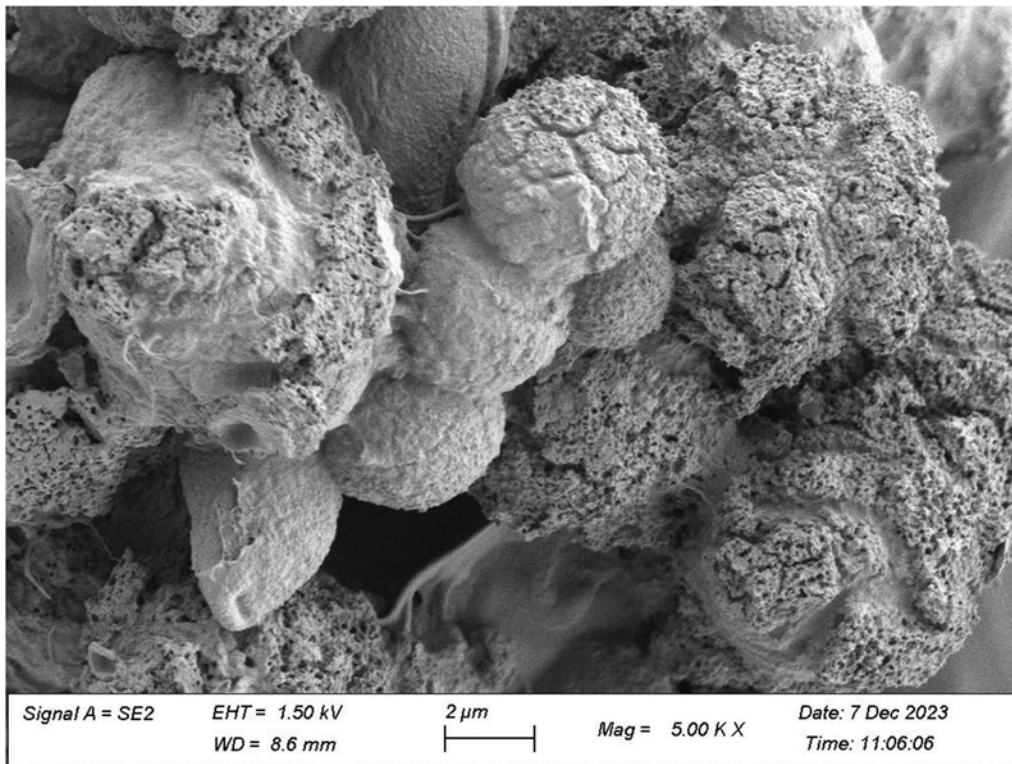
WhistlePig Warehouse Source Sample



WhistlePig Warehouse Source.

This image is a representation of source material collected.

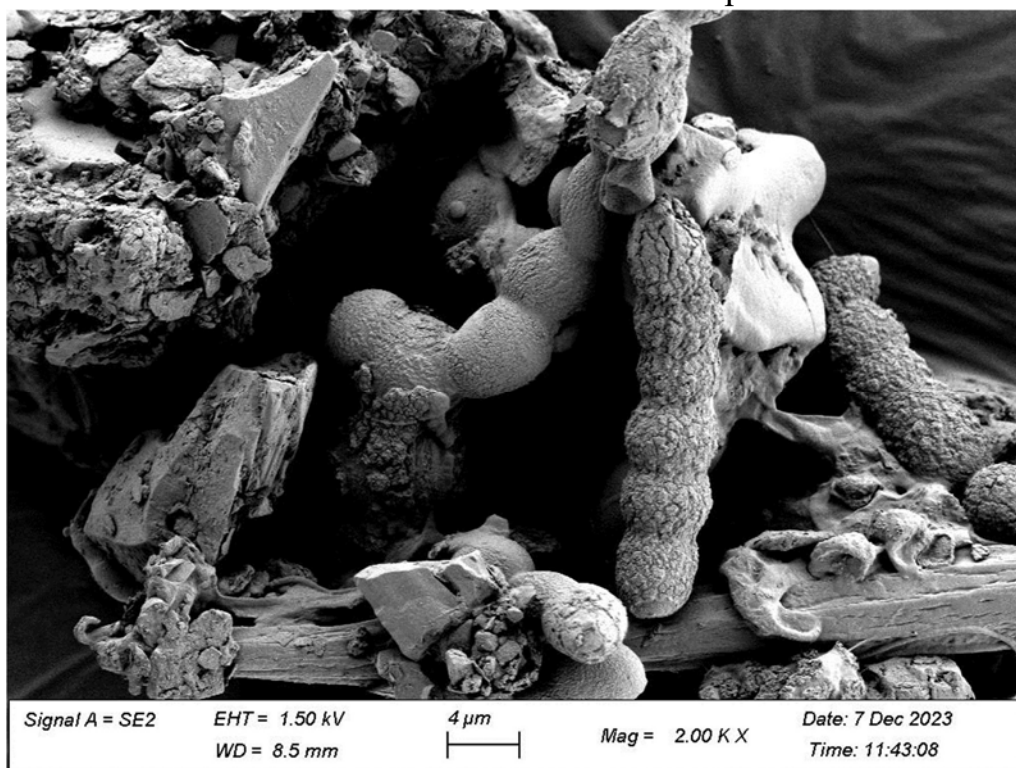
The fungus is in a chain and has a crusty appearance.



WhistlePig Warehouse
second source.

This is consistent with the
first source collected.

Residential Samples

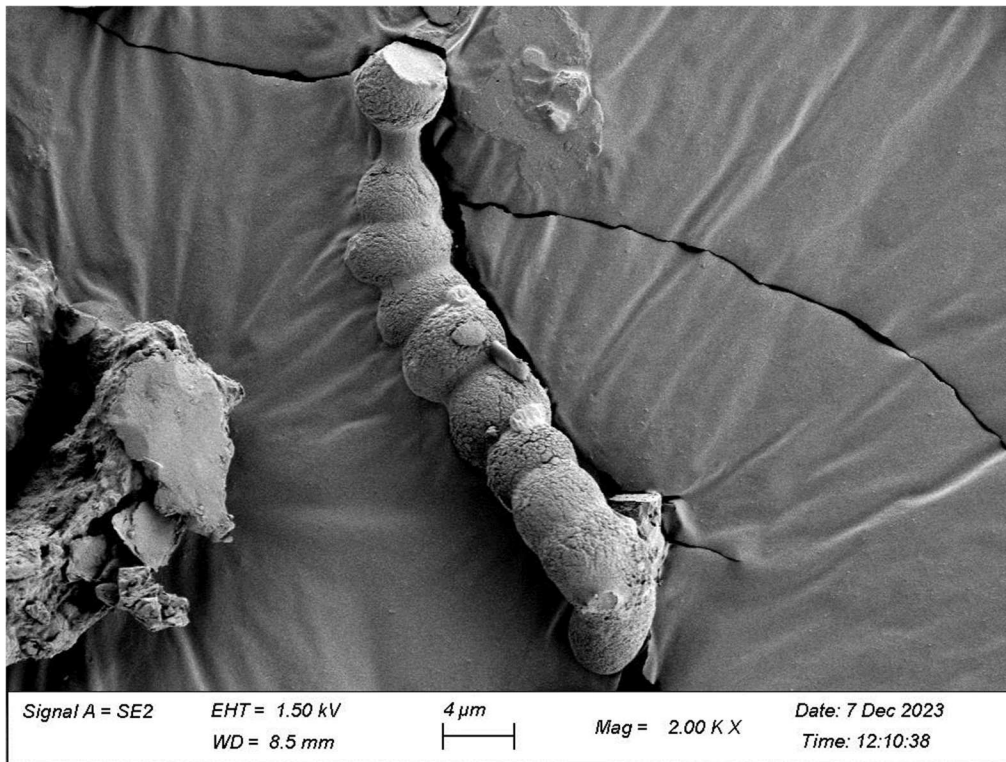


1A

This image is of the first
residential sample
collected from the
homeowner on
Federal Street. The
homeowner just had his
garage resided and the
growth was new. It was
black and
relatively
concentrated.

The image is consistent
with the
source collected from

WhistlePig in size and
morphology, and
crusty exterior.

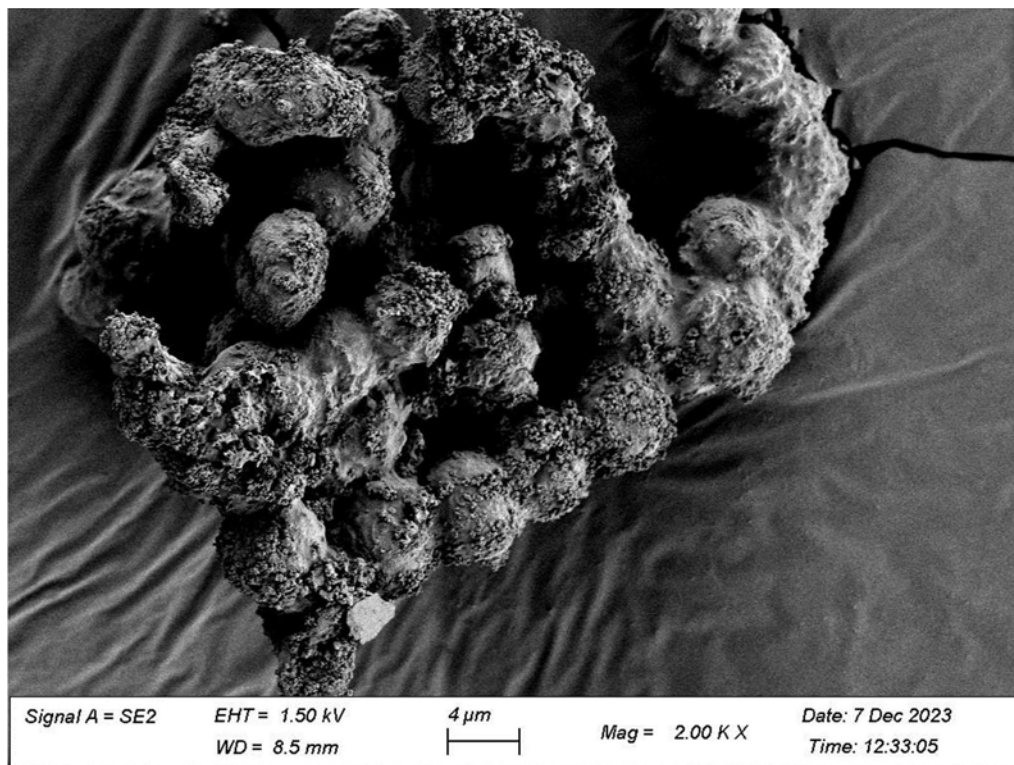


2A

This image is of the second residential sample and was collected from the homeowner on Mineville Drive.

The homeowner was in the process of cleaning her house.

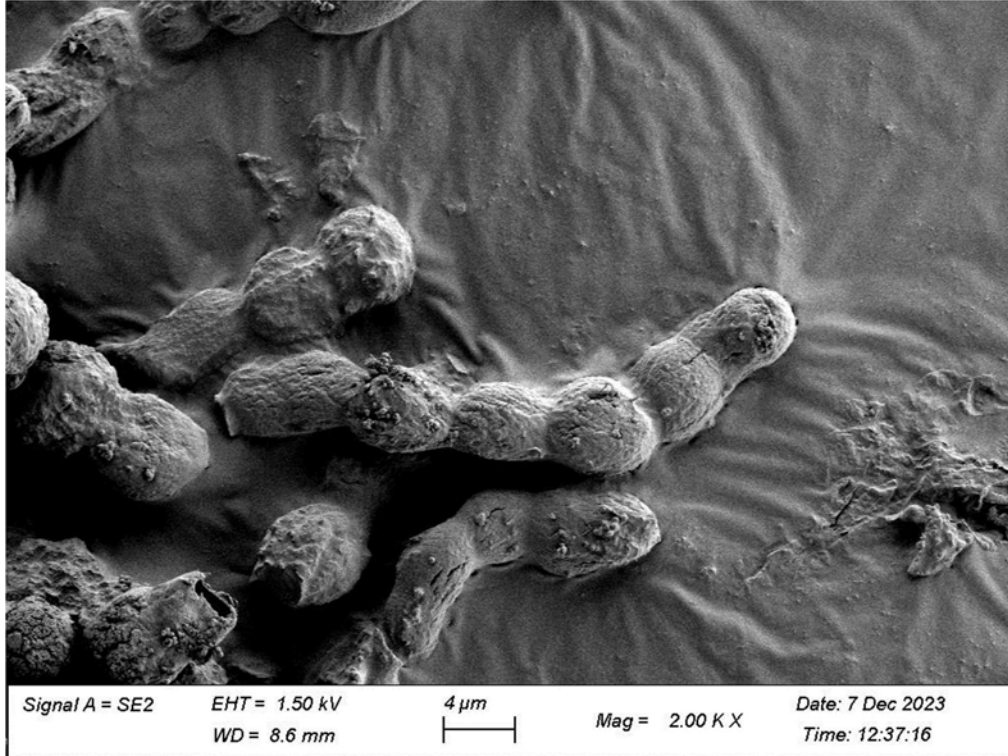
The image is consistent with the source collected from WhistlePig in size and morphology.



3A

This image is of the third residential sample and was collected from the homeowner on Champlain Drive.

The image is consistent with the source collected from WhistlePig in size and morphology.

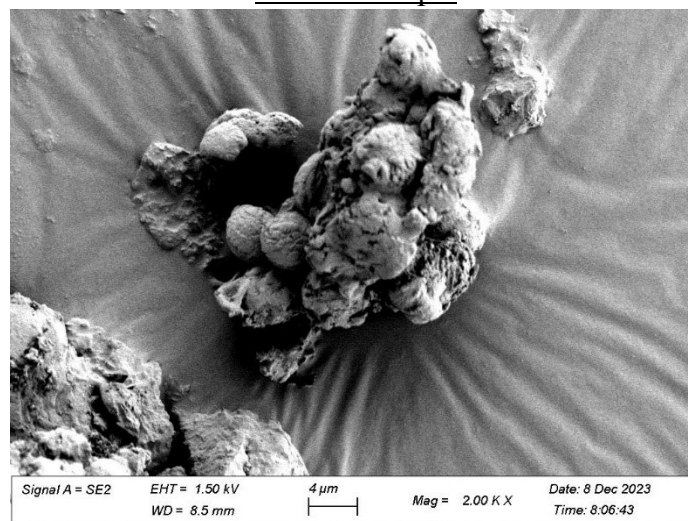


4A

This image is of the fourth residential sample and was collected from the homeowner on Plank Road.

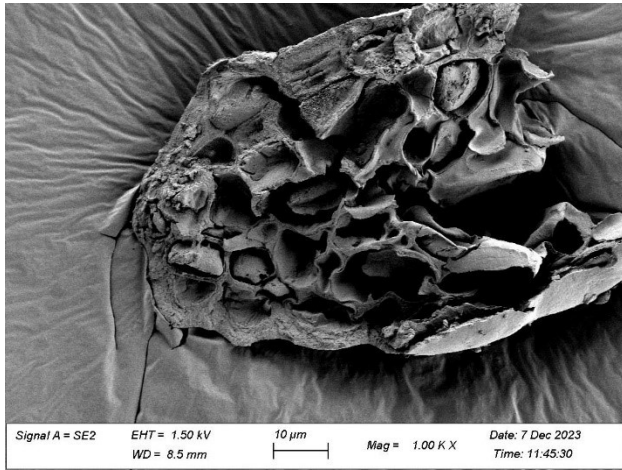
The image is consistent with the source collected from WhistlePig in size and morphology.

Control Sample

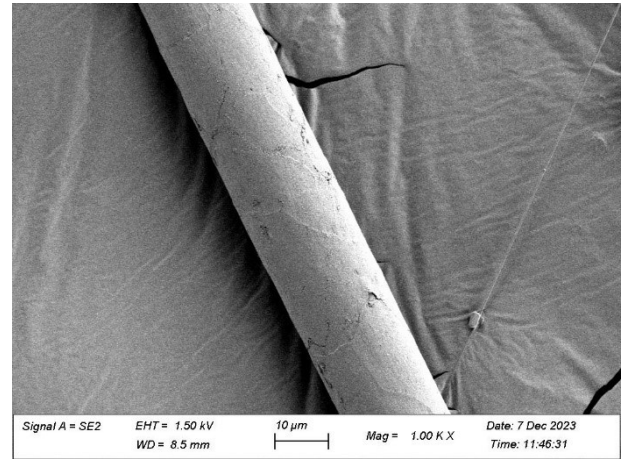


What appears to be Baudoinia is also present in the control sample. The control sample consisted mostly of growth other than Baudoinia.

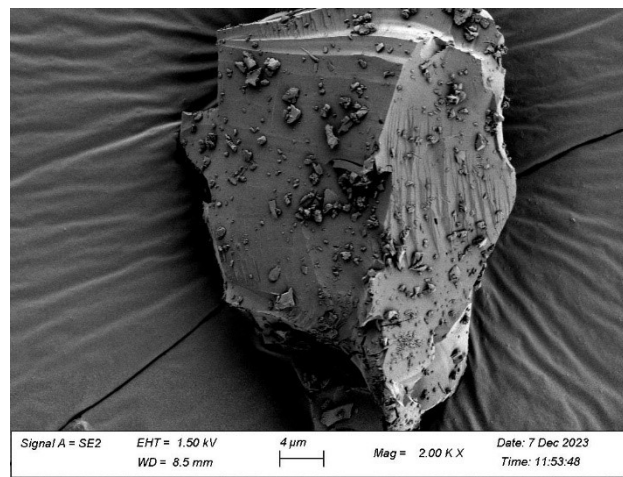
Other Particulate Matter Present on Residential Samples



Mold



Hair



Crustal Particulate Matter

The comparison of the samples to the source material revealed a significant amount of particulate matter that had a likeness to the source material. Sample 1A appeared to have the most and it also was closest to the facility. Sample 2A was the next closest, the homeowner indicated that they had been cleaning the outside of their home. All of the samples were collected in areas that appeared to have higher concentrations of dark particulate matter. The areas with higher concentrations were areas that were darker in color compared to other areas on the outside of the house.

The table below shows the estimated percentages of what was observed on the sample analyzed. The column labeled crustal refers to but is not limited to any dust, mineral, concrete, or earthen agglomeration that was present during the examination.

Conclusions

The residential samples were compared to the samples collected from the WhistlePig warehouse surfaces.

All the samples were collected directly onto a SEM stub.

A control sample was collected out of the area to determine background. The control was collected at the DEC Warrensburg office.

Based on all the available information, it is concluded that the fungus from the residences is consistent with that collected from the property of WhistlePig. The examination of the control sample shows evidence that the fungus material in the area is observed in greater quantities than what is

naturally found in the environment.

<u>Estimated % of Particulate Observed on Prepared Sample Stub Analyzed</u>							
	<u>Matched Source</u>	<u>Hair</u>	<u>Pollen</u>	<u>Crustal</u>	<u>Other Mold/Fungus</u>	<u>Insect Part</u>	<u>Uncategorized</u>
<u>R511923-1 1A</u>	62%	2%	0%	20%	9%	1%	6%
<u>R511923-2 2A</u>	65%	0%	3%	16%	13%	0%	3%
<u>R511923-3 3A</u>	67%	0%	3%	3%	5%	0%	22%
<u>R511923-4 4A</u>	51%	0%	0%	0%	49%	0%	2%
<u>Control</u>	2%	1%	1%	14%	77%	0%	5%

EXHIBIT C



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Deputy Director

Christopher Amato, Esq.
**Conservation Director
and Counsel**

March 8, 2024

Joseph Zalewski
Regional Director
New York State Department of Environmental Conservation
Region 5
P.O. Bx 296
Ray Brook, NY 12977-0296

**Re: Unlawful Air Emissions by WhistlePig Whiskey
Mineville, Town of Moriah, Essex County**

Dear Mr. Zalewski:

Protect the Adirondacks is writing to request that the Department of Environmental Conservation ("DEC") initiate an enforcement action against WhistlePig Whiskey ("WhistlePig") for its continuing violations of DEC air regulations. Specifically, warehouses owned and operated by WhistlePig have emitted and continue to emit vapor into the outside air that is causing damage to property and unreasonably interfering with the comfortable enjoyment of life or property in violation of 6 NYCRR § 211.1.

WhistlePig purchased land in Mineville in the Town of Moriah, Essex County, in 2016 from the Essex County Industrial Development Agency and subsequently constructed seven 14,000 square foot warehouses on the property. The warehouses are used to store and age the company's whiskey products, which emit vapors containing a fungus commonly referred to as "whiskey fungus," "warehouse staining fungus" and "distillery fungus." Its scientific name is *Baudonia compniacensis*.

The vapors form as the whiskey ages. When the vapor escapes to the outdoors, it coats surfaces it contacts with a black mold, which is currently affecting homes in Mineville. As reported in the *Adirondack Explorer*, "white and yellow houses are turning gray, green metal roofs are turning brown and white gutters and fence posts are turning spotted black." Gwendolyn Craig, As distilling business expands, so does black sheen on Mineville buildings, *Adirondack Explorer* (Nov. 29, 2023). According to the *Adirondack Explorer* article, DEC has collected samples of the black mold from Mineville homes and confirmed that it is whiskey fungus.

Protect the Adirondacks

PO Box 48, North Creek, NY 12853 518.251.2700

www.protectadks.org info@protectadks.org

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The DEC regulations provide:

No person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life *or to property, or which unreasonably interfere with the comfortable enjoyment of life or property*. Notwithstanding the existence of specific air quality standards or emission limits, *this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.*

6 NYCRR § 211.1 (emphasis added).

It is clear that the whiskey fungus vapors emitted by WhistlePig are injuring property and unreasonably interfering with the comfortable enjoyment of life or property in Mineville. The impacts from WhistlePig's emissions are likely to significantly increase because the company is apparently planning on constructing additional warehouses to store and age its product. We therefore call upon DEC to enforce section 211.1 of the Department's air regulations and require WhistlePig to take all necessary steps to control its emissions of whiskey fungus vapors.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chris Amato', with a stylized flourish at the end.

Christopher Amato
Conservation Director and Counsel
Protect the Adirondacks
P.O. Box 48
North Creek, NY 12853
(518) 860-3696
conservationdirector@protectadks.org

cc: Aaron Love, Esq., DEC Regional Attorney
Matthew Brassard, Supervisor, Town of Moriah
Greg Furness

EXHIBIT D

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Office of Environmental Quality, Region 5
232 Golf Course Road, Warrensburg, NY 12885
P: (518) 623-1200 | F: (518) 623-3603
www.dec.ny.gov

Sent Via Email and USPS

March 21, 2024

Ahren Wolson
Moriah Ventures, LLC
dba WhistlePig Whiskey Company
2139 Quiet Valley Rd
Shoreham, VT 05770
awolson@whistlepigrye.com

**Re: WhistlePig Whiskey Company warehouse emissions
52 Tom Phelps Ln
Moriah (T), Essex County**

Dear Ahren Wolson:

The Department of Environmental Conservation (DEC) has determined that emissions of ethanol from WhistlePig's whiskey aging warehouses in the Town of Moriah, New York, appear to be contributing to the growth of unsightly black whiskey fungus on building exteriors near the facility. The spread of this fungus has led to an increasing number of public complaints to DEC, including five in the last 12 months. In addition, DEC anticipates that WhistlePig's planned expansion of this facility is likely to cause additional fungus growth and lead to more complaints from community residents unless WhistlePig takes appropriate actions to mitigate the effects of its emissions.

"Whiskey fungus" is the common name for *Baudoinia compniacensis*, a naturally occurring fungus that thrives in the presence of ethanol. The tens-of-thousands of whiskey barrels aging in your warehouses emit ethanol, which is passively vented from the facility. These emissions appear to be contributing to the growth of whiskey fungus on nearby buildings. The enclosed reports prepared by DEC's Division of Air Resources analyzed mold samples collected in 2023 from your facility and from six local addresses up to 1,379 yards from your warehouses. Samples from five of the six addresses and from the outside of your warehouse are consistent with whiskey fungus.

DEC coordinated with the New York State Department of Health to evaluate these results, and although whiskey fungus is not typically associated with adverse health effects and does not pose a unique or significant health risk to people, the spread of whiskey fungus on outside surfaces such as building exteriors, decks, playgrounds, and furniture has the potential interrupt residents' quality of life and enjoyment of their properties. DEC has authority under New York Environmental Conservation Law Article 19, Section 19-0301, and Title 6 of the New York Codes, Rules, and Regulations, Part



Moriah Ventures, LLC
re: dba WhistlePig Whiskey Company
March 21, 2024
Page 2

211, to regulate emissions of air contaminants that “unreasonably interfere with the comfortable enjoyment of life or property.”

Without a protocol in place to neutralize emissions of ethanol or mitigate the growth of whiskey fungus, WhistlePig’s operations are likely to contribute to an actionable interference under these provisions.

Therefore, as the owner of this facility, DEC is requiring WhistlePig Whiskey Company to submit, within 30 days, a written corrective action plan for DEC’s review and approval to address the effects of the WhistlePig facility’s emissions. The plan should include specific measures and a schedule for implementation to either neutralize ethanol emissions or to mitigate the effects of whiskey fungus in the facility’s environs. Thank you for your attention to this matter and if you have any questions about this letter or the required corrective action plan, please contact me at 518-623-1715 or rachel.savarie@dec.ny.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "Rachel Savarie", is centered below the word "Sincerely,".

Rachel Savarie, P.E.
Division of Air Resources

Enclosure: Lab Summary Reports

Ec (w/enc.): T. Schmelzer, WhistlePig (tschmelzer@whistlepigrye.com)
Y. Zeng/File

**REPORT
for
Mineville 2023**

**Bureau of Air Quality Surveillance
Division of Air Resources
NYS Department of Environmental Conservation
Final 03/18/2024**

MINEVILLE SAMPLING REPORT

SUMMARY

A study into air pollution complaints in the vicinity of the WhistlePig Distillery has been completed. The WhistlePig facility in Mineville, New York is a spirits warehouse with processing and bottling operations. The complaints from nearby residents are regarding what appears to be a black fungus that has accumulated on their homes that they believe to be “Whiskey Fungus”. “Whiskey Fungus” is a common term used to describe the fungus *Baudoinia Compniacensis* that occurs naturally in the environment and has an affinity for ethanol exposed materials. The WhistlePig facility stores barrels of whiskey in warehouses for aging and ethanol emanates into the environment from the barrels as part of the aging process.

On November 9th, 2023, DEC staff visited the site of the WhistlePig operation in Mineville and collected samples for analysis. Several of the warehouses were examined and two samples were collected to be used as Source material for comparison in an analysis of the black material covering nearby buildings. The Source sample was collected directly from the warehouse where there was an observed concentrated amount of the black material. Onsite staff said the black material on the outside of the warehouses on site is *Baudoinia*. DEC staff then proceeded to the residences of the complainants and collected four samples. Many of the homes in the vicinity did appear to be impacted by a black substance that resembled a mold or fungus. A sample outside of the area where no known ethanol vapors are escaping was also collected.

The samples were analyzed by comparing the source sample collected from WhistlePig to the samples collected from the surface of the residential homes as well as the sample collected from outside the area. A scanning electron microscope (SEM) was used at 1000X to match the morphology of the source material to the morphology of the material collected at residences in the neighborhood. Fifty fields were examined across the SEM stub (the device each sample was collected on) and a percent match per sample analyzed was determined by matching morphology and size between source material and the receptor. This analysis does not positively identify the mold or fungus. The DEC Particle ID Laboratory does not have the capability at this time to analyze biological material with a transmitted light microscope. If positive identification of *Baudoinia* is necessary, samples will be sent out for mass spectrometry, PCR (polymerase chain reaction) or genome sequencing.

Sampling



Sample descriptions	Sample Location	Distance from WhistlePig Facility
R511923-1,	Source Sample WhistlePig	
R511923-2,	Source Sample WhistlePig	
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R511923-4, 2A	[REDACTED]	796 Yards
R511923-5, 3A	[REDACTED]	961 Yards
R511923-6, 4A	[REDACTED]	1379 Yards
R511923-7	Control (not on the map, Warrensburg Office)	

-The distance from WhistlePig facility was approximated by using tools available on Google Earth

The map on the previous page marks the sampling locations with green flags. A total of seven samples were collected, six appear on the map above, the other was the background sample.

During the month of October, prevailing winds were coming from the WhistlePig facility to the sampled areas at an average of 7 mile per hour from the Northwest. Sample number 1A was closest to the facility, at approximately 663 yards. Sample number 2A approximately 796 yards, 3A approximately 961 yards, and 4A approximately 1379 yards, were collected at increasing distances from the facility. Sample number 7, the background sample, was collected near the DEC Warrensburg office. According to James Scott, a scientist and professor at Dalla Lana School of Public Health in Toronto, Baudouinia can be found 100 or 200 yards from distilleries with 20,000 to 30,000 barrels in storage.¹ DEC staff visited the WhistlePig facility in Mineville and had conversations regarding “Whiskey Fungus”, and transport of ethanol vapors. The staff at WhistlePig mentioned a study that determines how far the ethanol emanates from a given source point. A copy of this study has been requested. At the time of DEC’s site visit, WhistlePig had 11 of their 13 warehouses in use. While in the Mineville area, DEC staff visually examined the residential neighborhood as samples were collected.

Source Samples

Source samples from two warehouses were collected to determine the presence of matching black particulate in the residential samples. The Particle ID lab obtained two samples from the WhistlePig Facility. These samples were both collected from the exterior surface of the warehouses where there was a concentration of the black material.

Sample Analysis

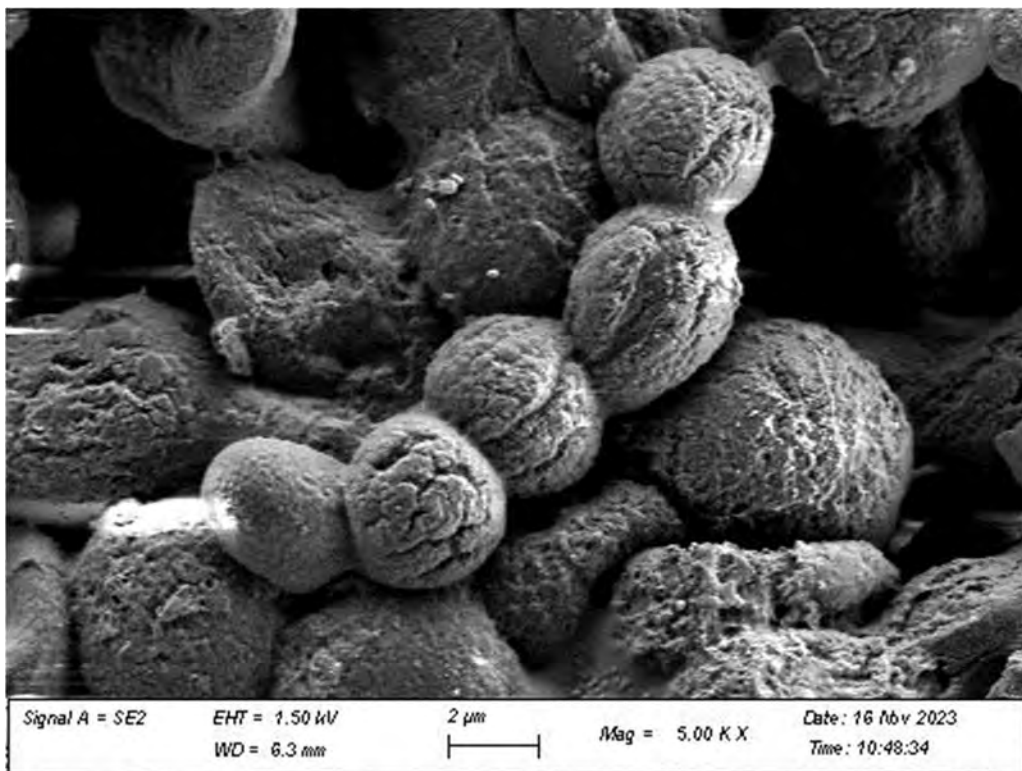
Samples were analyzed via direct examination with the following instrument: Scanning Electron Microscope. This report includes representative examples of what was observed. Many thousands of particles were analyzed for this investigation.

¹ Rackhousewhiskeyclub.com

RESULTS:

Scanning Electron Microscopy (SEM)

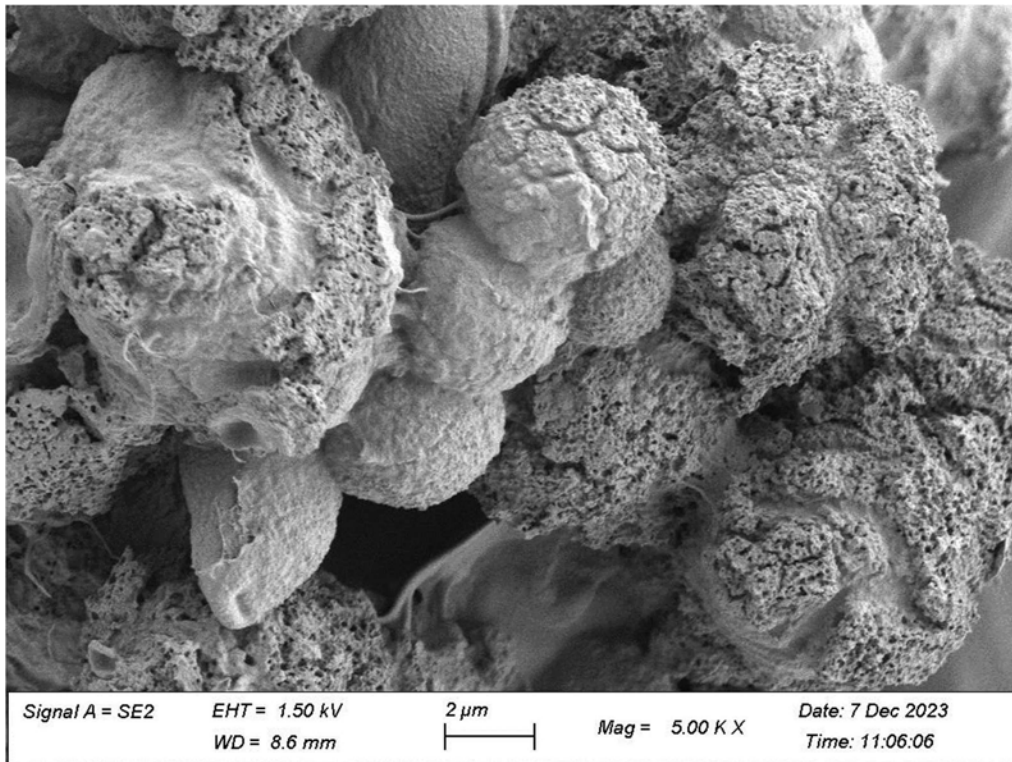
WhistlePig Warehouse Source Sample



WhistlePig Warehouse Source.

This image is a representation of source material collected.

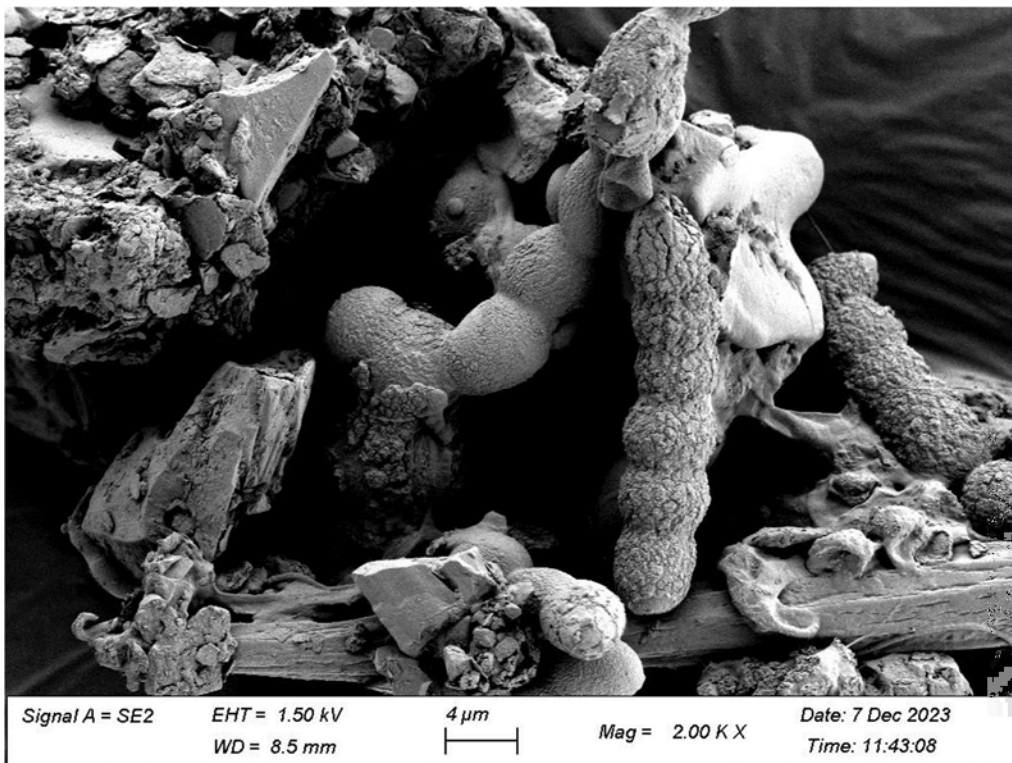
The fungus is in a chain and has a crusty appearance.



WhistlePig Warehouse
second source.

This is consistent with
the first source collected.

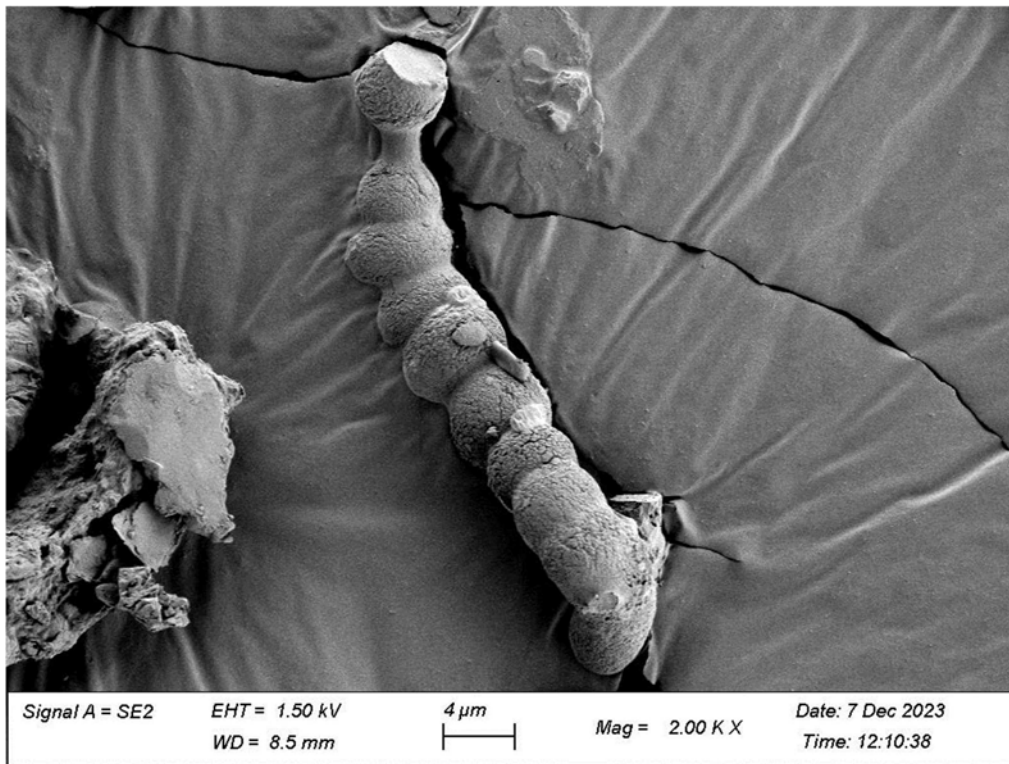
Residential Samples



1A

This image is of the
first residential sample
collected from the
homeowner on
[REDACTED]. The
homeowner just had
his garage resided
and the growth was
new. It was black and
relatively
concentrated.

The image is
consistent with the
source collected from
WhistlePig in size and
morphology, and
crusty exterior.

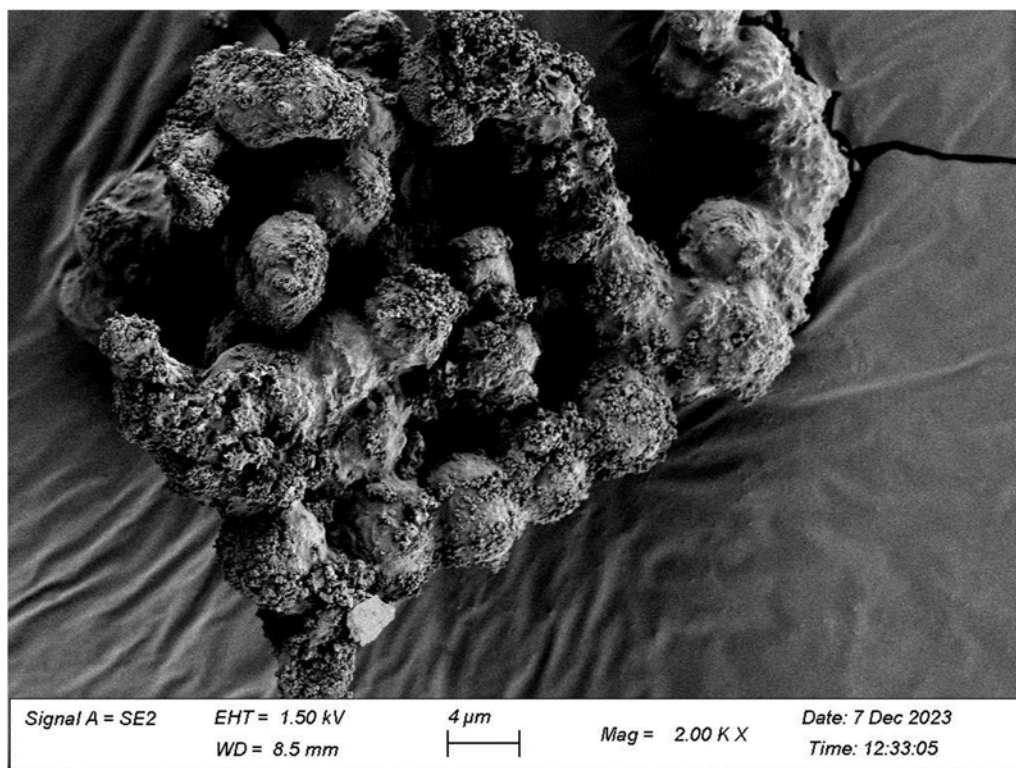


2A

This image is of the second residential sample and was collected from the homeowner on [REDACTED].

The homeowner was in the process of cleaning her house.

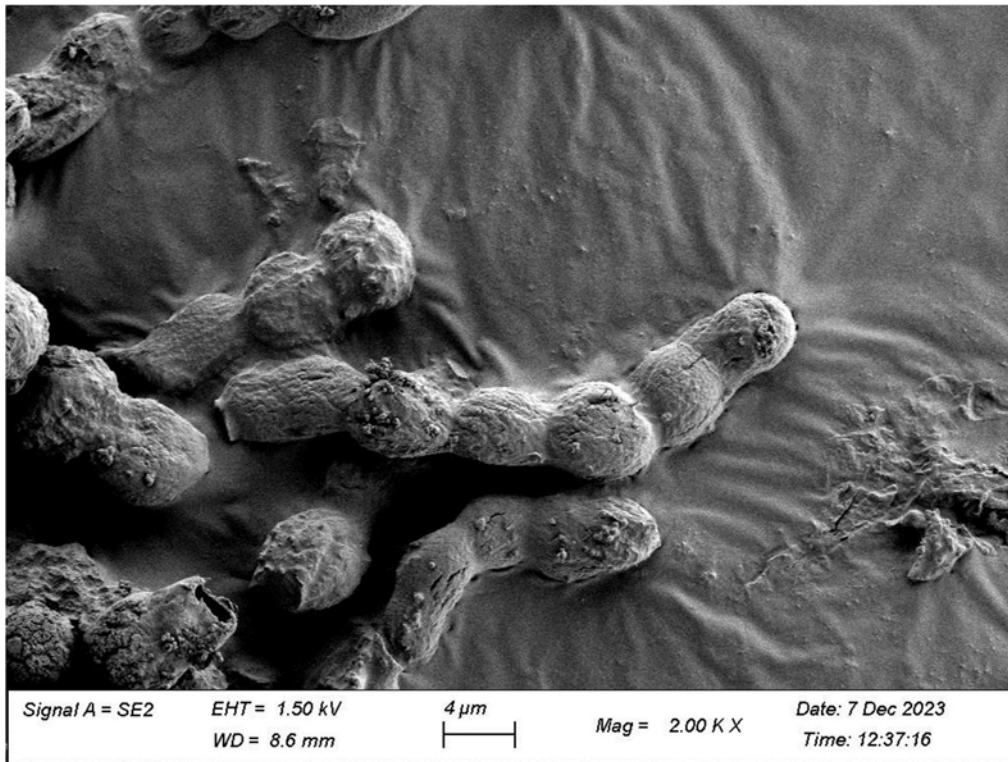
The image is consistent with the source collected from WhistlePig in size and morphology.



3A

This image is of the third residential sample and was collected from the homeowner on [REDACTED].

The image is consistent with the source collected from WhistlePig in size and morphology.

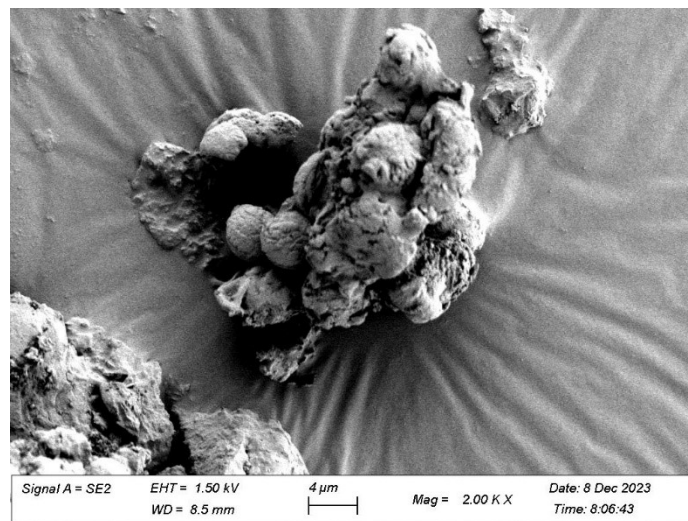


4A

This image is of the fourth residential sample and was collected from the homeowner on [REDACTED].

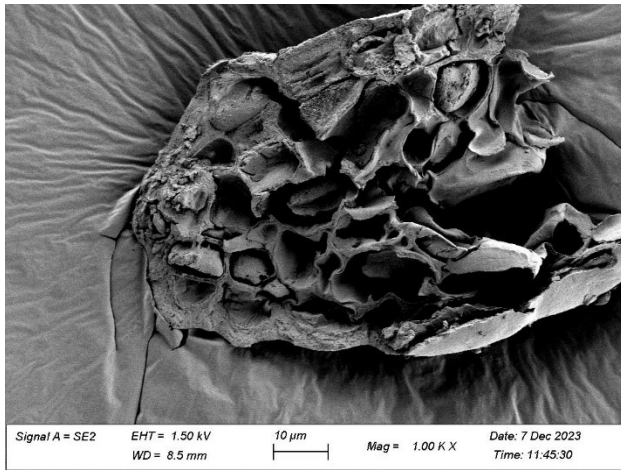
The image is consistent with the source collected from WhistlePig in size and morphology.

Control Sample

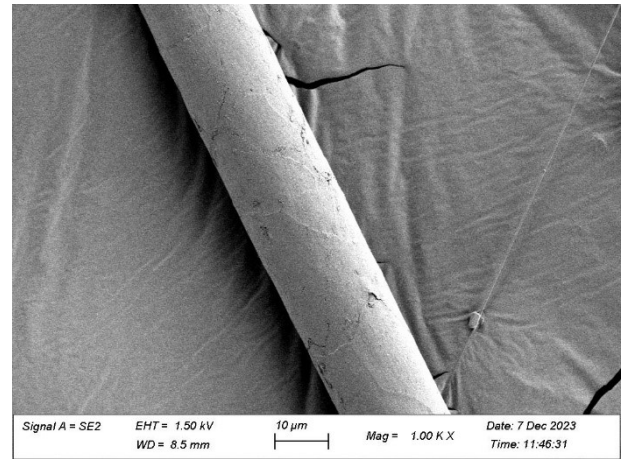


What appears to be Boudoinia is also present in the control sample. The control sample consisted mostly of growth other than Boudoinia.

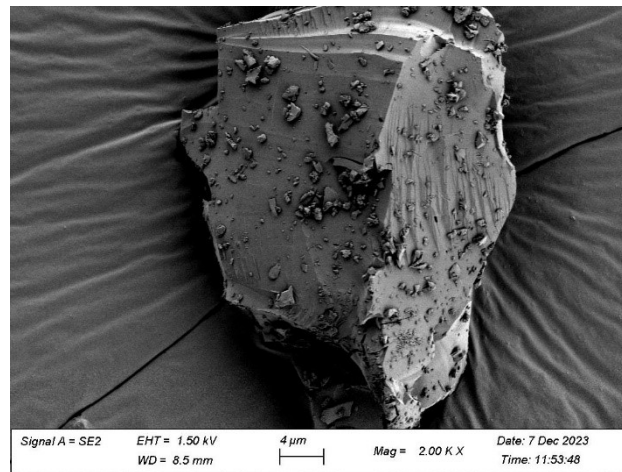
Other Particulate Matter Present on Residential Samples



Mold



Hair



Crustal Particulate Matter

The comparison of the samples to the source material revealed a significant amount of particulate matter that had a likeness to the source material. Sample 1A appeared to have the most and it also was closest to the facility. Sample 2A was the next closest, the homeowner indicated that they had been cleaning the outside of their home. All of the samples were collected in areas that appeared to have higher concentrations of dark particulate matter. The areas with higher concentrations were areas that were darker in color compared to other areas on the outside of the house.

The table below shows the estimated percentages of what was observed on the sample analyzed. The column labeled crustal refers to but is not limited to any dust, mineral, concrete, or earthen agglomeration that was present during the examination.

Conclusions

The residential samples were compared to the samples collected from the WhistlePig warehouse surfaces. All the samples were collected directly onto a SEM stub.

A control sample was collected out of the area to determine background. The control was collected at the DEC Warrensburg office.

Based on all the available information, it is concluded that the fungus from the residences is consistent with that collected from the property of WhistlePig. The examination of the control sample shows evidence that the fungus material in the area is observed in greater quantities than what is naturally found in the environment.

<u>Estimated % of Particulate Observed on Prepared Sample Stub Analyzed</u>							
	<u>Matched Source</u>	<u>Hair</u>	<u>Pollen</u>	<u>Crustal</u>	<u>Other Mold/Fungus</u>	<u>Insect Part</u>	<u>Uncategorized</u>
<u>R511923-1 1A</u>	62%	2%	0%	20%	9%	1%	6%
<u>R511923-2 2A</u>	65%	0%	3%	16%	13%	0%	3%
<u>R511923-3 3A</u>	67%	0%	3%	3%	5%	0%	22%
<u>R511923-4 4A</u>	51%	0%	0%	0%	49%	0%	2%
<u>Control</u>	2%	1%	1%	14%	77%	0%	5%

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Air Resources

625 Broadway, Albany, New York 12233-3250

P: (518) 402-8452 | F: (518) 402-9035

www.dec.ny.gov

To: Paul Siezenga, Rachel Savarie
From: Malissa Kramer, Environmental Chemist 2
Re: Region 5,
Date: 08/15/2023

A complaint was received and responded to by the Department of Environmental Conservation's (DEC) personnel on August 15, 2023. Samples were collected by DEC personnel to determine if the mold was from a nearby distillery from [REDACTED]. The samples were submitted to the Particle ID Laboratory for characterization. Samples were collected using prepared sampling devices as well as brushing material into petri dishes.

Sample Number

R581523-1 Garage 1

R581523-2 Garage 2

R581523-3 House 1

R581523-4 Hospice 1

R581523-5 Hospice 2

Sample Location



SAMPLING LOCATION



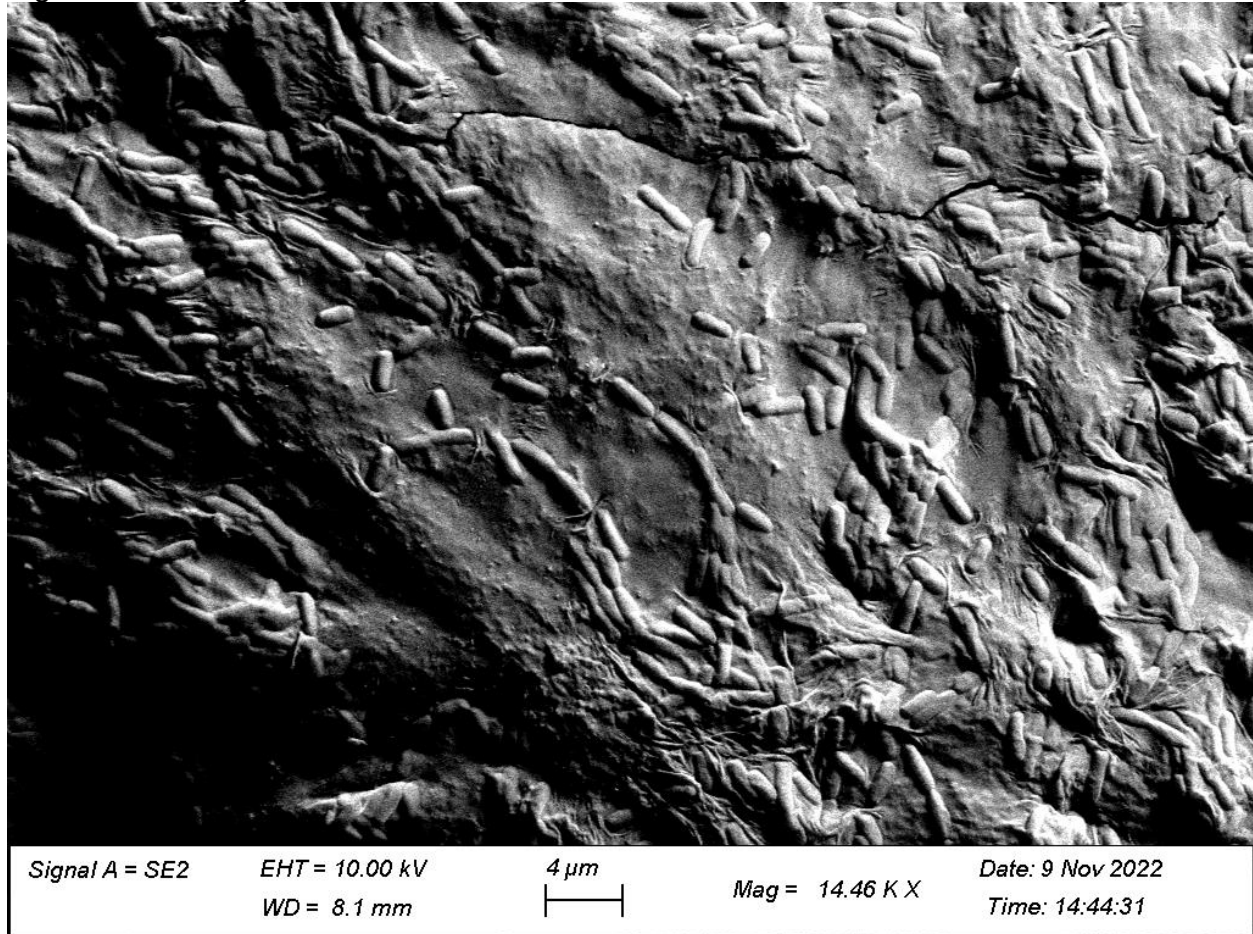
The residence is approximately 2000 ft South of the suspected distillery.



Department of
Environmental
Conservation

Scanning Electron Microscope Images

Figure1: Whiskey Mold



The image above represents whiskey mold that was cultivated in the laboratory. The whiskey used for this experiment was Whistle Pig, Piggy Back 100% Rye Whiskey. The mold was cultivated by placing the whiskey in a petri dish and adding standard plate count media to the petri dish. The growth was examined after 7 days, but was not separated from the auger. The morphology of the growth was analyzed and compared to images published by Daniel Mosquin (<https://botanyphoto.botanicalgarden.ubc.ca/author/danielmosquin/>) December 22, 2011. See Figure 2.

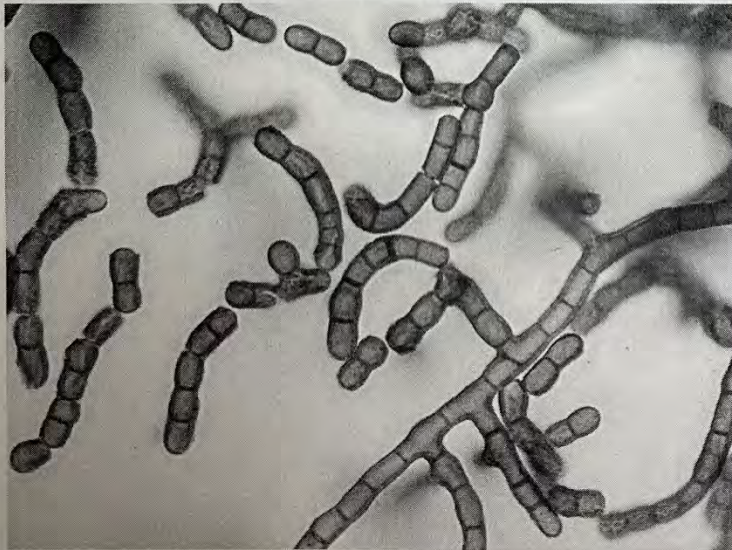
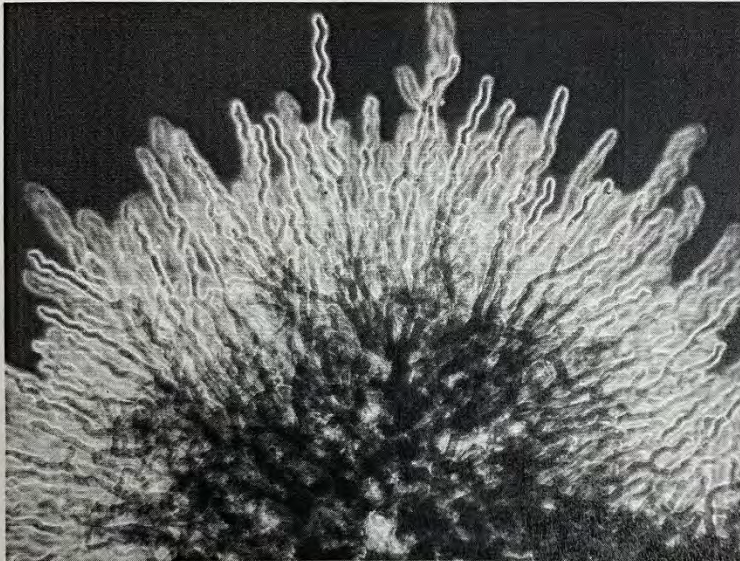
Figure 2:

Research

Baudoinia compniacensis

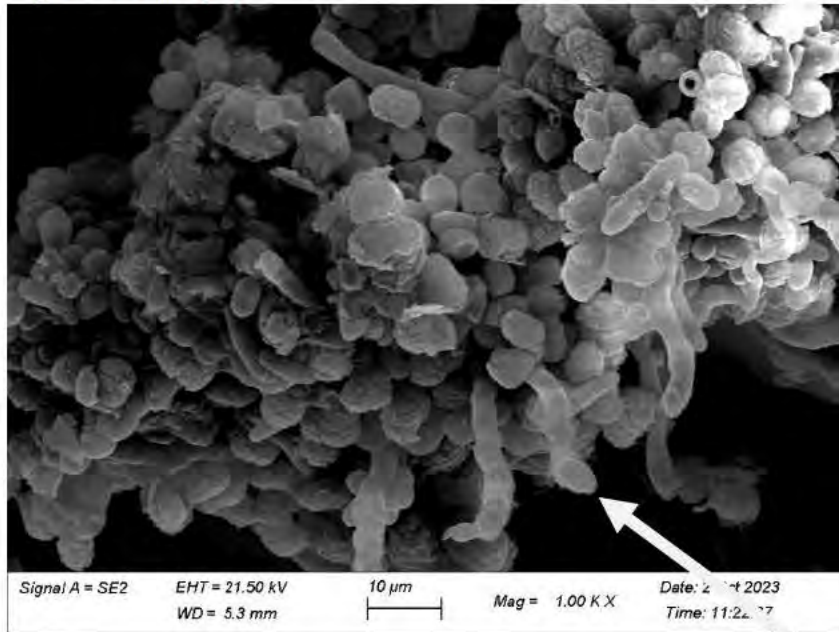
Published by Daniel Mosquin (<https://botanypphoto.botanicalgarden.ubc.ca/author/danielmosquin/>) on December 22, 2011

Learning about *Baudoinia compniacensis* was the prompting for a "Botany and Spirits" series, as the story intrigued me so much. A big thank you to Dr. James Scott (<http://individual.utoronto.ca/jscott/>), Associate Professor from the Dalla Lana School of Public Health at the University of Toronto for sharing the first three images, and a nod of appreciation to Shadle@Wikimedia Commons for a photograph (http://en.wikipedia.org/wiki/File:Heaven_Hill.jpg) of the phenomenon caused by the organism at Heaven Hill Distillery in Bardstown, Kentucky, USA.



Scanning Electron Microscope Images

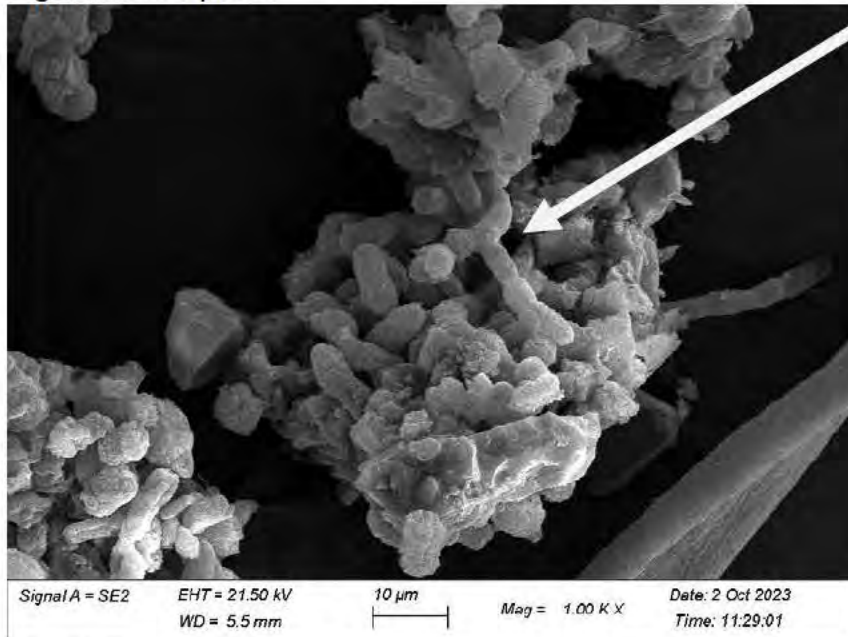
Figure 1: Hospice 1



This image represents the sample collected from Hospice 1. These samples were collected from [REDACTED], which is adjacent to the Whistle Pig warehouses where whisky is stored.

There is a strong correlation to "Whiskey" Mold.

Figure 2: Hospice 2

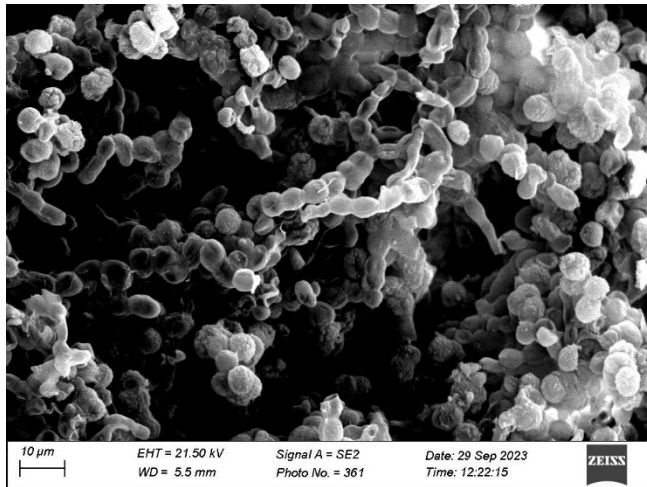


The morphology is consistent with "whiskey" mold and, filament is present in both hospice samples.

Filaments are associated with mold

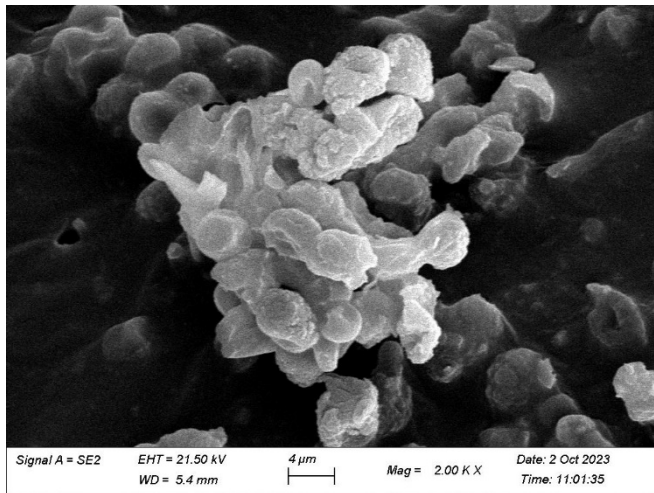
Scanning Electron Microscope Images

Figure 1: Garage 1



The images on the left represent the analysis of the samples collected from the residence located at [REDACTED]

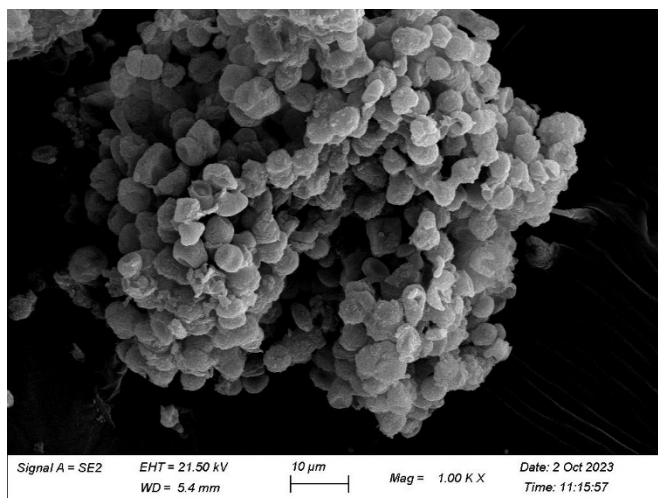
Figure 2: Garage 2



The particulate matter collected from the residence is smaller in size compared to the particulate matter collected from Hospice.

Figure 3: House 1

Filaments are not present on any of the samples collected from the residence.



Conclusion:

The analysis of the collected samples has been completed and at this time the determination is that samples collected from [REDACTED] do not agree with what the Particle ID Laboratory has

determined to be "Whiskey" mold. The specimen's analyzed from [REDACTED] [REDACTED] however do show agreement with 'Whiskey" mold. The filaments present and the morphology and size of the particulate matter agree with that of Baudoinia Compniacensis (also known as whiskey mold). The material observed on the samples collected from [REDACTED] do appear to be mold. The lab will investigate further to attempt to determine what type.

EXHIBIT E

Draft for Discussion Purposes Only
Internal Company Policy
Not for Disclosure under Freedom of Information Law

Moriah Ventures Internal Policy					
Department:	Operations	Title:	Community Washing Policy	Doc #:	WP-MV-OPS-236
Pages:	2	Approved:	6/5/2024	Revision #:	2.0

1.) Purpose:

To set forth practices to guide Company employees when receiving requests for exterior cleaning services from homeowners in proximity to our Mineville, New York barrel storage warehouses.

2.) Policy:

1. Historically the Company has voluntarily provided power wash services to clean the exteriors of homes within a 300-yard radius of our Mineville, New York whiskey barrel storage warehouses. We have provided these services upon request and free of charge to residents within that designated radius.
2. Based on our investment in and commitment to the Mineville community, we are expanding the coverage area for the provision of home washing services offered. Effective immediately, residences located within a 960-yard (2,880') radius of the nearest warehouse wall at our Mineville facility, will be offered free washing upon request.
3. Requests for washing and/or any questions regarding our policy can be directed to our appointed Community Liaison, by emailing community@whistlepigrye.com
4. Any employee receiving a request for power wash services from a resident should record the resident's contact information and inform them that the request will be referred to our Community Liaison for follow up.
5. Our Community Liaison, or a designee, will verify that the property is located within the 960-yard radius to which this Policy applies. A figure is attached to this policy which identifies the applicable radius.
6. Provided the property is within the 960-yard radius, a Company representative will contact the owner to schedule a site visit to confirm the offer and discuss scheduling.
7. Arrangements will be made with owners to schedule any cleaning based upon mutual availability of the owner and the third-party wash contractor.
8. The Company will provide power wash services no more than once per year per residence, and will only provide such services on the exterior of buildings.
9. The Company reserves the right, in its discretion, to consider requests for power wash cleaning from property owners located outside the 960-yard radius.
10. Details of this policy and the contact information for our Community Liaison will be made publicly available at our Mineville location, the town hall, and digitally on our website.
11. This Policy is effective immediately and will be in place until further notice.

Draft for Discussion Purposes Only
Internal Company Policy
Not for Disclosure under Freedom of Information Law

Moriah Ventures Internal Policy					
Department:	Operations	Title:	Community Washing Policy	Doc #:	WP-MV-OPS-236
Pages:	2	Approved:	6/5/2024	Revision #:	2.0

Please submit questions regarding this Policy to the assigned Community Liaison by email at community@whistlepigrye.com or by phone (518) 603-4460

Approximate Coverage Area
(For illustrative purposes only)

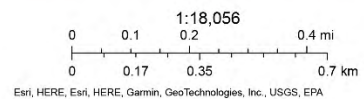
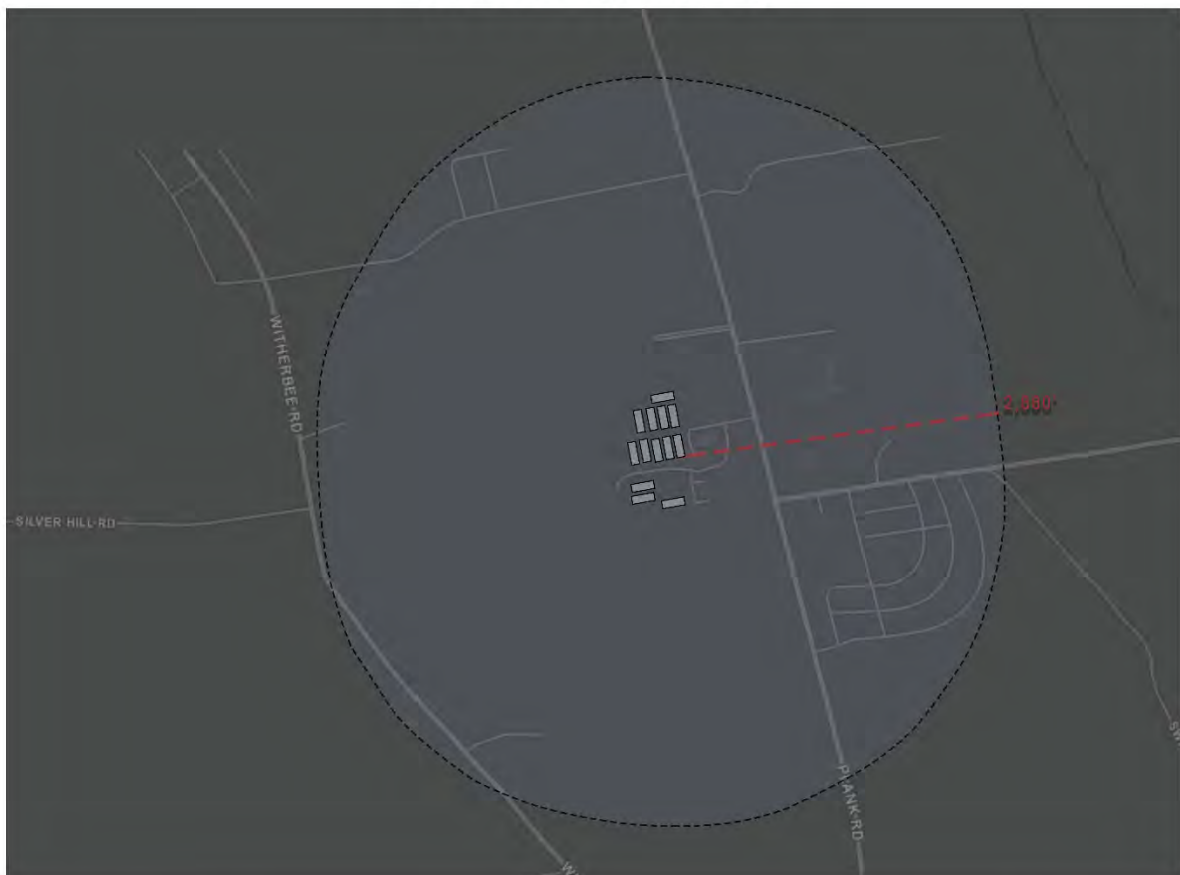


EXHIBIT F

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Office of Environmental Quality, Region 5

232 Golf Course Road, Warrensburg, NY 12885

P: (518) 623-1200 | F: (518) 623-3603

www.dec.ny.gov

Sent Via Email and USPS

July 31, 2024

Ahren Wolson
Moriah Ventures, LLC
dba WhistlePig Whiskey Company
2139 Quiet Valley Rd
Shoreham, VT 05770
awolson@whistelpigrye.com

**Re: Conditional Approval of Corrective Action Plan
WhistlePig Whiskey Company
52 Tom Phelps Ln
Moriah (T), Essex County**

Dear Ahren Wolson:

Department of Environmental Conservation (DEC) staff have reviewed the proposed corrective action plan for WhistlePig that you submitted by email on June 13, 2024, together with your letter of July 29, 2024 describing further study that the company is undertaking. The proposed plan is approved on the conditions described below.

The June 13 plan commits WhistlePig to providing home washing services at no cost to any residential property owner within 960 yards of the company's Moriah warehouses at a frequency of up to once per year. The June 13 plan explains that the company will publicize this service at the facility, the town hall, and on the company's website.

In response to DEC's request that you expand the cleaning zone beyond 960 yards, your July 29, 2024 letter explains that WhistlePig hired an engineering firm to perform air dispersion modeling to evaluate the expected range of impacts from the facility's emissions. You wrote that the modeling results are expected in August and would be provided to DEC for review and discussion.

DEC approves the June 13 plan on the condition that WhistlePig submit the results of the air dispersion modeling to DEC by August 30, 2024, with a written justification for the 960-yard cleaning radius and a map showing the location of all community cleaning requests received to that date. If the modeling results support expansion of the cleaning radius, or if DEC confirms additional *Baudoinia compniacensis* impact from the facility emissions beyond the 960-yard radius, DEC may require WhistlePig to amend the plan to expanding its washing services accordingly. Please implement the corrective action plan immediately.



Department of
Environmental
Conservation

Moriah Ventures, LLC
July 31, 2024
Page 2

Thank you for your cooperation. If you have questions or want to discuss this conditional approval, please contact Rachel Savarie, P.E., at (518) 623-1715 or by email at rachel.savarie@dec.ny.gov.

Sincerely,



James E. Hogan III, P.E.
Regional Air Pollution Control Engineer
Division of Air Resources

cc: Y. Zeng, P.E. (DEC)
A. Love, Esq. (DEC)