From:
 Crum, Lynn

 Sent:
 Thursday, November 21, 2013 3:10 PM

 To:
 Schantz, Steven

 Subject:
 FW: Mold Inspection with Scope of Work

 Attachments:
 Mold Assessment and ASB Report-A2 Fire Station #4.pdf; Inv_136273 _from_TEK_Environmental_Consulting_Services_Inc_3628.pdf

Steve,

Attached please find a copy of the test results that were conducted at station #4. I will be out of town on Friday, but will be back on Monday. Looks like some clean-up is needed. If you have time, let's go over what you think is needed. Thanks, D.L. Crum

From: Kara Lenling [mailto:kara@tekenvironmental.com] Sent: Monday, November 18, 2013 12:04 PM To: Crum, Lynn Subject: Mold Inspection with Scope of Work

Mr. Crum,

Please find the attached Mold Inspection Report, which includes a full Scope of Work and Photo Log. I have also included the Invoice. Final Lab Data will be emailed, once received. Should you have any additional questions, please contact me directly. Thank you and Have a Great Day!

Kara Lenling | Executive Director TEK Environmental & Consulting Services 9263 E. M-36, Whitmore Lake, MI 48189 T : 734.878.5588|F : 734.448.5088 Email: <u>kara@tekenvironmental.com</u> VISIT our website at: <u>www.tekenvironmental.com</u>





Save a tree. Please consider the environment before printing this e-mail

This message (including any attachments) contains confidential information intended for a specific individual(s) and purpose, and is protected by law. If you are not the intended recipient, you should delete this message. Any disclosure, copying, or distribution of this message, or the taking of any action based on it, by anyone other than the intended recipient(s), is strictly prohibited.

From: Sent: To: Cc: Subject: Attachments: Taylor, Ellen Thursday, November 21, 2013 5:47 PM Schantz, Steven Seto, John; Hubbard, Ollice FW: Mold Inspection with Scope of Work Mold Assessment and ASB Report-A2 Fire Station #4.pdf; Inv_136273 _from_TEK_Environmental__Consulting_Services_Inc_3628.pdf

Steven,

When visiting station four (4) back on October 15th, I was approached by a few firefighters about a possible problem in their dorm room where they sleep. They implied that quite a few of them were experiencing allergy symptoms after sleeping in the dorm. They thought that there may be a problem with how the dorm A/C unit was draining water. They thought the water may be draining improperly in the wall of the dorm causing mold. I asked them to put a help ticket into Facility Maintenance right away to have them check it out.

Facility Maintenance scheduled TEK Environmental & Consulting Services, Inc on November 7th by TEK Environmental & Consulting Services, Inc to perform some testing at station four (4)in regards to this complaint. The results that I just received show an unacceptable amount of Penicillium/Aspergillus (P/A) spores in the dorm room. Because the crews have been complaining of allergy like symptoms, which could be a result of this type of spore, both the Chief and I feel that we should error on the safe side until the we have a better understanding of the test results. We have decided to close down station four (4) and have station four's crew stay and respond from station one (1) for the time being.

Please contact Chief Hubbard or myself at you earliest convenience about this situation.

Thank You,

Ellen

One Person can make a difference, and every one should try. ---- John F. Kennedy

Confidentiality: This E-mail (including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521, is confidential and legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution, or copying of this communication is strictly prohibited. Please reply to the sender that you have received the message in error; then delete it. Neither the sender nor his or her employer makes any warranties as to the completeness or accuracy of any of the information contained herein or that this message or any of its attachments are free of viruses.

From: Crum, Lynn Sent: Thursday, November 21, 2013 2:40 PM To: Taylor, Ellen Subject: FW: Mold Inspection with Scope of Work

Ellen,

Attached are the results of the testing at station #4. Looks like some minor clean-up is needed at the back A/C unit. I will be out of town on Friday, but back on Monday.

Thanks, D.L. Crum

From: Kara Lenling [mailto:kara@tekenvironmental.com] Sent: Monday, November 18, 2013 12:04 PM To: Crum, Lynn Subject: Mold Inspection with Scope of Work

Mr. Crum,

Please find the attached Mold Inspection Report, which includes a full Scope of Work and Photo Log. I have also included the Invoice. Final Lab Data will be emailed, once received. Should you have any additional questions, please contact me directly. Thank you and Have a Great Day!

Kara Lenling | Executive Director **TEK Environmental & Consulting Services** 9263 E. M-36, Whitmore Lake, MI 48189 T: 734.878.5588|F: 734.448.5088 Email: kara@tekenvironmental.com VISIT our website at: <u>www.tekenvironmental.com</u>



Save a tree. Please consider the environment before printing this e-mail

This message (including any attachments) contains confidential information intended for a specific individual(s) and purpose, and is protected by law. If you are not the intended recipient, you should delete this message. Any disclosure, copying, or distribution of this message, or the taking of any action based on it, by anyone other than the intended recipient(s), is strictly prohibited.

From:Taylor, EllenSent:Wednesday, November 27, 2013 9:03 AMTo:Schantz, Steven; Kulhanek, MatthewSubject:Fwd: Station 4 Concerns

I would like to share the below email. Some of station four's firefighters are expressing concerns.

------ Original Message ------Subject: Station 4 Concerns From: "Berry, Greg" <<u>GBerry@a2gov.org</u>> To: "Taylor, Ellen" <<u>ETaylor@a2gov.org</u>> CC: "Taylor, Christopher (Fire)" <<u>CATaylor@a2gov.org</u>>,"Hein, Carl" <<u>CHein@a2gov.org</u>>,"Hubbard, Ollice" <<u>OHubbard@a2gov.org</u>>,"Cook, Kevin" <<u>KCook@a2gov.org</u>>,"Corrado, Jason" <<u>JCorrado@a2gov.org</u>>,"Gravelle, Jason" <<u>JDGravelle@a2gov.org</u>>,"Close, Earnst" <<u>EClose@a2gov.org</u>>,"Leadbetter, Christoper" <<u>CLeadbetter@a2gov.org</u>>,"Maguire, John" <<u>JTMaguire@a2gov.org</u>>,"Bommarito, Gianna" <<u>GBommarito@a2gov.org</u>>,"Buscemi, Christopher" <<u>CBuscemi@a2gov.org</u>>,"Francis, Matthew" <<u>MFrancis@a2gov.org</u>>,"Torres, Jeremy" <JTorres@a2gov.org>,"Lowe, Steve" <SLowe@a2gov.org>,"Vogel, Robert" <RVogel@a2gov.org>

AC Taylor,

Per our conversation on 11/26/13, I have several concerns with the mold and asbestos removal / cleaning at fire station 4.

I have read the Water Damage and Mold Assessment Report prepared by TEK Environmental and Consulting Services Inc.

On page eight of the report TEK recommends a deep steam cleaning of the mattresses or disposal because of unacceptable levels of Penicillium /Aspergillus, an airborne spore.

The mold damage is just above a heat duct. This means that the airborne contaminants are throughout station 4.

Based on this I recommend that all mattresses and the two cloth couches be replaced. The couches should be replaced with leather or leather like material for easy cleaning.

1

We discussed and I heard you request an estimate on removal of all asbestos tile in station 4.

I have missed three workdays with a respiratory infection. Several other firefighters have complained of respiratory problems after working at station 4.

I think the Ann Arbor Fire Dept. should protect its employees and remove all contaminants and not just cover and or clean the contaminated articles.

Thank you for your concern

Waiting for your reply,

Lt. Greg Berry

Sta. 4

From: Sent: To: Subject:

Tracking:

Schantz, Steven Wednesday, November 27, 2013 10:09 AM Taylor, Ellen; Kulhanek, Matthew; Crum, Lynn RE: Station 4 Concerns

Recipient Taylor, Ellen Kulhanek, Matthew Crum, Lynn Read Read: 11/27/2013 10:23 AM Read: 11/27/2013 10:19 AM Read: 12/2/2013 10:27 AM

All,

I suggest that remediation follow the recommendations identified in the TEK report. This should include the deep steam cleaning of the bedding mattresses. I would also recommend the steam cleaning of carpeting in the Bunk Room as well as the steam cleaning of the couches. *If following the initial remediation activities*, the microbial air sampling results still indicate elevated indoor spore concentrations when compared to outdoor environment level; I would then recommend additional cleaning and disposal of the bedding and couches.

I would also recommend that during the limited asbestos removal activities, a third-party air monitoring company be retained to conduct occupational and environmental fiber concentration monitoring with post abatement clearance sampling.

Respectfully,

Steve Schantz Safety Manager

From: Taylor, Ellen Sent: Wednesday, November 27, 2013 9:03 AM To: Schantz, Steven; Kulhanek, Matthew Subject: Fwd: Station 4 Concerns

I would like to share the below email. Some of station four's firefighters are expressing concerns.

------ Original Message ------Subject: Station 4 Concerns From: "Berry, Greg" <<u>GBerry@a2gov.org</u>> To: "Taylor, Ellen" <<u>ETaylor@a2gov.org</u>> CC: "Taylor, Christopher (Fire)" <<u>CATaylor@a2gov.org</u>>,"Hein, Carl" <<u>CHein@a2gov.org</u>>,"Hubbard, Ollice" <<u>OHubbard@a2gov.org</u>>,"Cook, Kevin" <<u>KCook@a2gov.org</u>>,"Corrado, Jason" <<u>JCorrado@a2gov.org</u>>,"Gravelle, Jason" <<u>JDGravelle@a2gov.org</u>>,"Close, Earnst" <<u>EClose@a2gov.org</u>>,"Leadbetter, Christoper" <<u>CLeadbetter@a2gov.org</u>>,"Maguire, John" <<u>JTMaguire@a2gov.org</u>>,"Bommarito, Gianna" <<u>GBommarito@a2gov.org</u>>,"Buscemi, Christopher" <<u>CBuscemi@a2gov.org</u>>,"Francis, Matthew" <<u>MFrancis@a2gov.org</u>>,"Torres, Jeremy" <JTorres@a2gov.org>,"Lowe, Steve" <<u>SLowe@a2gov.org</u>>,"Vogel, Robert" <<u>RVogel@a2gov.org</u>>

AC Taylor,

Per our conversation on 11/26/13, I have several concerns with the mold and asbestos removal / cleaning at fire station 4.

I have read the Water Damage and Mold Assessment Report prepared by TEK Environmental and Consulting Services Inc.

On page eight of the report TEK recommends a deep steam cleaning of the mattresses or disposal because of unacceptable levels of Penicillium /Aspergillus, an airborne spore.

The mold damage is just above a heat duct. This means that the airborne contaminants are throughout station 4.

Based on this I recommend that all mattresses and the two cloth couches be replaced. The couches should be replaced with leather or leather like material for easy cleaning.

We discussed and I heard you request an estimate on removal of all asbestos tile in station 4.

I have missed three workdays with a respiratory infection. Several other firefighters have complained of respiratory problems after working at station 4.

I think the Ann Arbor Fire Dept. should protect its employees and remove all contaminants and not just cover and or clean the contaminated articles.

Thank you for your concern

Waiting for your reply,

Lt. Greg Berry

Sta. 4

From:Crum, LynnSent:Monday, December 02, 2013 1:37 PMTo:Schantz, StevenSubject:FW: Fire Station #4 QuoteAttachments:Job # 428-13.docx; Fiberlock-Shockwave-pds.pdf; Fiberlock-Shockwave-msds.pdf

Steve,

Attached is Adrian's quote for cleaning up the mold at station #4. I am still waiting for Dalton's quote for cleaning the heating duct. The levels of work involved with this project are:

- * Dalton Environmental-----Heat duct cleaning
- * Adrian Environmental------Mold clean-up, removal two areas of tile floor Hepa vac & wipe down all furniture, walls, mattresses Hepa vac all carpet in bunk room
- * Ann Arbor Carpet Cleaning---Deep steam clean carpet, furniture, mattress
- * TEK Env. to provide air monitoring during clean-up and final. (could use another company)

Thanks, D.L. Crum

From: David Graham [mailto:adrianenvironmental@yahoo.com] Sent: Monday, December 02, 2013 12:48 PM To: Crum, Lynn Subject: Fire Station #4 Quote

Lynn,

Sorry for the delay. I took the weekend off and been real busy today. Here is the quote. Let me know if you have any questions. Thanks,

1

Dave Graham

From:Schantz, StevenSent:Monday, December 02, 2013 4:08 PMTo:Taylor, EllenSubject:FW: Fire Station #4Attachments:Fiberlock-Shockwave-pds.pdf; Fiberlock-Shockwave-msds.pdf

Tracking:

Recipient Taylor, Ellen Read Read: 12/2/2013 4:09 PM

Ellen,

I hope all is well and you had a good thanksgiving. Please find following the plan of action for Station #4 I received from Lynn Crum. In addition, I have included the safety data sheet and product data for the mold sanitizer being proposed. This sanitizer is EPA registered and is the standard sanitizer utilized throughout the industry. I have asked Lynn to include asbestos air monitoring during the asbestos removal and to utilize a company separate from TEK to conduct the mold clearance sampling. I also suggested having Lynn inquire with the Union to ensure the Union does not want to have their own industrial hygiene firm conduct parallel sampling at the time of the mold clearance sampling. Please let me know if you have questions.

Steve

From: Crum, Lynn Sent: Monday, December 02, 2013 1:37 PM To: Schantz, Steven Subject: FW: Fire Station #4 Ouote

Steve,

Attached is Adrian's quote for cleaning up the mold at station #4. I am still waiting for Dalton's quote for cleaning the heating duct. The levels of work involved with this project are:

* Dalton Environmental------Heat duct cleaning

* Adrian Environmental------Mold clean-up, removal two areas of tile floor

Hepa vac & wipe down all furniture, walls, mattresses

Hepa vac all carpet in bunk room

* Ann Arbor Carpet Cleaning---Deep steam clean carpet, furniture, mattress

* TEK Env. to provide air monitoring during clean-up and final. (could use another company)

Thanks, D.L. Crum

From: David Graham [mailto:adrianenvironmental@yahoo.com] Sent: Monday, December 02, 2013 12:48 PM To: Crum, Lynn Subject: Fire Station #4 Quote

Lynn,

Sorry for the delay. I took the weekend off and been real busy today. Here is the quote. Let me know if you have any questions. Thanks,

Dave Graham

From: Sent: To: Subject: Schantz, Steven Monday, December 02, 2013 4:17 PM Crum, Lynn RE: Fire Station #4 Quote

Lynn,

The number provided for remediation looks consistent with industry norms to me. I also approve of the sanitizer and agree with the process outlined. Just an FYI, during asbestos removal, air monitoring should be provided and following all mold remediation, duct cleaning and carpet cleaning, I would recommend post-remediation clearance sampling by a company other than TEK. You may want to see if Adrian wants to keep their air machines operational during carpet, furniture, and mattress cleaning activities. I have included below some hygiene companies who can provide mold sampling for you. Let me know if you have questions.

Steve

Nova Environmental – Ann Arbor Performance Environmental – Wixom Monarch Environmental – Brighton (must disclose this was the company that I was but are no longer part-owner of) FiberTec – Holt TEC – Troy

From: Crum, Lynn Sent: Monday, December 02, 2013 1:37 PM To: Schantz, Steven Subject: FW: Fire Station #4 Quote

Steve,

Attached is Adrian's quote for cleaning up the mold at station #4. I am still waiting for Dalton's quote for cleaning the heating duct. The levels of work involved with this project are:

> * Dalton Environmental------Heat duct cleaning * Adrian Environmental------Mold clean-up, removal two areas of tile floor

Hepa vac & wipe down all furniture, walls, mattresses Hepa vac all carpet in bunk room

* Ann Arbor Carpet Cleaning---Deep steam clean carpet, furniture, mattress

1

* TEK Env. to provide air monitoring during clean-up and final, (could use another company)

Thanks, D.L. Crum

From: David Graham [mailto:adrianenvironmental@yahoo.com] Sent: Monday, December 02, 2013 12:48 PM To: Crum, Lynn Subject: Fire Station #4 Quote

Lynn,

Sorry for the delay. I took the weekend off and been real busy today. Here is the quote. Let me know if you have any questions. Thanks, Dave Graham

From: Sent: To: Cc: Subject: Taylor, Ellen Monday, December 02, 2013 4:20 PM Bolen, Tilvis Hubbard, Ollice; Crum, Lynn; Schantz, Steven; Buscemi, Christopher; Brow, Amy; Seto, John Station 4 Air Quality

Tilvis,

Lynn Crum has asked me to contact the union in regards to station four's air quality. He would like to offer the union the chance to hire a company along with the City's contracted company to conduct the mold clearance sampling once station four has been mitigated. If the union wants to hire a secondary company to monitor the air please contact Lynn Crum at (734) 323-4158. It is looking like the monitoring will be scheduled near the end of this week.

Thank You,

Ellen S. Taylor Assistant Fire Chief City of Ann Arbor Fire Department Telephone: (734) 794-6961 x 49604 Fax: (734) 994-8814

One Person can make a difference, and every one should try. ---- John F. Kennedy

Confidentiality: This E-mail (including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521, is confidential and legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution, or copying of this communication is strictly prohibited. Please reply to the sender that you have received the message in error; then delete it. Neither the sender nor his or her employer makes any warranties as to the completeness or accuracy of any of the information contained herein or that this message or any of its attachments are free of viruses.

From: Sent: To: Subject: Schantz, Steven Monday, December 02, 2013 4:44 PM Taylor, Ellen RE: Fire Station #4

Based on his information provided to me, all he is waiting on is the duct cleaner to confirm.

Steve

From: Taylor, Ellen Sent: Monday, December 02, 2013 4:43 PM To: Schantz, Steven Subject: RE: Fire Station #4

Thanks Steven! I am hoping that Lynn gets the companies in the next few days. We really need to get station four back open.

From: Schantz, Steven Sent: Monday, December 02, 2013 4:08 PM To: Taylor, Ellen Subject: FW: Fire Station #4

Ellen,

I hope all is well and you had a good thanksgiving. Please find following the plan of action for Station #4 I received from Lynn Crum. In addition, I have included the safety data sheet and product data for the mold sanitizer being proposed. This sanitizer is EPA registered and is the standard sanitizer utilized throughout the industry. I have asked Lynn to include asbestos air monitoring during the asbestos removal and to utilize a company separate from TEK to conduct the mold clearance sampling. I also suggested having Lynn inquire with the Union to ensure the Union does not want to have their own industrial hygiene firm conduct parallel sampling at the time of the mold clearance sampling. Please let me know if you have questions.

Steve

From: Crum, Lynn Sent: Monday, December 02, 2013 1:37 PM To: Schantz, Steven Subject: FW: Fire Station #4 Quote

Steve,

Attached is Adrian's quote for cleaning up the mold at station #4. I am still waiting for Dalton's quote for cleaning the heating duct. The levels of work involved with this project are:

- * Dalton Environmental-----Heat duct cleaning
- * Adrian Environmental------Mold clean-up, removal two areas of tile floor
 - Hepa vac & wipe down all furniture, walls, mattresses Hepa vac all carpet in bunk room
- * Ann Arbor Carpet Cleaning---Deep steam clean carpet, furniture, mattress
- * TEK Env. to provide air monitoring during clean-up and final. (could use another company)

Thanks, D.L. Crum

From: David Graham [mailto:adrianenvironmental@yahoo.com] Sent: Monday, December 02, 2013 12:48 PM To: Crum, Lynn Subject: Fire Station #4 Quote

Lynn,

Sorry for the delay. I took the weekend off and been real busy today. Here is the quote. Let me know if you have any questions. Thanks,

2

Dave Graham

From: Sent: To: Cc: Subject: Schantz, Steven Wednesday, December 04, 2013 3:36 PM Crum, Lynn Taylor, Ellen Fire Station #4

Lynn,

Will you provide us with a quick update on the progress at Station #4.

In advance thank you.

Steve Schantz

Sent from my iPhone

From: Sent: To: Subject: Crum, Lynn Thursday, December 05, 2013 10:12 AM Schantz, Steven; Taylor, Ellen Station #4

Steve & Ellen,

Below please find the schedule for clean-up and air testing for fire station #4.

* Saturday (12/7 @ 12noon)	duct cleaning
* Monday (12/9 @8am)	install clean room barriers and perform
	mold clean-up and two areas of floor tile removal
	@ kitchen and bunk room, hepa vac bunk room
	carpet, mattresses, furniture and wipe down walls,
	cabinets. (Air testing will be provided by Adrian Env.
	during all work) Air test results will be received on
	Tuesday (12/10). If results are clear, next step is
	scheduled.
* Wednesday (12/11)	With clear air results, the clean rooms will be dismantled.
	Bunk room area carpet, mattresses and furniture will be deep steam cleaned.
* Thursday (12/12)	NOVA Environmental will set up and perform the final air testing. With clear results, the building will be returned to service.

Any questions, please call D.L. Crum (734-323-4158)

From: Sent: To: Cc: Subject: Schantz, Steven Thursday, December 05, 2013 10:33 AM Crum, Lynn Schantz, Steven; Taylor, Ellen Re: Station #4

Thanks. I am confused on the air testing. Will you clarify. Is Adrian performing mold testing? Who is performing asbestos clearance testing? If Adrian is doing asbestos air sampling it is only occupational and covers workers and does not apply to the environmental. I believe we spoke about Nova doing environmental asbestos testing at the time of asbestos abatement. And will final be mold?

Steve

Sent from my iPhone

On Dec 5, 2013, at 10:12 AM, "Crum, Lynn" < DLCrum@a2gov.org > wrote:

Steve & Ellen,

Below please find the schedule for clean-up and air testing for fire station #4.

	* Saturday (12/7 @ 12noon) * Monday (12/9 @8am)	duct cleaning install clean room barriers and perform mold clean-up and two areas of floor tile
removal		
		@ kitchen and bunk room, hepa vac bunk
room		sevent mathematic formitions and wine down
walls,		carpet, mattresses, furniture and wipe down
wans,		cabinets. (Air testing will be provided by
Adrian Env.		
8		during all work) Air test results will be
received on		Tuesday (12/10). If results are clear, next
step is		
		scheduled.
	* Wednesday (12/11)	With clear air results, the clean rooms will be
dismantled.		
Constant will be		Bunk room area carpet, mattresses and
furniture will be		deep steam cleaned.
	* Thursday (12/12)	NOVA Environmental will set up and perform
the final		
		air testing. With clear results, the building
will be returned		La contra de la co
		to service.

Any questions, please call D.L. Crum (734-323-4158)

From: Sent: To: Subject: Crum, Lynn Friday, December 06, 2013 9:06 AM Schantz, Steven RE: Station #4

Steve,

NOVA (Kary Amin) will be monitoring the final clearance for the building (mold & asbestos). Per Kary (legally) air monitoring is not required for the process of mold clean-up or removal of the non-friable floor tiles. But you are right, as we discussed, I have now also set NOVA to perform air testing on Monday during the clean-up/abatement as well as the final air testing on Thursday. Thanks, D.L. Crum

From: Schantz, Steven
Sent: Thursday, December 05, 2013 10:33 AM
To: Crum, Lynn
Cc: Schantz, Steven; Taylor, Ellen
Subject: Re: Station #4

Thanks. I am confused on the air testing. Will you clarify. Is Adrian performing mold testing? Who is performing asbestos clearance testing? If Adrian is doing asbestos air sampling it is only occupational and covers workers and does not apply to the environmental. I believe we spoke about Nova doing environmental asbestos testing at the time of asbestos abatement. And will final be mold?

Steve

Sent from my iPhone

On Dec 5, 2013, at 10:12 AM, "Crum, Lynn" < <u>DLCrum@a2gov.org</u>> wrote:

Steve & Ellen,

Below please find the schedule for clean-up and air testing for fire station #4.

	* Saturday (12/7 @ 12noon)	duct cleaning	
	* Monday (12/9 @8am)	install clean room barriers and perform	
		mold clean-up and two areas of floor tile	
removal			
		@ kitchen and bunk room, hepa vac bunk	
room			
	8	carpet, mattresses, furniture and wipe down	
walls,	-72 		
		cabinets. (Air testing will be provided by	
Adrian Env.			
		during all work) Air test results will be	
received on			
		Tuesday (12/10). If results are clear, next	
step is			
		scheduled.	
	* Wednesday (12/11)	With clear air results, the clean rooms will be	
dismantled.			

Bunk room area carpet, mattresses and

furniture will be

deep steam cleaned. * Thursday (12/12)-----NOVA Environmental will set up and perform air testing. With clear results, the building

will be returned

the final

to service.

Any questions, please call D.L. Crum (734-323-4158)

St 1.

From: Sent: To: Subject:

Schantz, Steven Friday, December 06, 2013 9:08 AM Crum, Lynn RE: Station #4

Tracking:

Crum, Lynn

Recipient

Read Read: 12/6/2013 9:13 AM

Lynn,

Thank you. I realize that air monitoring is not required to perform asbestos removal of non-friable floor tiles, but given the dynamics and sensitivity of the project, I think it is best. I am good with no mold testing at the time of remediation. Thanks again.

Steve

From: Crum, Lynn Sent: Friday, December 06, 2013 9:06 AM To: Schantz, Steven Subject: RE: Station #4

Steve,

NOVA (Kary Amin) will be monitoring the final clearance for the building (mold & asbestos). Per Kary (legally) air monitoring is not required for the process of mold clean-up or removal of the non-friable floor tiles. But you are right, as we discussed, I have now also set NOVA to perform air testing on Monday during the clean-up/abatement as well as the final air testing on Thursday.

Thanks, D.L. Crum

From: Schantz, Steven Sent: Thursday, December 05, 2013 10:33 AM To: Crum, Lynn Cc: Schantz, Steven; Taylor, Ellen Subject: Re: Station #4

Thanks. I am confused on the air testing. Will you clarify. Is Adrian performing mold testing? Who is performing asbestos clearance testing? If Adrian is doing asbestos air sampling it is only occupational and covers workers and does not apply to the environmental. I believe we spoke about Nova doing environmental asbestos testing at the time of asbestos abatement. And will final be mold?

Steve

Sent from my iPhone

On Dec 5, 2013, at 10:12 AM, "Crum, Lynn" < DLCrum@a2gov.org> wrote:

Steve & Ellen,

Below please find the schedule for clean-up and air testing for fire station #4.

* Saturday (12/7 @ 12noon)-----duct cleaning

	* Monday (12/9 @8am)	install clean room barriers and perform mold clean-up and two areas of floor tile
removal		
		@ kitchen and bunk room, hepa vac bunk
room		
walle		carpet, mattresses, furniture and wipe down
walls,		cabinets. (Air testing will be provided by
Adrian Env.		during all works) Air teat regults will be
received on		during all work) Air test results will be
received on		Tuesday (12/10). If results are clear, next
step is		
		scheduled.
15 J. J.	* Wednesday (12/11)	With clear air results, the clean rooms will be
dismantled.		Bunk room area carpet, mattresses and
furniture will be		built room area carpet, mattresses and
		deep steam cleaned.
	* Thursday (12/12)	NOVA Environmental will set up and perform
the final	×	
		air testing. With clear results, the building
will be returned		
		to service.
	Any questions please call D.L. Crum	(734-323-4158)

Any questions, please call D.L. Crum (734-323-4158)

From: Sent: To: Cc: Subject: Attachments:		
Tracking:	Recipient	Read
	Crum, Lynn	Read: 12/13/2013 1:56 PM
	Taylor, Ellen	4

Kulhanek, Matthew

Read: 12/13/2013 2:52 PM Read: 12/13/2013 1:49 PM

Lynn,

Nova Environmental has provided the preliminary fungal spore air sample results for Fire Station #4 that were collected on 12/12/13. To simplify this email and not to get too deep into interpretation details, the results of the sampling indicated elevated microbial concentrations within the Bunk Room when compared to the outdoor sample. These results indicate that a microbial source remains within the Bunk Room area. At this time, I recommend the following actions.

1. Remove the carpet and padding within the Bunk Room.

Seto, John

- 2. Remove the asbestos floor tile and asbestos floor tile mastic within the Bunk Room (since the padding is glued to the tile, it will come up with the pad at the time of removal).
- 3. Remove and discard the mattresses and box springs located within the Bunk Room.
- 4. Remove and discard all pores furniture within the Bunk Room.
- 5. Clean and sanitize (HEPA vacuum and wet wipe) the ceiling plenum within the Bunk Room.
- 6. Re-clean all vertical and horizontal surfaces within the Bunk Room.
- 7. Re-test within the Bunk Room, a control area, and the immediate outdoor environment.
- 8. Re-install floor tile or other non-pores flooring.

I have also included the asbestos clearance sampling results with this email. The asbestos clearance sampling results were below all regulatory clearance requirements and the areas are safe for general occupancy.

If upon your receipt of this correspondence, you encounter questions or additional information is required, please do not hesitate to contact me.

Respectfully,

Steve Schantz Safety Manager

From: Joel Lamb [mailto: jlamb@nova-env.com] Sent: Friday, December 13, 2013 12:07 PM To: Schantz, Steven Subject: Fire House #4 Preliminary Fungal Spore Air Sample Results Steve,

Please see attached.

Joel

Joel H. Lamb, CIE **Environmental Consultant** Council-certified Indoor Environmentalist Board-awarded by the American Council for Accredited Certification American Society of Safety Engineers - Member #47112





NEW ADDRESS 5300 Plymouth Road Ann Arbor, Michigan 48105 Office (734) 930-0995 Fax (734) 930-2969 Mobile (734) 260-3142

From: Sent: To: Subject: Taylor, Ellen Saturday, December 14, 2013 11:38 AM Schantz, Steven Fwd: Station 4 mold problem

Steven,

I'm hoping you could possibly answer this question in regards to station four personnel's personal bedding (sheets, pillows, blankets, and comforters)? I am assuming that washing this bedding would be sufficient and would not have affected station one's environment?

I am sure we will have additional questions.

Ellen

------ Original Message ------Subject: Station 4 mold problem From: "Hughes, Matthew" <<u>MHughes@a2gov.org</u>> To: "Taylor, Ellen" <<u>ETaylor@a2gov.org</u>>,"Budd, James" <<u>JBudd@a2gov.org</u>>,"Lowe, Steve" <<u>SLowe@a2gov.org</u>> CC:

Ellen...since now station 4 has contamination in the beds and couches, wouldn't all station 4s personnel bedding be included on the replacement? I am concerned that by them bringing their bedding to other stations including station 1 it will expose us all to the mold. I do not believe anyone thought it could be this bad. Please let me know.

Thank you Matthew

Sent from my Verizon Wireless 4G LTE DROID

From: Sent: To: Subject: Schantz, Steven Saturday, December 14, 2013 11:39 AM Taylor, Ellen Re: Station 4 mold problem

Ellen,

Yes, washing the bedding is the protocol. Normal wash with detergent.

Thanks, Steve

Sent from my iPhone

On Dec 14, 2013, at 11:37 AM, "Taylor, Ellen" < ETaylor@a2gov.org> wrote:

Steven,

I'm hoping you could possibly answer this question in regards to station four personnel's personal bedding (sheets, pillows, blankets, and comforters)? I am assuming that washing this bedding would be sufficient and would not have affected station one's environment?

I am sure we will have additional questions.

Ellen

------ Original Message ------Subject: Station 4 mold problem From: "Hughes, Matthew" <<u>MHughes@a2gov.org</u>> To: "Taylor, Ellen" <<u>ETaylor@a2gov.org</u>>,"Budd, James" <<u>JBudd@a2gov.org</u>>,"Lowe, Steve" <<u>SLowe@a2gov.org</u>> CC:

Ellen...since now station 4 has contamination in the beds and couches, wouldn't all station 4s personnel bedding be included on the replacement? I am concerned that by them bringing their bedding to other stations including station 1 it will expose us all to the mold. I do not believe anyone thought it could be this bad. Please let me know.

1

Thank you Matthew

Sent from my Verizon Wireless 4G LTE DROID

From: Sent: To: Cc: Subject: Seto, John Thursday, December 19, 2013 12:50 PM Schantz, Steven; Crum, Lynn Taylor, Ellen; Kulhanek, Matthew RE: Fire House #4 Preliminary Fungal Spore Air Sample Results

Steve,

Thanks for this update and the conversation we had this morning about Station 4. I just met with Ellen and getting Station 4 back into service has to be a priority.

Please do whatever you can and let me know if there is anything I can do to make this happen as soon as possible. I really appreciate your help.

John

From: Schantz, Steven
Sent: Friday, December 13, 2013 1:48 PM
To: Crum, Lynn
Cc: Taylor, Ellen; Seto, John; Kulhanek, Matthew
Subject: FW: Fire House #4 Preliminary Fungal Spore Air Sample Results

Lynn,

Nova Environmental has provided the preliminary fungal spore air sample results for Fire Station #4 that were collected on 12/12/13. To simplify this email and not to get too deep into interpretation details, the results of the sampling indicated elevated microbial concentrations within the Bunk Room when compared to the outdoor sample. These results indicate that a microbial source remains within the Bunk Room area. At this time, I recommend the following actions.

- 1. Remove the carpet and padding within the Bunk Room.
- 2. Remove the asbestos floor tile and asbestos floor tile mastic within the Bunk Room (since the padding is glued to the tile, it will come up with the pad at the time of removal).
- 3. Remove and discard the mattresses and box springs located within the Bunk Room.
- 4. Remove and discard all pores furniture within the Bunk Room.
- 5. Clean and sanitize (HEPA vacuum and wet wipe) the ceiling plenum within the Bunk Room.
- 6. Re-clean all vertical and horizontal surfaces within the Bunk Room.
- 7. Re-test within the Bunk Room, a control area, and the immediate outdoor environment.
- 8. Re-install floor tile or other non-pores flooring.

I have also included the asbestos clearance sampling results with this email. The asbestos clearance sampling results were below all regulatory clearance requirements and the areas are safe for general occupancy.

If upon your receipt of this correspondence, you encounter questions or additional information is required, please do not hesitate to contact me.

Respectfully,

Steve Schantz Safety Manager From: Joel Lamb [mailto:jlamb@nova-env.com]
Sent: Friday, December 13, 2013 12:07 PM
To: Schantz, Steven
Subject: Fire House #4 Preliminary Fungal Spore Air Sample Results

Steve,

Please see attached.

Joel

Joel H. Lamb, CIE Environmental Consultant Council-certified Indoor Environmentalist Board-awarded by the American Council for Accredited Certification American Society of Safety Engineers - Member #47112

2





NEW ADDRESS 5300 Plymouth Road Ann Arbor, Michigan 48105 Office (734) 930-0995 Fax (734) 930-2969 Mobile (734) 260-3142

From: Sent: To: Cc: Subject:	Schantz, Steven Thursday, December 19, 2013 1 Seto, John Kulhanek, Matthew; Crum, Lynn RE: Fire House #4 Preliminary F	
Tracking:	Recipient	Read
	Seto, John	Read: 12/19/2013 1:59 PM
	Kulhanek, Matthew	Read: 12/20/2013 8:27 AM

John,

Will do. Given the priority of the situation, maybe just doing what we need to do to get the work completed and the crews back in might make more sense at this point? Matt?

Deleted: 12/19/2013 2:18 PM

Steve

From: Seto, John
Sent: Thursday, December 19, 2013 12:50 PM
To: Schantz, Steven; Crum, Lynn
Cc: Taylor, Ellen; Kulhanek, Matthew
Subject: RE: Fire House #4 Preliminary Fungal Spore Air Sample Results

Crum, Lynn

Steve,

Thanks for this update and the conversation we had this morning about Station 4. I just met with Ellen and getting Station 4 back into service has to be a priority.

Please do whatever you can and let me know if there is anything I can do to make this happen as soon as possible. I really appreciate your help.

John

From: Schantz, Steven
Sent: Friday, December 13, 2013 1:48 PM
To: Crum, Lynn
Cc: Taylor, Ellen; Seto, John; Kulhanek, Matthew
Subject: FW: Fire House #4 Preliminary Fungal Spore Air Sample Results

Lynn,

Nova Environmental has provided the preliminary fungal spore air sample results for Fire Station #4 that were collected on 12/12/13. To simplify this email and not to get too deep into interpretation details, the results of the sampling indicated elevated microbial concentrations within the Bunk Room when compared to the outdoor sample. These results indicate that a microbial source remains within the Bunk Room area. At this time, I recommend the following actions.

- 1. Remove the carpet and padding within the Bunk Room.
- 2. Remove the asbestos floor tile and asbestos floor tile mastic within the Bunk Room (since the padding is glued to the tile, it will come up with the pad at the time of removal).
- 3. Remove and discard the mattresses and box springs located within the Bunk Room.

- 4. Remove and discard all pores furniture within the Bunk Room.
- 5. Clean and sanitize (HEPA vacuum and wet wipe) the ceiling plenum within the Bunk Room.
- 6. Re-clean all vertical and horizontal surfaces within the Bunk Room.
- 7. Re-test within the Bunk Room, a control area, and the immediate outdoor environment.
- 8. Re-install floor tile or other non-pores flooring.

I have also included the asbestos clearance sampling results with this email. The asbestos clearance sampling results were below all regulatory clearance requirements and the areas are safe for general occupancy.

If upon your receipt of this correspondence, you encounter questions or additional information is required, please do not hesitate to contact me.

Respectfully,

Steve Schantz Safety Manager

From: Joel Lamb [<u>mailto:jlamb@nova-env.com</u>] Sent: Friday, December 13, 2013 12:07 PM To: Schantz, Steven Subject: Fire House #4 Preliminary Fungal Spore Air Sample Results

Steve,

Please see attached.

Joel

Joel H. Lamb, CIE Environmental Consultant Council-certified Indoor Environmentalist Board-awarded by the American Council for Accredited Certification American Society of Safety Engineers - Member #47112







NEW ADDRESS 5300 Plymouth Road Ann Arbor, Michigan 48105 Office (734) 930-0995 Fax (734) 930-2969 Mobile (734) 260-3142

From:Schantz, StevenSent:Thursday, December 19, 2013 5:56 PMTo:Taylor, EllenSubject:FW: Fire Station #4 PCM and IAQ ReportAttachments:FS #4 PCM and IAQ Report.pdf

FYI

From: Joel Lamb [mailto:jlamb@nova-env.com] Sent: Thursday, December 19, 2013 2:02 PM To: Schantz, Steven Cc: Crum, Lynn Subject: Fire Station #4 PCM and IAQ Report

Steve,

Attached is the report for the sampling that was conducted on December 12, 2013 at Fire Station #4. Let me know if you have any questions.

1

Thanks,

Joel

Joel H. Lamb, CIE Environmental Consultant Council-certified Indoor Environmentalist Board-awarded by the American Council for Accredited Certification American Society of Safety Engineers - Member #47112





5300 Plymouth Road Ann Arbor, Michigan 48105 Office (734) 930-0995 Fax (734) 930-2969 Mobile (734) 260-3142

From: Sent: To: Subject: Attachments: Crum, Lynn Thursday, December 19, 2013 7:36 AM Kulhanek, Matthew; Schantz, Steven FW: Fire Station #4 quote Job #428-13 AWR(2).dotx

Matt & Steve,

Please see attached quote from Adrian Environmental regarding total clean-out of the bunk room at station #4. Also, included is the quote for floor tile removal to the balance of the building.

If you want all proposed work done, I will obtain two additional quotes.

Thanks, D.L. Crum

From: David Graham [mailto:adrianenvironmental@yahoo.com] Sent: Wednesday, December 18, 2013 7:25 PM To: Crum, Lynn Subject: Fire Station #4 quote

Lynn,

Here is the quote you have been waiting for. Sorry for the wait.

1

Dave G.

Schantz, Steven Friday, December 20, 2013 2:35 PM Crum, Lynn; Taylor, Ellen Powers, Steve; Seto, John; Kulhanek, Matthew; Wondrash, Lisa; Wilkerson, Robyn; Niemela, Nancy; Hupy, Craig Station #4 Subject:

All,

From:

Sent: To:

Cc:

Please find below the sequencing of events for the second round of remediation / asbestos abatement at Station #4 that has been established.

Thursday 12/26/13 – Remediation Contractor completing carpet removal and asbestos abatement Friday 12/27/13 – Remediation Contractor completing remediation and final asbestos abatement Friday 12/27/13 – HVAC cleaning contractor to sanitize HVAC system and ductwork (following remediation) Saturday 12/28/13 - Air monitoring consultant completing asbestos clearance and mold testing Monday 12/30/13 - Preliminary mold results expected from laboratory

*Please note that during the remediation / abatement process, all non-essential personnel will not be allowed within Station #4. Please remove all required personal or work related items from Station #4 prior to Thursday 12/26/13 at 8am.

*Steve Schantz will be on-site throughout the duration of the remediation / abatement process as well as during the post-remediation / abatement testing.

*I am still in support of no-pores flooring replacing the carpet to be removed in the Bunk Room.

If upon your receipt of this correspondence, you encounter questions or additional information is required, please do not hesitate to contact me.

Respectfully,

Steven E. Schantz Safety Manager City of Ann Arbor 301 E. Huron, 6th Floor Ann Arbor, MI 48107 sschantz@a2gov.org 734-794-6000 x43110 office 810-656-4465 cell www.A2gov.org



Think Green! Don't print this e-mail unless you need to.

CONFIDENTIALITY NOTICE: This e-mail, and any attachments, is for the sole use of the intended recipient(s) and may contain information that is confidential and protected from disclosure under the law. Any unauthorized review, use, disclosure, or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail, and delete/destroy all copies of the original message and attachments. Thank you.

Relinquished by: Date:	Comments:		4	(J) Y	- 1	Lab ID #	Other :	Turn Around (Circle One Below) Rush 24	Client Name: Region: Address, City, St Phone: 7 878 Contact Person:	
d by:			1001	Acc 3	Hool	Sample ID #	Test	Turn Around Times: (Circle One Below) Rush 24 hour 48 hour 72 hour	Client Name: <u> </u>	API
Received by:			Shi Bunk - S wald	Kitchen Break Pun - W. W	10.	Material/Location	Test Until Positive (TTP)Other	Asbestos	Envr 9263 E. 1436 Whitmore Fax:	PER ENVIRONMENTAL Wh & CONSULTING Pho Pho
Chancel				Wall 1012	~	Start Time	MoldBulkCello-Tape Other Analysis	BulkWij BulkW	لي Date of Survey: 1 (/ 7 Building Name: 2 + 1 5 Project Location/Area: TEK Project # : C Mobile Phone (Optional):	9263 E. M-36 Whitmore Lake, MI 48189 Phone: 734-878-5588 E-mail: info@tekenvironmental.com
NOV ® Relinquished by:				1022 1	1037 15,3	Stop Flow Rate Time	apeBioSIS	Analysis Type: Circle and Check pePoint CountTEMPC peAirPaint-chip	(1):	@tekenvironmental.co
v:					1532	te Volume	Viable/Non Viable	rcle and Check PCM Paint-chip	PKKNY A2 ghout! 635	ım Fax: 734-448-5588
						Results	Viable (allergance)	Micro Vac		1.288 Lab Use Only
Water Damage and Mold Assessment Report Ann Arbor Fire Department 2415 Huron Parkway, Ann Arbor, Michigan (Fire Station #4) Date of Inspection: November 7, 2013



PREPARED FOR: Mr. Lynn Crum Ann Arbor Fire Department Fire Station #4 2415 Huron Parkway Ann Arbor, Michigan 734.323.4158 dlcrum@a2gov.org

Prepared By: Mr. Hugh Russell, ASD Water Mitigation/Industrial Hygienist



TEK Project Number Cl0044/635

Page 2 November 13, 2013



November 13, 2013

Mr. Lynn Crum Ann Arbor Fire Department Fire Station #4 2415 Huron Parkway Ann Arbor, Michigan 734.323.4158 dlcrum@a2gov.org

Subject: Water Damage and Mold Assessment Report Ann Arbor Fire Department, Fire Station #4 Located at 2415 Huron Parkway, Ann Arbor, Michigan TEK Project Number: CI0044/635

Dear Mr. Crum,

TEK Environmental & Consulting Services, Inc. (TEK) was retained by the Ann Arbor Fire Department (Fire Station #4) to inspect the interior affected areas of the property located at 2415 Huron Parkway, Ann Arbor, Michigan. The purpose of the site visit was to investigate and sample potential for potential fungal growth and make recommendations for remedial action procedures following the concern for trapped and bound moisture within the block wall of the Southwest bunk as well as visible, heavy concentrations of calcification and paint bubbling to the block wall in the affected areas. As a result, TEK Environmental was contracted by the Ann Arbor Fire Department to inspect the aforementioned subject property and to test for potential fungal growth throughout the property. The primary focus of the inspection was to evaluate the condition of building components and adjacent finishing materials and to make recommendations for remedial action procedures, if necessary. Mr. Hugh Russell of TEK conducted the investigation on November 7, 2013.

EXECUTIVE SUMMARY

The following report provides an analysis and evaluation of the current condition of the affected South west bunk area South wall following water damage suffered from a water intrusion event that occurred during the summer months. The South wall in the bunk appears to have been the point of water penetrations in the past and may still be weeping or leaching water, the carpeting beneath the area of water migration has visible water staining and a musty odor. In conjunction to the carpeting being within close proximity of the water intrusion a heat duct is also in the flooring that may be contributing the poor air quality conditions that are present. TEK highly recommends mold remediation/ decontamination of impacted contents, block wall, glued down carpet over concrete, and the duct system (boiler). Removal and cleaning of all contents within the bunk are recommended and are to be HEPA vacuumed and evaluated by a mold remediation specialist.



Page 3 November 13, 2013

- Proper removal/ remediation of impacted materials and components are required within <u>negative</u> pressure HEPA-Filtered containment enclosure in the Southwest Bunk room.
- TEK recommends HEPA equipped air filtration is under neutral pressure operation as a standard control measure while the contents are cleaned prior to removal from their current location, and HEPA vacuumed/ steam cleaned to disinfect properly.

BACKGROUND

According Mr. Crum, it was reported to him that this past summer individuals that were occupying the Southwest bunk were experiencing allergy type symptoms, as the summer progressed it was noted that visible damage to the block wall surface paint was beginning, indicating a water impacted surface, either directly or indirectly (high humidity). On the south wall where air and surface sampling were conducted there is an in wall air conditioning unit that runs throughout the year, this unit or the previous unit is suspect to have been condensing back into the building due to the unit not being on a sufficient angle to allow the water to evacuate outdoors. The carpeting below the block wall at the water intrusion point has suffered water damage and has visible staining, salvability will need to be determined by a remediation specialist and options for proper action discussed with Mr. Crum prior to removal. It was also reported to the TEK hygienist that water damage had occurred and that the water intrusion had affected the duct systems that have been built within the cement flooring. There is reason to believe that this source of water intrusion could most likely be a second source of contamination leading to poor air quality and fungal growth through high humidity and particulate matter.

All contents and textiles should only be removed after <u>Neutral</u> pressure has been established using HEPA filtration devices and polyethylene critical barriers have been placed at entry points in the affected areas. Upon successful completion of contents and textile disinfecting activities, the contents should be relocated to an area away from the south wall and a critical barrier shall be place along the south wall using polyethylene sheeting, <u>Negative pressure</u> at this time will need to be achieved utilizing Air Filtration Devices in the containment barrier prior to work commencement. As a result, TEK Environmental has provided testing and recommendations for remedial action for the presence of fungal growth within the affected Southwest bunk areas.

INVESTIGATION RESULTS

Visual Inspection

A visual inspection of the interior affected Bunk and Kitchen/Break Room areas were performed to determine the extent of any moisture damage and to observe if any visible fungal growth was present. Once in the areas, the inspector immediately noticed areas where visible damage existed to the South block wall and the carpeting.

Observations

Weather Conditions

On the day of the inspection, temperatures ranged between 40° and 45° Fahrenheit. It was mostly cloudy during the entire inspection.

Moisture Readings

During the site investigation, the on-site inspector visually evaluated the extent of the moisture damage and components containing fungal growth within the building using direct read instrumentation. Observations were made on cellulose building components such as block walls, Carpeting, subflooring, wood base moldings, insulating materials and other associated components. These components have the potential to provide a food source for fungal growth when moist/damp conditions are present and are unable to become dry in a short amount of time. Moisture readings were collected using a direct read Protimeter Surveymaster SM® moisture detection instrument to determine the percent moisture present in drywall and wood materials.



Readings were taken on various materials in the first floor area revealing normal moisture conditions to the lower wall systems in the 3 locations listed above.

However, the south wall of the Southwest bunk area was determined to contain elevated moisture conditions. The cinderblock wall system had elevated moisture greater than 35%.

Odors

A slight musty odor was evident in the Southwest Bunk near the heat duct.

BASELINE MOLD AIR SAMPLING

TEK collected mold air samples to evaluate baseline airborne mold spore levels prior to remedial activities. Samples were collected to establish airborne baseline conditions of current airborne mold spores within the property. Samples were collected to represent the current air quality conditions within the affected areas. An outside sample was collected for ambient airborne outdoor mold spore concentration comparisons on site and at the time of the inspection. Samples were submitted under Chain-of-Custody control to Apex Research, Inc., a third party laboratory, for microscopic Pollen/Fungal analysis. A sample volume of 158 liters was collected for each sample and the analytical reports for each sampling event are attached. Apex Research analyzed the samples in units of spores per cubic meter.

Three (3) mold air samples were collected using Alergenco $D^{\text{(B)}}$ air impaction cassettes specifically designed to identify airborne aerosols such as viable and non-viable mold spores and pollen. Sample and locations are listed below.

- Sample A001 was collected on the exterior ambient outside of the property (West Entry);
- Sample A002 was collected in the S/W Bunk South Wall;
- Sample A003 was collected in the Kitchen/Break Room.

Airborne Mold Spore Sample Results

- The analytical results for the ambient exterior air Sample A001 indicated low levels of the common outdoor spore type known as *Ascospores*, along with low indications of the contaminant *Epicoccum*.
- Sample A002 indicated <u>acceptable levels</u> of the common outdoor spore types known as *Cladosporium* and <u>unacceptable levels</u> of *Penicillium/Aspergillus (P/A)* spores.
- Sample A003 indicated <u>acceptable levels</u> of the common outdoor spore types known as *Ascospores* and *Cladosporium*, along with one spore of the contaminant *Chaetomium*.

Sample A-002 indicated unacceptable levels of more than 500 spores per cubic meter of the identified contaminant known as Penicillium/Aspergillus (P/A) spores.

Identified Fungal Growth Descriptions

Disclaimer: Diagnosis of a particular health effect should be left to a medical professional. Health effects in general are not well studied, dosage, exposure, and sensitivity thresholds are not well known and can potentially vary tremendously depending on various conditions and in particular individuals with compromised immune system deficiencies. Those individuals with such symptoms are recommended to seek professional medical evaluations and may warrant additional environmental testing. Effects will also vary from species to species within a particular mold genus. Additionally, many ill effects of mold that have been observed recently are the result of modern building design and its lack of adequate ventilation, which can vary from room to room, let alone building to building. The following are brief descriptions for general informational purposes of some of the identified fungal spore analyses. More detailed and extensive information can be found from various other sources. Different sources will sometimes disagree on particular properties, especially where health concerns are involved.

Ascospores (ass-co'-spores) - A large category of spores (produced in a sac-like structure) that are found everywhere in nature and include more than 3000 genera. Most Ascospores of health or IAQ importance are identified separately by their genus (e.g. Chaetomium) when possible on a IAQ report, and the Ascospore category is used primarily on these reports for a large group of less important spore types often found in quantity on outdoor air samples. On tape samples, Ascospore is sometimes also used as a general morphological identification (i.e. the ascus or sac structure is present) for certain samples in those cases when the spores do not appear to represent any of the IAQ significant genera.

Aspergillus (as-per-jill-us) – allergen / contaminant / opportunistic pathogen, commonly found in the environment around the world. It comprises approximately 200 species and can appear almost any color. Though commonly found on cultures, tape-lifts, and air samples, its spores are indistinguishable from Pencillium on non-cultured samples (like tape-lifts and air-o-cells) unless the conidiophore is present. Health effects vary by species, but many species are reported to be allergenic. Some species produce toxins that might have significant health effects in humans. Aspergillus is one of the most infectious of molds, but infections are not common in normal immune systems. In immuno-compromised individuals, however, the disease Aspergillosis is a very significant and potentially deadly health concern.

Chaetomium (k--toe-me-um) - contaminant, rarely involved in systemic and cutaneous disease and sometimes reported to be allergenic. Primary IAQ importance is currently related to that it will grow in the same conditions as Stachybotrys (wet cellulose) and amplified amounts in indoor air could be a warning that conditions do exist for Stachybotrys growth. Many times on damp sheetrock paper, colonies of Chaetomium and Stachybotrys will be growing on top of one another or side by side (this can also be an important consideration when doing tape lifts of sheetrock because most of the time the colonies are not distinguishable by the naked eye – the small area that is sampled might be a pure colony of just Chaetomium even though numerous colonies of Stachybotrys might exist.).

Cladosporium (*clad-oh-spore-ee-um*) – common allergen / contaminant / very rarely pathogenic, found everywhere, many times the most common and numerous mold found in outdoor air. Indoor concentrations are usually not as high, but it is an important airborne allergen and common agent for hay fever, asthma, and other allergy related symptoms. It can thrive in various indoor environments, appearing light green to black (the black mold on air vent grills is usually Cladosporium).

Epicoccum (*epp-ee-cock'-um*) - contaminant / opportunistic pathogen, found in soil, air, water and rotting vegetation and can be commonly found in outdoor air. It is a common allergen, and rarely can cause an infection in the skin.

Penicillium (*pen-uh-sill'-ee-um*) - contaminant / opportunistic pathogen, one of the most common genera found worldwide in soil and decaying vegetation and indoors in dust, food, and various building materials. Common bread mold is a species of Penicillium. Spores usually cannot be distinguished from Aspergillus on non-cultured samples (like tape-lifts and air-o-cells). It is reported to be allergenic, to cause certain infections in compromised individuals, and some species do produce toxins unhealthy to humans.

MOLD SURFACE SAMPLING

Sampling and Analyses

Based on visual inspection, a surface cellophane tape (cello-tape) / bulk sample was collected from the area where evidence of fungus or other microbiological growth was present. Sampling methods followed the ACGIH method for surface mold sampling. Although the site inspector did not take a sample from each type of mold growth location, samples were collected to be representative of mold or staining present on interior building components.



Page 6 November 13, 2013

The sample was collected using cello-tape applied to selected surfaces, then transferred to a pre-cleaned glass slide. The sample was placed in a sealed plastic bag and submitted under Chain-of-Custody control to APEX Research Inc. Laboratories. The Phase Contrast Microscopic (PCM) method, which was utilized, identifies most fungal organisms; algae, micro-fauna (e.g., mites and fleas) and pollen, but does not include bacteria or arthropod allergens (e.g., fecal pellets) from cockroaches, mites or other arthropods.

A fungal bulk/surface tape sample was collected from the property. Sampling of visible mold was collected as follows:

• Tape-001 was collected from fungal growth/staining on the S/W Bunk - South Wall.

Analytical Surface Sampling Results

Apex Research Inc. Laboratory provided analytical results for all fungal samples. The following sample results and laboratory analytical results are attached. Please reference the mold definition/descriptions.

• Tape-001 - No Mold Spores, Hyphae or Conidia were detected in the sample.

Mold Rating	Description	Interpretation		
0	No Mold Spore, Hyphae, Conidia were detected	The sample consists of environmental debris that is not microscopically identified with mold or fungi.		
1 Trace amount of mold spores, conidia or hyphae present		The sample consists of environmental debris with random appearances of mold debris.		
2	Up to 25% of the material on the bulk samples are mold spores, conidia or hyphae	The sample consists of environmental debris with a noticeable amount of mold present. A consistent accumulation from a nearby mold source.		
3	26%-50% of the material on the bulk sample are mold spores, conidia or hyphae	The sample consists of environmental debris intermingled with mold that may or may not be in a growth phase.		
4 51%-75% of the material on the bulk sample are mold spores, conidia or hyphae The sample consists of a mold growth that h environmental debris.		The sample consists of a mold growth that has some environmental debris.		
5	>75% of the material on the bulk sample are mold spores, conidia or hyphae	The sample consists primarily of mold or related structures indicating a colony of established mold.		

Mold Spore Rating



SUSPECT ASBESTOS BUILDING MATERIAL BULK SAMPLING

Sampling and Analyses

While on site, TEK observed suspect asbestos-containing building materials already damaged or with the potential to become damaged during remedial activity. The aforementioned materials require removal in order to access affected materials or to eliminate saturation and fungal growth. TEK sampled the materials collected for asbestos content analysis from the affected areas within the subject property.

A total of seventeen (17) samples was collected and analyzed using standard laboratory turn around procedures. Mr. Hugh Russell of TEK collected the samples of materials on November 7, 2013. The materials were collected and submitted to APEX Research, Inc. and analyzed by Polarized Light Microscopy (PLM) Method EPA 600/R-93/116 for asbestos content. A copy of the Chain of Custody form and laboratory analysis report for the bulk samples are attached for your records.

Laboratory results indicate that asbestos was detected in the 9 x 9 floor tile and mastic indicated below:

Sample ID #	Material Description & Sample Location	Asbestos Results
001A	Mud Fittings – Boiler Room	NAD
001B	Mud Fittings – Boiler Room	NAD
002A	Straight Pipe Insulation with Wrap – Boiler Room	NAD
002B	Straight Pipe Insulation with Wrap – Boiler Room	NAD. NAD
003A	12 x 12 Grey w/ Black Streaks Floor Tile – Garage outside Bath	NAD, NAD
003B	12 x 12 Grey w/ Black Streaks Floor Tile – Break Room/Kitchen	NAD, NAD
004A	9 x 9 Green w/ White Streaks Floor Tile – Garage outside Bath	Chrysotile - 5%, NAD
004B	9 x 9 Green w/ White Streaks Floor Tile – Break Room/Kitchen	N/A, NAD
005A	Mastic under Floor Tile – Garage outside Bath	Chrysotile – 5%, NAD
005B	Mastie under Floor Tile – Break Room/Kitchen	N/A, NAD

*N/A=Not Analyzed; NAD=No Asbestos Detected

CONCLUSIONS AND ABATEMENT RECOMMENDATIONS

Based upon the visual investigation and fungal sample analysis, moisture damage has impacted finished and structural components within the Southwest Bunk area, South wall. As a result of the inspection, disinfecting is required at this time where airborne mold spore indications as well as physical fungal growth to the contents and building components.

Aforementioned contents will require complete cleaning and disinfecting the areas free of fungal growth. TEK highly recommends complete removal of carpet flooring materials as well as duct cleaning throughout the station.

- > TEK recommends a deep steam clean of the bedding mattress materials or disposal of the mattresses if the restoration contractor cannot guarantee complete cleaning and disinfecting of these materials.
- Prior to work commencing, isolate the South wall chamber from the remainder of the Southwest Bunk area. This will create a contained work area to eliminate the potential for cross-contamination into the remaining areas.



Page 8 November 13, 2013

General Requirements

- It is recommended any HVAC ductwork be isolated and sealed off during removal and disinfecting activities. Upon completion of cleaning, it is recommended that any forced air HVAC system be professionally cleaned and disinfected upon completion of disinfection activities.
- All abatement activities should be performed in a regulated HEPA-filtered containment area isolating the Southwest bunk from the remainder of the building.
- Due to elevated mold spores in the Southwest bunk, TEK recommends all contents and horizontal surfaces to be professionally HEPA vacuumed and wet wiped with an approved fungicidal product pre-approved by the owner.
- All disinfecting activities should be performed using HEPA vacuuming techniques during the final cleaning phase in addition to treatment using a professional grade anti-microbial disinfectant pre-approved by the property owner.
- TEK recommends that the appropriate personal protective equipment (PPE) be used during any remediation/ abatement activity. Chosen PPE will depend on the contractors own health and safety guidelines as well as the potential exposure hazards.
- Remaining contents in the affected work areas can be HEPA vacuumed and disinfected in accordance with IICRC S-520 disinfecting guidelines pertaining to Porous and Non-Porous contents, prior to relocation out of the regulated area. Contents in areas where secondary contamination was identified can be HEPA vacuumed and disinfected in place and in accordance with IICRC S-520 disinfecting guidelines pertaining to Porous and Non-Porous contents.
- If physical mold contamination is present on contents it is recommended those contents be inventoried and placed in sealed clear plastic bags/containers to be evaluated for disposal.
- The remaining carpet in the Southwest bunk is recommended to be removed and concrete cleaned prior to any post abatement air sampling throughout the area.
- <u>ALL</u> horizontal surfaces and fabric textiles/contents in the remainder of the Southwest Bunk area need to be disinfected and HEPA vacuumed. HEPA filtered air-filtration devices are to be operated under neutral pressure during the cleaning process.
- The air conditioning unit that is currently installed should be removed from the wall cavity and inspected for the possible cause of damage and/or water intrusion to the south block wall, minimally this wall cavity should be inspected and/or addressed to meet industry standards for acceptable allowable moisture levels within cinderblock materials.

Southwest Bunk area (conducted within a regulated HEPA filtered area/containment).

- Construct polyethylene critical barriers over all ducts and vent openings leading to non-work areas.
- Air Filtration Devices (AFD's) should be mobilized on site, operated under <u>negative</u> pressure and ducted outside during the initial cleaning. During final cleaning phase, AFD's should be operated under <u>neutral</u> pressure for a minimum of 12 hours prior to shut down to perform post remediation testing by TEK.
- Relocate all contents and fixtures (i.e. stored boxes, items) upon the establishment of Neutral pressure. Clean and disinfect all contents within the Southwest bunk area outside of the polyethylene critical barrier that is to be constructed on the south wall. Contents will be part of the post remediation air clearance.
- Remove, inspect, and relocate the air conditioning unit upon the establishment of Neutral pressure within the Southwest Bunk.



- Abrasively clean or scrape the cinderblock South wall to remove visible paint bubbling and damage to this wall below the air conditioning unit.
- Remove and dispose of glued down flooring within the Southwest Bunk, and abrasively scour any existing staining present. * Proceed with carpet removal cautiously as 9x9 tiles and mastic may be present beneath flooring that have been identified as asbestos containing.*
- After abrasive methods are used on the cinderblock wall system and cement flooring, treat the remaining components (structural) with a professional grade anti-microbial disinfecting agent pre-approved by the property owner.

Post Decontamination Visual Inspection and Post Remediation Sampling

TEK Environmental & Consulting Services, Inc. recommends post decontamination visual inspection verification and post abatement mold sampling to determine airborne mold spore concentrations within the regulated polyethylene containment area(s). TEK recommends air sampling be performed immediately following the completion of abatement procedures, but before reconstruction or renovation activities begin.

All AFD's should remain operating under neutral pressure and all critical barriers are recommended to remain in place until the final post abatement analytical data is approved by TEK. TEK will evaluate airborne mold spore concentrations, compared to initial findings within the regulated area interior area (s) and exterior airborne levels on the day of sampling.

TEK Environmental & Consulting Services, Inc. would like to thank you for the opportunity to serve your environmental needs. If you have any questions regarding this information or additional concerns, please contact me at 734.878.5588.

Respectfully,

TEK Environmental & Consulting Services, Inc.



Hugh Russell, ASD Water Mitigation/Industrial Hygienist

Attachments: Analytical Data w/Chain of Custody Form

INSPECTION DISCLAIMER

The sampling and inspection services performed for the presence of fungal growth, mold growth and/or airborne mold spore concentrations only represent the conditions at the time of the investigation. However, the environmental sampling performed at the time of the inspection may not represent acceptable air quality conditions to individuals with compromised immune deficiencies, sensitive allergy conditions and persons with a high sensitivity to mold spores or certain chemical/biological allergies. Additional sampling may be recommended upon further health evaluations by a medial professional doctor.

Environmental conditions and findings at the time of the inspection may change depending on the changing indoor air quality conditions due to temperature fluctuations, interior/exterior humidity and/or changes in the ambient exterior weather patterns throughout the year. Additionally, some areas, cavities, pipe chases, etc. or inaccessible areas may or may not have been easily accessible at the time of the investigation and/or did not illustrate a mold/fungal condition present during the inspection and may require additional inspection procedures if concerns or indications arise.

If moisture intrusion or continuous saturation to building components/furnishings is not eliminated, then additional mold growth or fungal activity will most certainly re-occur. Statements made by the inspector in regards to origin and cause of moisture intrusion, is recommended to be followed up by a licensed/trained professional in the discipline of concern. However, it is our professional recommendation that any moisture or water intrusion sources related to the inspection, must be corrected or stopped prior to the commencement of remedial activities such as; disinfection, cleanup, demolition, dehumidification, etc.

\\192.168.1.75\Share\TEK Server Data\TEK\CLIENTS\Cl0044 Residential Inspections\635 Fire Station#4 2415 Huron Pkwy, Ann Arbor-MOLD 11-7-2013\Mold Assessment and ASB Report doc

ANALYTICAL DATA AND CHAIN OF CUSTODY RECORD

Photo Log:

1. Southwest bunk South wall below the air conditioning unit, visible damage to the cinderblock and carpet



2. Southwest Bunk South wall damage to the carpet and evidence of water intrusion to the duct system below the air conditioning system.



3. Bunk South wall with visible damage to the wall, paint bubbling and calcification indicating water intrusion.



SHOCKWAVETM Disinfectant/Sanitizer/Cleaner/Fungicide

Product Description

FIBERLOCK

ShockWave is an EPA-registered disinfectant, sanitizer and cleaner designed specifically for mold remediation contractors. ShockWave is designed to meet all your disinfecting, sanitizing, cleaning, and de-odorizing needs. ShockWave is strong enough to be used as a hospital grade disinfectant, and has been specifically formulated to be used on both porous and non-porous materials. ShockWave is a powerful concentrated quaternary ammonium chloride blend that yields up to 64 gallons of usable product from every gallon of concentrate. ShockWave has over 130 organism kill claims including Aspergillus niger, Penecillium spinulosum, E. coli, Salmonella, HIV, Hepatitis-B, Herpes, Poliovirus, and many other pathogenic and environmental microbial organisms.

Application Information

DIRECTIONS

WATER DAMAGE RESTORATION: This product is particularly suitable for use in water damage restoration situations to sanitize against odor causing bacteria on the following porous and semi-porous materials: carpets, carpet cushion, subfloors, drywall, trim and frame lumber, tackless strip and paneling. Using solutions recommended, saturate affected materials with enough product to remain wet for at least 10 minutes.

SEWER BACKUP & RIVER FLOODING: During mitigation procedures, dilute 2-4 ounces of the product per gallon of water allowing for the diluting effect of absorbed water within saturated materials. Remove gross filth or heavy soil along with non-salvageable materials. Saturate all affected areas with a sprayer using a coarse spray tip, before and after cleaning and extraction.

Disinfection: Add two ounces of Shock-Wave per gallon of water. Remove gross filth or heavy soil. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a cloth, mop, sponge, or hand pump trigger sprayer such that all surfaces remain wet for 10 minutes. Let air dry. Prepare a fresh solution for each use. ShockWave is effective in hard water up to 300 ppm hardness (calculated as CaCo3) and in the presence of organic soil (5% blood serum).

Fungicide: At 2 oz. per gallon, ShockWave is effective against the pathogenic fungi, Trichophyton mentagrophytes in 5% organic soil. Contact time - 10 minutes. Virucidal: When used on inanimate, hard, non-porous, environmental surfaces at 2 ounces per gallon of water for a 10 minute contact time (5% organic soil), except for Poliovirus type 1 (strain): which requires a 20 minute contact time (5% organic soil) and HIV-1 which requires only a 30 second contact time.

Cleaning and Deodorization: ShockWave deodorizes garbage storage areas, empty garbage bins and cans, toilet bowls and any other odor-causing areas. Mix 2 ounces per gallon of water and apply solution to surfaces. Be sure to thoughly wet surfaces, allow to air dry.

CAUTION! KEEP OUT OF REACH OF CHILDREN. KEEP CONTAINER CLOSED DURING STORAGE. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. AVOID BREATHING OF MISTS. USE IN WELL-VENTILATED AREA.

FIRST AID

Skin: Remove contaminated clothing. Flush affected areas with large quantities of water. Seek medical attention if irritation persists.

Eyes: Flush with large quantities of water, holding eyelids open. Seek medical attention.

Inhalation: Remove victim to fresh air and monitor. Seek medical attention if symptoms persist.

Ingestion: Give large quantities of water. Seek medical attention immediately.

Properties

Product Specification	
Active Ingredient:	Quaternary Ammonium
	Chloride
Color:	Clear Blue
Odor:	Fresh Linen
Foam:	0
Flash Point:	> 200°F
рН	11.7
Shelf Life:	36 Months Min.
((Driginal Sealed Containers)

Product Testing

EPA Registration Number:61178-1-73884EPA Est. Number8325-PA-01

Available Package Sizes

1 gallon containers / 4 per case 10 oz bottles / 24 per case





PRODUCT DATA SHEET

PRODUCT DATA SHEET

ShockWaye Disinfectant/Sanitizer/Cleaner/Fungicide

For Technical Information call 800.342.3755

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use of this product are beyond our control. Neither Fiberlock Technologeies, Inc., nor its agents shall be responsible for the use or results of use of this product or any injury, loss or damage, direct or consequential. We recommend that the prospective user determine the suitability of this product for each specific project and for the health and safety of personnel working in the area.

1045-3518

8310

Fiberlock Technologies • 150 Dascomb Rd • Andover, MA 01810 • www.fiberlock.com • 800.342.3755

Certificate of Laboratory Analysis

Test Method, Pollen/Fungal/Dust Mite Analysis

Project: 2415 Huron Pkwy., Ann Arbor, MI Project Area: Throughout Project #: CI0044/635

Report to:

Mr. Tyler Lenling TEK Environmental & Consulting Services, Inc. 9263 E. M-36 Whitmore Lake, MI 48189

Lab ID # M18105-04 Client ID: T001

Sample: Bulk Type: Tape

Location: SW Bunk - S. Wall

Genus/Particle Observed

 ARL Report #
 13-M18105

 Date Collected:
 11/07/13

 Date Received:
 11/07/13

 Date Analyzed:
 11/13/13

 Date Reported:
 11/13/13

Image of Sample Date: 11/13/13 Magnification: 600x



Mold Rating: 0

Observations: No mold was observed.

Genera are listed according to amount observed, from largest to smallest.

Kent ft

Robert T. Letarte Jr., Laboratory Director

Some fungi, yeasts, molds, are not able to be identified by microscopic examination, all identifications are presumptive and confirmation of specific molds, fungi, or yeast or bacteria should be confirmed by culturing. APEX Research is not responsible for the sample collection or interpretation of results. The results are presumptive and analyzed to reflect the conditions at the moment tested with understanding that results may vary with time and space. The above certificate of analysis relates only to the samples tested and to insure the integrity of results may only be reproduced in full. Liability limited to ensure that only is a sample state of analysis.



Page 1 of 1



Comments



Invoice

9263 E. M-36 Whitmore Lake, MI 48189 (734) 878.5588 Office (734) 448.5088 Fax

Bill To

Mr. Lynn Crum Ann Arbor Fire Department Fire Station #4 Ann Arbor, Michigan dlcrum@a2gov.org
 Date
 Invoice #

 11/18/2013
 13-6273

Project

CI0044/635 Fire Station#4 2415 Huron Pkwy

F	P.O. No.	Terms			16.5	Due Date	С	laim No.
		Due on receipt			. 3	11/18/2013		
Qty		C	escription	Rate	Serviced	Item		Amount
1		tion/Assessment AN 250 for Scope of Wo	D Scope of Work and Recommendations ork)	650.00	11/7/2013	Mold Professiona	l Ser	650.00
3		nalysis for microsco ® air impaction case	pic Pollen/Fungal analysis using ettes	65.00	11/7/2013	Lab Analysis-MO	LD	195.00
1	Tape sample		opic Pollen/Fungal analysis using surface	50.00	11/7/2013	Lab Analysis-MO	LD	50.00
17	STANDARI Party analyti	D Turn Around for B ical laboratory and an	ulk samples by a NVLAP Accredited 3rd aalyzed by Polarized Light Microscopy 16 for asbestos content	15.00	11/7/2013	Lab Analysis-ASF	BES	255.00
	Ann Arbor H Located at 2	ge and Mold Assess Fire Department, Fire 415 Huron Parkway, Number: CI0044/63	Station #4 Ann Arbor, Michigan					
	k You for the 952712	Opportunity to Serv	ce Your Environmental Needs TEK Tax ID	#	Total			\$1,150.0
Pay	online at:	https://ipn.intui	t.com/x6xgpc2h		Payme	ents/Credits		\$0.0
-					Balanc	e Due		\$1,150.0

www.tekenvironmental.com

Certificate of Laboratory Analysis

Test Method, Fungal Spore Analysis

Project: 2415 Huron Pkwy., Ann Arbor, MI Project Area: Throughout Project #: CI0044/635

M18105-02

A002

SW Bunk - S. Wall

11/07/13

153 L

3

Raw Ct.

0

1

16

0

0

Spore/m³

0

44

704

0

0

Report to:

Mr. Tyler Lenling TEK Environmental & Consulting Services, Inc. 9263 E. M-36 Whitmore Lake, MI 48189

ARL #

Client #

Location:

Volume:

Sampling Date:

Debris Rating:

Spore Type/Particulate

Ascospores

Cladosporium

Penicillium/Aspergillus

Chaetomium

Epicoccum

M18105-01

A001

Outside - W. Entry

11/07/13

153 L

3

Spore/m³

88

264

0

0

88

Raw Ct.

2

6

0

0

2

ARL Report # 13-M18105 Date Received: 11/07/13 Date Analyzed: 11/13/13 Date Reported: 11/13/13 Media: AllergencoD

Spore/m³

Total	10	440	17	748	7	308		
· L		8	E.			Put	- 19	4-
				52			0 - r	Director
		40 15		÷.,	Kober	t.T. Letarte, J	r., Laborato	ry Director
Some fungi, yeasts, and molds ar Research is not responsible for sar with time and space. The above c the cost of analysis.	ple collection or th	e interpretation of	of results. Results	s only reflect condi	tions for the me	ment tested with	the understanding	ng that all results vary
			1.00					

APEX Research Inc., 11054 Hi Tech Drive, Whitmore Lake, MI 48189 (734) 449 - 9990, Fax (734) 449 - 9991

Raw Ct.

M18105-03

A003

Kitchen/Break Rm. - W. Wall 11/07/13

153 L

3

Raw Ct.

1

5

0

1

0

Spore/m³

44

220

0

44

0



MATERIAL SAFETY DATA SHEET SHOCKWAVE™

Per OSHA-recommended ANSI Z400.1-2004 standard format & in accordance with European standard format

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: ShockWave™ Product Description: EPA Registered Disinfectant/Sanitizer/Cleaner/Fungicide Concentrate Product Code: 8310 Chemical Family: Quaternary Ammonium Chloride

EPA Reg No. 61178-1-73884

Manufactured For: Fiberlock Technologies Inc.

Address: Fiberlock Technologies 150 Dascomb Road Andover MA, 01810

Contact Info: Tel: (800) 342-3755 Fax: (978) 475-6205

Emergency Phone: 24 Hour Contact: CHEM-TEL: (800) 255-3924 INTERNATIONAL 24 HOUR EMERGENCY Phone: 813-248-0585

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous:

Chemical Name	CAS#	Percent	OSHA PEL	ACGIH TLV
1 - Dimethyl Benzyl Ammonium Chloride	68391-01-5	< 2.25	Not Established	Not Established
2 - Dimethyl Ethylbenzyl Ammonium Chloride	68956-79-6	< 2.25	Not Established	Not Established

This product does not contains any toxic chemical(s) subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

SECTION 3: HAZARDS IDENTIFICATION

Potential Health Hazards:

Skin Contact: Skin irritant. Prolonged or repeated contact may cause dermatitis.

Eyes Contact: Severe eye irritant. Liquid and mists may injure the eyes causing corneal damage.

Inhalation: Inhalation of vapors or mists may cause irritation of the throat and respiratory tract. High vapor concentrations may cause central nervous system effects.

Ingestion: Irritating to the mouth, throat, and gastrointestinal system. Burning, pain, and diarrhea expected with large doses.

SECTION 4: FIRST AID MEASURES

Eyes: Immediately flush eyes with large amounts of water for 15 minutes holding eyelids open. Get medical attention immediately.

Skin: Remove contaminated clothing. Flush affected areas with large quantities of water. Seek medical attention if irritation persists.

Ingestion: Drink 3-4 glasses of milk or water. Do not induce vomiting. Get medical attention immediately.

Inhalation: Remove victim to fresh air and monitor. Seek medical attention if symptoms persist.

MSDS DATE: 4/8/09

SECTION 5: FIRE-FIGHTING MEASURES

Product is non-combustible

lash point:	
-------------	--

	Not flammable	
2:	Not flammable	

Autoignition Temperature:

F: Not Established C: Not Established

Extinguishing Media:

F

C

Use extinguishing media appropriate for surrounding fire

Water Spray	ОК
Carbon Dioxide	NO
Foam	NO
Dry Chemical	ОК
Halon	NO
Other	N/A

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus and protective clothing should be worn when fighting chemical fires. Use water spray to keep fire-exposed containers cool.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures:

Personal Precautions: Do not get in eyes. Do not take internally. Avoid skin contact. Prevent prolonged or repeated breathing of vapor or spray mists. Keep unnecessary people away. Floor may be slippery, use care to avoid falling. Remove all sources if ignition. Ventilate the area. Remove with inert absorbent.

Environmental Precautions: Keep spills and cleaning run-offs out of municipal sewers and open bodies of water. Comply with local, national and state regulations.

SECTION 7: HANDLING AND STORAGE

Handling and Storage:

Maximum Storage Temperature: 100°F (38°C), minimum 35°F (2°C). Keep closure tight and containers upright to prevent leakage.

Product is non-combustible.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Precautions:

Use only with adequate ventilation.

Work Hygienic Practices: Avoid contact with skin. Do not get in eyes. Do not take internally. Avoid breathing vapors or spray mists.

Ventilation: Use in well-ventilated areas. Provide local exhaust to keep TLV of Section 2 ingredients below acceptable limit.

Respiratory Protection: No special requirements. Avoid breathing mists.

Eye Protection: Chemical goggles recommended when spraying diluted product.

Skin Protection: Wear neoprene, rubber, vinyl, or nitrile gloves to prevent skin contact if prolonged skin contact is likely. Wash hands before eating, smoking or using the wash room.

Other Protective Equipment: Eyewash station should be provided nearby.

	The first of the		Tetel
Appearance:	Thin liquid	Solubility in Water:	Total
Odor:	Pleasant odor	Color:	Light Blue
Boiling Point:	210°F	Viscosity @ 77°F:	60-75 Kreb Units
Evaporation Rate: (Butyl Acetate=1)	Slower	Vapor Density (AIR = 1) @ 68°F:	Heavier
Vapor Pressure:	20mm Hg @ 68 F	Specific Gravity (H2O = 1) @ 68°F:	1.040
рH	11.5-12.0	Percent Volatile	90+

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable

Incompatibility: None

Hazardous Decomposition or By-Products: Will not occur.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological Information:

No Data Available

SECTION 12: ECOLOGICAL INFORMATION

Ecological Information:

Toxic to Fish. LC_{so} (Rainbow Trout) = 0.930ppm, LC_{so} (Bluegill) = 0.515ppm

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution. Do not dump into sewers, any body of water or onto the ground.

SECTION 14: TRANSPORT INFORMATION

- U.S. Department of Transportation
 - Proper Shipping Name: "Non Regulated" Hazard Class: "Non Regulated" Shipping Class: Cleaning Compound

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations:

TSCA (TOXIC SUBSTANCE CONTROL ACT): All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

SARA TITLE III (SARA 313): No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

SARA TITLE III (SARA 311/312): Ingredients in this product are subject to SARA 311/312 Immediate (acute) Health Hazard Supplier Notification.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No Components of this product are on the California Proposition 65 lists.

New Jersey Right to Know Hazardous Substance List: This product contains no components subject to reporting requirements

Canada: Workplace Hazardous materials Information System (WHMIS)-listed material: This product contains the following components subject to reporting requirements: Sodium carbonate.

SECTION 16: OTHER INFORMATION

To comply with New Jersey DOH Right-To-Know labeling law (NJAC 8:59 - 5.1 & 5.2)

CAS. No.:	CHEMICAL INGREDIENTS		
7732-18-5	Water		
68391-01-5	Dimethyl Benzyl Ammonium Chloride		
68956-79-6	Dimethyl Ethylbenzyl Ammonium Chloride		
9016-45-9	Nonionic Surfactant		
497-19-8	Sodium Carbonate		
(+)	Contents Partially Unknown		

Personal Protection E
ard 0 3=S

This company cannot anticipate all conditions of handling and use of this product. Therefore, this company accepts no responsibility for results obtained by the application of this information, or the safety and suitability of our products either alone or in combination with other products. It is the responsibility of the user to provide a safe workplace, using the health and safety information contained herein as a guide. This company will accept no liability for damages or loss incurred from the improper handling and use of this product.



ADRIAN ENVIRONMENTAL LLC

652 Lenawee St. Adrian, MI 49221

Fax: 517-759-4386 Office: 1-877-264-0873 Cell: 517-442-3277

Email: Adrianenvironmental@yahoo.com Web: adrianenvironmentalllc.com

ADDITIONAL WORK REQUEST

Date:	12/18/2013		
Customer:	City of Ann Arbor	Job #	428-13
Job Location:	2415 S. Huron Parkway. (Fire Station #4)	Service:	Asbestos/Mold
City/State/Zip:	Ann Arbor, MI. 48105	Contact:	L. Crum

Adrian Environmental LLC proposes to furnish all labor and materials necessary for the completion of the following specifications:

SCOPE OF WORK: (CARPET, TILE AND MASTIC REMOVAL)

*Removal/Disposal of (500sf.) Carpet, Padding, ACM Floor tile and Mastic from the "Bunk Quarters" area. *Chemical removal of the ACM mastic using "Low Odor" Mastic Remover.

*Discard all porous items within "Bunk Quarters" area. (Mattresses, Box springs, Loveseat, Pillows etc.)

*Sanitize the plenum area above the "Bunk Quarters" drop ceiling.

*Re-Clean all surfaces within the "Bunk Quarters" area.

*Seal all HVAC vents within work area.

*Install 42" poly splash walls for protection during mastic removal in "Bunk Quarters" work area.

*Negative-Air in use during all phases of project.

*Personal Air monitoring w/report during all phases of ACM removal.

*Manifested disposal of all ACM waste at a EPA approved facility. (Liberty Landfill)

*Expected length of project: 3(8hr) shifts.

*All clearance testing provided by owner.

TOTAL COST OF BUNK QUARTERS ADDITIONAL WORK: \$2,250.00

ALTERNATE #1:(TILE/MASTIC REMOVAL FROM VARIOUS LOCATIONS)

*Removal/Disposal of (770sf.) Double Layer ACM floor tile from the kitchen, dispatch and rear entry locations. *Chemical removal of the ACM mastic using "Low Odor" Mastic Remover.

*Negative-Air in use during all phases of project.

*Personal Air monitoring w/report during all phases of project.

*Manifested disposal of all project waste at a EPA approved facility. (Liberty Landfill)

*Expected length of project: 2(8hr) shifts.

*Owner to remove/relocate all moveable furnishings within kitchen, lounge and dispatch areas.

*All clearance testing provided by owner.

TOTAL COST OF ALTERNATE #1: \$1,950.00

Payment schedule as follows: Net 45 days after completion. If payment is not received, there is a 1.5 interest rate charge on all bills that are past 45 days.

All material is guaranteed to be as specified and the work will be completed in a workmanlike manner in accordance to specifications. Any alteration or deviation from the above specifications involving extra costs will be executed only upon a written order and will become an extra charge over and above the proposed estimate. All agreements are contingent to any strikes, accidents, or delays beyond the Adrian Environmental LLCs control. Adrian Environmental LLC carries our own General Liability Insurance. Our workers are fully covered by workers compensation insurance. If either party commences legal action to enforce its rights pursuant to this agreement, the prevailing party in said legal action shall be entitled to recover its reasonable attorneys fees and costs of litigation relating to said legal action, as determined by a court of competent jurisdiction.

Submitted by: David A. Graham (Owner) Adrian Environmental LLC (12/18/2013)

NOTE: This proposal may be withdrawn if not accepted within 30 days.

Acceptance of Proposal

As stated in the above specifications, the costs, materials and specifications are satisfactory and are hereby accepted. I authorized the contractor to perform the work as specified and payments will be made as summarize above.

Customer Signature:

Date:

Eaton, Jack

From:Edward Vielmetti [edward.vielmetti@gmail.com]Sent:Friday, December 20, 2013 11:10 AMTo:Teall, Margie; Eaton, Jack; Kunselman, Stephen; Taylor, Christopher (Council)Cc:Ben Connor BarrieSubject:Fwd: fire station closing

Margie, Jack, Chris, Steve -

I found out about the closing of the East Ann Arbor fire station (which has apparently been closed since Thanksgiving) through an article in the Ann Arbor News. I'm always a little surprised to hear about the city something first in the newspaper, since I try to watch city hall pretty closely.

Were you aware of this station closing? I didn't hear any mention of it at the council meetings in December.

thanks

Ed

the story: <u>http://www.mlive.com/news/ann-</u> arbor/index.ssf/2013/12/ann_arbor_fire_station_closed.html#incart_river

cc: Ben Connor-Barrie, Damn Arbor

------ Forwarded message ------From: Wondrash, Lisa <<u>LWondrash@a2gov.org</u>> Date: Fri, Dec 20, 2013 at 11:03 AM Subject: RE: fire station closing To: Edward Vielmetti <<u>edward.vielmetti@gmail.com</u>>

Hi Ed:

No, the Communications Office did not issue a news release.

Thanks,

Lisa

From: Edward Vielmetti [mailto:<u>edward.vielmetti@gmail.com</u>] Sent: Friday, December 20, 2013 9:45 AM To: Wondrash, Lisa Subject: fire station closing

Lisa -

The Ann Arbor News reports that a fire station is closed.

Did a news release go out about this situation? I'm always surprised a little bit when I find out things from the newspaper instead of directly from the city.

thanks

Ed

Edward Vielmetti <u>+1 734 330 2465</u>

edward.vielmetti@gmail.com

Edward Vielmetti +1 734 330 2465 edward.vielmetti@gmail.com

Eaton, Jack

From: Sent: To: Cc: Subject: Powers, Steve Friday, December 20, 2013 1:02 PM *City Council Members (All) Seto, John Fire Station

Fire Station Four is located on Huron Parkway near Platt. In early November water damage was discovered and an initial mold investigation was completed. On November 21 the firefighters were relocated to Station One because of health concerns and to allow completion of remediation and abatement work. Remediation and abatement began in early December and is scheduled to be completed by the second week of January. Station Four will reopen at that time.

We have been expediting the completion of the testing and remediation work. During the time Station Four has been temporarily closed, there have been 42 calls for service in the station's area. While deployed out of Station 1, Engine Four also responded to 15 additional calls for service due to their deployment location.

Steve Powers City Administrator City of Ann Arbor 734-794-6110

Eaton, Jack

From: Sent: To: Cc: Subject: Kunselman, Stephen Friday, December 20, 2013 11:29 AM Edward Vielmetti Teall, Margie; Eaton, Jack; Taylor, Christopher (Council); Ben Connor Barrie Re: fire station closing

I was not.

Steve

Sent from my iPhone

On Dec 20, 2013, at 11:10 AM, "Edward Vielmetti" <edward.vielmetti@gmail.com> wrote:

Margie, Jack, Chris, Steve -

I found out about the closing of the East Ann Arbor fire station (which has apparently been closed since Thanksgiving) through an article in the Ann Arbor News. I'm always a little surprised to hear about the city something first in the newspaper, since I try to watch city hall pretty closely.

Were you aware of this station closing? I didn't hear any mention of it at the council meetings in December.

thanks

Ed

the story: <u>http://www.mlive.com/news/ann-</u> arbor/index.ssf/2013/12/ann_arbor_fire_station_closed.html#incart_river

cc: Ben Connor-Barrie, Damn Arbor

------ Forwarded message ------From: Wondrash, Lisa <<u>LWondrash@a2gov.org</u>> Date: Fri, Dec 20, 2013 at 11:03 AM Subject: RE: fire station closing To: Edward Vielmetti <<u>edward.vielmetti@gmail.com</u>>

Hi Ed:

No, the Communications Office did not issue a news release.

Thanks,

Lisa

From: Edward Vielmetti [mailto:<u>edward.vielmetti@gmail.com</u>] Sent: Friday, December 20, 2013 9:45 AM To: Wondrash, Lisa Subject: fire station closing

Lisa -

The Ann Arbor News reports that a fire station is closed.

Did a news release go out about this situation? I'm always surprised a little bit when I find out things from the newspaper instead of directly from the city.

thanks

Ed

Edward Vielmetti +1 734 330 2465

edward.vielmetti@gmail.com

Edward Vielmetti +1 734 330 2465 edward.vielmetti@gmail.com

Seto, John

From:	Schantz, Steven
Sent:	Friday, December 13, 2013 1:48 PM
То:	Crum, Lynn
Cc:	Taylor, Ellen; Seto, John; Kulhanek, Matthew
Subject:	FW: Fire House #4 Preliminary Fungal Spore Air Sample Results
Attachments:	Preliminary Air Sample Results.pdf; PCM Results FS #4 12-12-2013.pdf

Lynn,

Nova Environmental has provided the preliminary fungal spore air sample results for Fire Station #4 that were collected on 12/12/13. To simplify this email and not to get too deep into interpretation details, the results of the sampling indicated elevated microbial concentrations within the Bunk Room when compared to the outdoor sample. These results indicate that a microbial source remains within the Bunk Room area. At this time, I recommend the following actions.

- 1. Remove the carpet and padding within the Bunk Room.
- 2. Remove the asbestos floor tile and asbestos floor tile mastic within the Bunk Room (since the padding is glued to the tile, it will come up with the pad at the time of removal).
- 3. Remove and discard the mattresses and box springs located within the Bunk Room.
- 4. Remove and discard all pores furniture within the Bunk Room.
- 5. Clean and sanitize (HEPA vacuum and wet wipe) the ceiling plenum within the Bunk Room.
- 6. Re-clean all vertical and horizontal surfaces within the Bunk Room.
- 7. Re-test within the Bunk Room, a control area, and the immediate outdoor environment.
- 8. Re-install floor tile or other non-pores flooring.

I have also included the asbestos clearance sampling results with this email. The asbestos clearance sampling results were below all regulatory clearance requirements and the areas are safe for general occupancy.

If upon your receipt of this correspondence, you encounter questions or additional information is required, please do not hesitate to contact me.

Respectfully,

Steve Schantz Safety Manager

From: Joel Lamb [mailto:jlamb@nova-env.com] Sent: Friday, December 13, 2013 12:07 PM To: Schantz, Steven Subject: Fire House #4 Preliminary Fungal Spore Air Sample Results

Steve,

Please see attached.

Joel

Joel H. Lamb, CIE Environmental Consultant Council-certified Indoor Environmentalist Board-awarded by the American Council for Accredited Certification American Society of Safety Engineers - Member #47112





NEW ADDRESS

5300 Plymouth Road Ann Arbor, Michigan 48105 Office (734) 930-0995 Fax (734) 930-2969 Mobile (734) 260-3142



CASE NARRATIVE

Date: 13-Dec-13

CLIENT: NOVA ENVIRONMENTAL Project: CI0168/*143

Work Order No 13120664

PRELIMINARY REPORT:

This is a preliminary report. A final report, including the signed cover letter, will be issued after the final quality review is completed by a second person on Monday, December 16.

The results of this report relate only to the samples listed in the body of this report.

Unless otherwise noted below, the following statements apply: 1) all samples were received in acceptable condition, 2) all quality control results associated with this sample set were within acceptable limits and/or do not adversely affect the reported results, and 3) the industrial hygiene results have not been blank corrected.

The microbiology samples were analyzed according to either the standard method or the Bureau Veritas in-house testing procedure cited in the 'Analysis' section of the report.



ANALYTICAL RESULTS

Date: 13-Dec-13

Client:	NOVA ENVIRO	ONMENTA:	L				
Project ID:	CI0168/*143				v	Vork Order No.:	13120664
Analysis:	Fotal Fungal St	ructures in A	Air				
Client Sample ID:	CI0168/*143-01	A				Received Date:	12/12/2013
Lab Number:	001					Collection Date:	12/12/2013
Sample Location:	BUNK RM.					Date Analyzed:	12/13/2013
Sample Media:	Air-O-Cell					Analyzed By:	JMN
Air Volume (L):	74.2	Count of Fungal Structures	Fungal Structures/m ³	Percent of Total	Presumptive Fungal Identification		
		16	810	72.7	Aspergillus/Penicillium	like	1 A A
		5	250	22.7	basidiospores		
		1	51	4.55	Cladosporium		
Multiplication Facto	or: 50.9	22	1,100	100	Total		
Debris Rating:	2 (>5 to ≤25%	occluded)					
Client Sample ID:	CI0168/*143-02	A				Received Date:	12/12/2013
	CI0168/*143-02 002	A				Received Date: Collection Date:	12/12/2013 12/12/2013
Lab Number:		A					
Lab Number: Sample Location:	002	A				Collection Date:	12/12/2013
Lab Number: Sample Location: Sample Media:	002 KIT/DINING	Count of Fungal	Fungal Structures/m ³	Percent of Total	Presumptive Fungal Identification	Collection Date: Date Analyzed:	12/12/2013 12/13/2013
Lab Number: Sample Location: Sample Media:	002 KIT/DINING Air-O-Cell	Count of Fungal	Fungal Structures/m ³ 410			Collection Date: Date Analyzed: Analyzed By:	12/12/2013 12/13/2013
Lab Number: Sample Location: Sample Media:	002 KIT/DINING Air-O-Cell	Count of Fungal Structures	Structures/m ³	of Total	Identification	Collection Date: Date Analyzed: Analyzed By: like	12/12/2013 12/13/2013
Lab Number: Sample Location: Sample Media:	002 KIT/DINING Air-O-Cell	Count of Fungal Structures 8	Structures/m ³ 410	of Total 72.7	Identification Aspergillus/Penicillium	Collection Date: Date Analyzed: Analyzed By: like	12/12/2013 12/13/2013
Lab Number: Sample Location: Sample Media:	002 KIT/DINING Air-O-Cell	Count of Fungal Structures 8 1	Structures/m³ 410 51	of Total 72.7 9.09	Identification Aspergillus/Penicillium unidentifiable fungus #1	Collection Date: Date Analyzed: Analyzed By: like	12/12/2013 12/13/2013
Client Sample ID: Lab Number: Sample Location: Sample Media: Air Volume (L):	002 KIT/DINING Air-O-Cell 73.65	Count of Fungal Structures 8 1 1	Structures/m ³ 410 51 51	of Total 72.7 9.09 9.09	Identification Aspergillus/Penicillium unidentifiable fungus #1 basidiospores	Collection Date: Date Analyzed: Analyzed By: like	12/12/2013 12/13/2013



ANALYTICAL RESULTS

Date: 13-Dec-13

	NOVA ENVIRO Cl0168/*143	ONMENTA	L			Konk Onden No.	12120664
Project ID:	C10108/*143				Y	Vork Order No.:	13120004
Analysis:	Total Fungal Str	uctures in a	Air				
Client Sample ID:	CI0168/*143-03	A	191		1. S. S. S. S. S. S.	Received Date:	12/12/2013
Lab Number:	003					Collection Date:	12/12/2013
Sample Location:	TRUCK BAY					Date Analyzed:	12/13/2013
Sample Media:	Air-O-Cell					Analyzed By:	JMN
Air Volume (L):	74.2	Count of Fungal Structures	Fungal Structures/m ³	Percent of Total	Presumptive Fungal Identification		
	25 1 1	16	810	80.0	Aspergillus/Penicillium	like	
		3	150	15.0	basidiospores		
		1	51	5.00	Chaetomium		
Multiplication Fact	or: 50.9	20	1,000	100	Total		
Debris Rating:	2 (>5 to ≤25%	occluded)					
Client Sample ID:	CI0168/*143-04	A	25, 30	1.30	OF CE COLLE	Received Date:	12/12/2013
Lab Number:	004					Collection Date:	12/12/2013
Sample Location:	EAST EXT.					Date Analyzed:	12/13/2013
Sample Media:	Air-O-Cell					Analyzed By:	JMN
Air Volume (L):	147.3	Count of Fungal Structures	Fungal Structures/m ³	Percent of Total	Presumptive Fungal Identification		
		25	640	73.5	Aspergillus/Penicillium	like	and the second
		4	100	11.8	unidentifiable fungus #1		
		4	100	11.8	basidiospores		
		1	26	2.94	Cladosporium		
Multiplication Facto	or: 25.6	34	870	100	Total		



ANALYTICAL RESULTS

Date: 13-Dec-13

Client: NOVA ENVIRONMENTAL CI0168/*143

Project ID:

Work Order No.: 13120664

Analysis: **Total Fungal Structures in Air**

Analytical sensitivity is equivalent to a count of 1 fungal structure calculated to the final sample concentration in fungal structures/m3.

The multiplication factor is multiplied by the total count of fungal structures to obtain the final sample concentration in fungal structures/m3. Multiplication factors may vary, depending on the loadings of fungal spores. Multiplication factor = (1000/sample air volume in liters)(deposit area/area assessed).

Unidentifiable fungal spores lack distinguishing characteristics for identification. Unidentifiable fungal spores are numbered, based on appearance.

Debris ratings range from 0 to 5. As the debris rating increases, negative bias on fungal structure detection increases, because of increased occlusion.

NUVA ENVIRONMENTAL, INC. DAILY PROJECT INFORMATION SHEET

Client:	City of Ann Arbor	
Building:	Fire Station #4 (2415 South Huron Parkway)	
Collector/Analyst: JHL/JHI	JHL/JHL	

Location: Kitchen/Dining Area and Bunk Area

Project #: CI0168/*142

Collection/Analysis Date: 12/12/2013

the air samples collected today are listed in the table below. Both of the air samples collected today were approximately the same locations as the post-abatement air samples collected on 12/9/2013 were 0.005 and 0.004 f/cc, respectively. The EPA clearance level for airborne fibers is 0.01 fibers per cubic centimeter (F/cc). Today, background air sampling was conducted in two areas where abatement had been previously conducted on 12/9/2013. A visual inspection was conducted and passed this day. Results of

Located between the Kitchen and Dining Area. Located near the center of the Bunk Area. Sample Location Description Prepared on Site. 2.55 F/mm² Prepared on Site. 1.5 Field Blank Average: 1.27 F/mm² 0.002 F/cc 0.002 F/cc Concentration 1,211.74 1,208.30 Volume Ľ -Count Fibers/Fields 100 100 100 100 7.5 N 9 . **Total Time** (Min) 86 86 1 E Start Time Stop Time 10:19 AM 10:27 AM ļ 1 8:53 AM 9:01 AM 1 1 Pump 14.090 14.050 1 Pump ID 94 23 Sample ID BG2 BG1 F82 FB1 13AC346JL003 13AC346JL001 13AC346JL002 13AC346JL004 Lab Number

Sample I.D. Legend; FB - Field Blank - Quality Assurance/Quality Control Sample; BG - Background - Ambient Air; Fimm² - Fibers per square millimeter; FIcc - Fibers per cubic centimeter.

Seto, John

From: Sent: To: Cc: Subject: Schantz, Steven Thursday, December 19, 2013 1:37 PM Seto, John Kulhanek, Matthew; Crum, Lynn RE: Fire House #4 Preliminary Fungal Spore Air Sample Results

John,

Will do. Given the priority of the situation, maybe just doing what we need to do to get the work completed and the crews back in might make more sense at this point? Matt?

Steve

From: Seto, John
Sent: Thursday, December 19, 2013 12:50 PM
To: Schantz, Steven; Crum, Lynn
Cc: Taylor, Ellen; Kulhanek, Matthew
Subject: RE: Fire House #4 Preliminary Fungal Spore Air Sample Results

Steve,

Thanks for this update and the conversation we had this morning about Station 4. I just met with Ellen and getting Station 4 back into service has to be a priority.

Please do whatever you can and let me know if there is anything I can do to make this happen as soon as possible. I really appreciate your help.

John

From: Schantz, Steven
Sent: Friday, December 13, 2013 1:48 PM
To: Crum, Lynn
Cc: Taylor, Ellen; Seto, John; Kulhanek, Matthew
Subject: FW: Fire House #4 Preliminary Fungal Spore Air Sample Results

Lynn,

Nova Environmental has provided the preliminary fungal spore air sample results for Fire Station #4 that were collected on 12/12/13. To simplify this email and not to get too deep into interpretation details, the results of the sampling indicated elevated microbial concentrations within the Bunk Room when compared to the outdoor sample. These results indicate that a microbial source remains within the Bunk Room area. At this time, I recommend the following actions.

- 1. Remove the carpet and padding within the Bunk Room.
- 2. Remove the asbestos floor tile and asbestos floor tile mastic within the Bunk Room (since the padding is glued to the tile, it will come up with the pad at the time of removal).
- 3. Remove and discard the mattresses and box springs located within the Bunk Room.
- 4. Remove and discard all pores furniture within the Bunk Room.
- 5. Clean and sanitize (HEPA vacuum and wet wipe) the ceiling plenum within the Bunk Room.
- 6. Re-clean all vertical and horizontal surfaces within the Bunk Room.
- 7. Re-test within the Bunk Room, a control area, and the immediate outdoor environment.
- 8. Re-install floor tile or other non-pores flooring.

I have also included the asbestos clearance sampling results with this email. The asbestos clearance sampling results were below all regulatory clearance requirements and the areas are safe for general occupancy.

If upon your receipt of this correspondence, you encounter questions or additional information is required, please do not hesitate to contact me.

Respectfully,

Steve Schantz Safety Manager

From: Joel Lamb [mailto:jlamb@nova_env.com] Sent: Friday, December 13, 2013 12:07 PM To: Schantz, Steven Subject: Fire House #4 Preliminary Fungal Spore Air Sample Results

Steve,

Please see attached.

Joel

Joel H. Lamb, CIE Environmental Consultant Council-certified Indoor Environmentalist Board-awarded by the American Council for Accredited Certification American Society of Safety Engineers - Member #47112





NEW ADDRESS 5300 Plymouth Road Ann Arbor, Michigan 48105 Office (734) 930-0995 Fax (734) 930-2969 Mobile (734) 260-3142 Seto, John

From: Sent: To: Cc:

Subject:

Schantz, Steven Friday, December 20, 2013 2:35 PM Crum, Lynn; Taylor, Ellen Powers, Steve; Seto, John; Kulhanek, Matthew; Wondrash, Lisa; Wilkerson, Robyn; Niemela, Nancy; Hupy, Craig Station #4

All,

Please find below the sequencing of events for the second round of remediation / asbestos abatement at Station #4 that has been established.

Thursday 12/26/13 – Remediation Contractor completing carpet removal and asbestos abatement Friday 12/27/13 – Remediation Contractor completing remediation and final asbestos abatement Friday 12/27/13 – HVAC cleaning contractor to sanitize HVAC system and ductwork (following remediation) Saturday 12/28/13 – Air monitoring consultant completing asbestos clearance and mold testing Monday 12/30/13 – Preliminary mold results expected from laboratory

*Please note that during the remediation / abatement process, all non-essential personnel will not be allowed within Station #4. Please remove all required personal or work related items from Station #4 prior to Thursday 12/26/13 at 8am.

*Steve Schantz will be on-site throughout the duration of the remediation / abatement process as well as during the post-remediation / abatement testing.

*I am still in support of no-pores flooring replacing the carpet to be removed in the Bunk Room.

If upon your receipt of this correspondence, you encounter questions or additional information is required, please do not hesitate to contact me.

1

Respectfully,

Steven E. Schantz Safety Manager City of Ann Arbor 301 E. Huron, 6th Floor Ann Arbor, MI 48107 <u>sschantz@a2gov.org</u> 734-794-6000 x43110 office 810-656-4465 cell www.A2gov.org



冉

Think Green! Don't print this e-mail unless you need to.

Seto, John

From: Sent: To: Cc: Subject: Powers, Steve Friday, December 20, 2013 1:02 PM *City Council Members (All) Seto, John Fire Station

Fire Station Four is located on Huron Parkway near Platt. In early November water damage was discovered and an initial mold investigation was completed. On November 21 the firefighters were relocated to Station One because of health concerns and to allow completion of remediation and abatement work. Remediation and abatement began in early December and is scheduled to be completed by the second week of January. Station Four will reopen at that time.

We have been expediting the completion of the testing and remediation work. During the time Station Four has been temporarily closed, there have been 42 calls for service in the station's area. While deployed out of Station 1, Engine Four also responded to 15 additional calls for service due to their deployment location.

Steve Powers City Administrator City of Ann Arbor 734-794-6110
Seto, John

From: Sent: To: Cc: Subject: Seto, John Friday, December 20, 2013 4:58 PM Hubbard, Ollice Taylor, Ellen RE: Huron Parkway station closing

My original thought was yes, but I believe Ellen mentioned that you did not want to draw attention to it and I told her we can wait until today. Seeing as how the story is out and it is public knowledge that the station is closed, I believe a sign should be placed at the location until it is reopened. Please have someone take care of this.

Thanks.

From: Hubbard, Ollice Sent: Friday, December 20, 2013 4:37 PM To: Seto, John Subject: FW: Huron Parkway station closing

FYI

From: Sent: Friday, December 20, 2013 3:56 PM To: Farrackand, Warreka Cc: Hubbard, Ollice Subject: Huron Parkway station closing

RE: Closing of the Huron Parkway station for environmental concerns

Should a sign informing the neighborhood of the closure be displayed in front of the station during this closure?

This was done during the budget crisis times to notify the public that the house didn't have any trained professionals for those seeking medical or emergency care directly at the fire house.

Just a thought as it appears the station house will be closed for several weeks.

Don Christie



From: Sent: To: Subject: Powers, Steve Monday, December 23, 2013 9:48 AM Alexa, Jennifer FW: Fire Station Four

From: Powers, Steve Sent: Thursday, December 19, 2013 4:32 PM To: Anglin, Mike; Warpehoski, Chuck; Hieftje, John Cc: Seto, John; Higgins, Sara Subject: Fire Station Four

Fire Station Four on Jackson is closed temporarily. The building has mold that needs to be cleaned up. The firefighters and engine have been moved to Station One.

Station Four will reopen within one to four weeks depending on the clean-up.

Steve Powers City Administrator City of Ann Arbor 734-794-6110

From: Sent: To: Subject: Powers, Steve Monday, December 23, 2013 9:48 AM Alexa, Jennifer FW: Fire Station Four

-----Original Message-----From: Powers, Steve Sent: Friday, December 20, 2013 4:46 PM To: Schantz, Steven Subject: Fire Station Four

Idea from a local architect

-----Original Message-----From: Brad Moore LT [<u>mailto:brad@jbradleymoore.com</u>] Sent: Friday, December 20, 2013 10:27 AM To: Powers, Steve Subject: Re: closed gas station

I meant closed Fire Station, sorry I've been up all night trying to get 3 submissions to the HDC read as today is the filing deadline

There are Ozone generating machines that I am told are used to saturate a buildings with high enough levels of Ozone to kill mold

Brad Moore

On 12/20/2013 9:48 AM, Powers, Steve wrote: > ? > > -----Original Message-----> From: Brad Moore LT [mailto:brad@jbradleymoore.com] > Sent: Friday, December 20, 2013 9:48 AM > To: Powers, Steve > Subject: closed gas station > > Have they considered a 48 hour Ozone treatment/saturation for the > facility? > > Brad Moore > > >

From: Sent: To: Subject: Powers, Steve Monday, December 23, 2013 9:49 AM Alexa, Jennifer FW: fire station

From: Ryan Stanton [mailto:stant1rj@gmail.com] Sent: Thursday, December 19, 2013 4:23 PM To: Powers, Steve Subject: fire station

As I said in our phone conversation, if you can confirm/deny the accuracy of any of this information and otherwise provide details about what happened and what's being done, I appreciate it. Thanks. -Ryan

Here's the tip I got:

It might be worth writing a story about the Ann Arbor Fire Station #4 being closed since Thanksgiving. The address is 2415 S Huron Parkway.

The reason the station is closed is for years the fire fighters were complaining about respiratory problems at the station. The new safety person for the city ordered a mold & asbestos test to be done. Once the results came back, the firefighters were immediately ordered out of the station due to "unsatisfactory high levels" in the station.

Attempts were made to remedy the mold by steam cleaning portions of the station, which again returned unsatisfactory levels of 2 different types of mold.

Now they will be tearing out the carpet which is glued to asbestos tiles, so an abatement will be done because of the asbestos. There's not telling when it will be open again.

The people that are counted on to respond to dangerous situations are working/living in these types of conditions in the City of Ann Arbor.

The truck is still in service, but responds out of the downtown station. So any responses will significantly be delayed, and no one is at the station for walk in medical emergencies.

Ryan Stanton Ann Arbor News city hall reporter 734.623.2529 (work) 734.255.5016 (cell) 734.956.0584 (google voice)

From: Sent: To: Subject: Powers, Steve Monday, December 23, 2013 9:49 AM Alexa, Jennifer FW: fire station

From: Powers, Steve Sent: Thursday, December 19, 2013 4:26 PM To: Seto, John; Schantz, Steven; Wondrash, Lisa Cc: Higgins, Sara; Niemela, Nancy; Wilkerson, Robyn Subject: FW: fire station

Please provide a coordinated response to Ryan, if possible, first thing in the morning. SP

From: Ryan Stanton [mailto:stant1rj@gmail.com] Sent: Thursday, December 19, 2013 4:23 PM To: Powers, Steve Subject: fire station

As I said in our phone conversation, if you can confirm/deny the accuracy of any of this information and otherwise provide details about what happened and what's being done, I appreciate it. Thanks. -Ryan

Here's the tip I got:

It might be worth writing a story about the Ann Arbor Fire Station #4 being closed since Thanksgiving. The address is 2415 S Huron Parkway.

The reason the station is closed is for years the fire fighters were complaining about respiratory problems at the station. The new safety person for the city ordered a mold & asbestos test to be done. Once the results came back, the firefighters were immediately ordered out of the station due to "unsatisfactory high levels" in the station.

Attempts were made to remedy the mold by steam cleaning portions of the station, which again returned unsatisfactory levels of 2 different types of mold.

Now they will be tearing out the carpet which is glued to asbestos tiles, so an abatement will be done because of the asbestos. There's not telling when it will be open again.

The people that are counted on to respond to dangerous situations are working/living in these types of conditions in the City of Ann Arbor.

The truck is still in service, but responds out of the downtown station. So any responses will significantly be delayed, and no one is at the station for walk in medical emergencies.

Ryan Stanton Ann Arbor News city hall reporter 734.623.2529 (work) 734.255.5016 (cell) 734.956.0584 (google voice)

From: Sent: To: Subject: Powers, Steve Monday, December 23, 2013 9:49 AM Alexa, Jennifer FW: fire station

From: Schantz, Steven Sent: Thursday, December 19, 2013 4:29 PM To: Powers, Steve Subject: RE: fire station

Priority #1 tomorrow morning.

Steve

From: Powers, Steve Sent: Thursday, December 19, 2013 4:26 PM To: Seto, John; Schantz, Steven; Wondrash, Lisa Cc: Higgins, Sara; Niemela, Nancy; Wilkerson, Robyn Subject: FW: fire station

Please provide a coordinated response to Ryan, if possible, first thing in the morning. SP

From: Ryan Stanton [mailto:stant1rj@gmail.com] Sent: Thursday, December 19, 2013 4:23 PM To: Powers, Steve Subject: fire station

As I said in our phone conversation, if you can confirm/deny the accuracy of any of this information and otherwise provide details about what happened and what's being done, I appreciate it. Thanks. -Ryan

Here's the tip I got:

It might be worth writing a story about the Ann Arbor Fire Station #4 being closed since Thanksgiving. The address is 2415 S Huron Parkway.

The reason the station is closed is for years the fire fighters were complaining about respiratory problems at the station. The new safety person for the city ordered a mold & asbestos test to be done. Once the results came back, the firefighters were immediately ordered out of the station due to "unsatisfactory high levels" in the station.

Attempts were made to remedy the mold by steam cleaning portions of the station, which again returned unsatisfactory levels of 2 different types of mold.

Now they will be tearing out the carpet which is glued to asbestos tiles, so an abatement will be done because of the asbestos. There's not telling when it will be open again.

The people that are counted on to respond to dangerous situations are working/living in these types of conditions in the City of Ann Arbor.

The truck is still in service, but responds out of the downtown station. So any responses will significantly be delayed, and no one is at the station for walk in medical emergencies.

Ryan Stanton Ann Arbor News city hall reporter 734.623.2529 (work) 734.255.5016 (cell) 734.956.0584 (google voice)

--

From: Sent: To: Subject: Powers, Steve Monday, December 23, 2013 9:49 AM Alexa, Jennifer FW: fire station

From: Powers, Steve Sent: Thursday, December 19, 2013 4:27 PM To: 'Ryan Stanton' Subject: RE: fire station

Thanks, Ryan. I have asked those with the knowledge to respond to you in the morning.

SP

From: Ryan Stanton [mailto:stant1rj@gmail.com] Sent: Thursday, December 19, 2013 4:23 PM To: Powers, Steve Subject: fire station

As I said in our phone conversation, if you can confirm/deny the accuracy of any of this information and otherwise provide details about what happened and what's being done, I appreciate it. Thanks. -Ryan

Here's the tip I got:

It might be worth writing a story about the Ann Arbor Fire Station #4 being closed since Thanksgiving. The address is 2415 S Huron Parkway.

The reason the station is closed is for years the fire fighters were complaining about respiratory problems at the station. The new safety person for the city ordered a mold & asbestos test to be done. Once the results came back, the firefighters were immediately ordered out of the station due to "unsatisfactory high levels" in the station.

Attempts were made to remedy the mold by steam cleaning portions of the station, which again returned unsatisfactory levels of 2 different types of mold.

Now they will be tearing out the carpet which is glued to asbestos tiles, so an abatement will be done because of the asbestos. There's not telling when it will be open again.

The people that are counted on to respond to dangerous situations are working/living in these types of conditions in the City of Ann Arbor.

The truck is still in service, but responds out of the downtown station. So any responses will significantly be delayed, and no one is at the station for walk in medical emergencies.

Ryan Stanton Ann Arbor News city hall reporter 734.623.2529 (work) 734.255.5016 (cell) 734.956.0584 (google voice)

From: Sent: To: Subject: Powers, Steve Monday, December 23, 2013 9:50 AM Alexa, Jennifer FW: Fire Station

From: Powers, Steve Sent: Friday, December 20, 2013 1:02 PM To: *City Council Members (All) Cc: Seto, John Subject: Fire Station

Fire Station Four is located on Huron Parkway near Platt. In early November water damage was discovered and an initial mold investigation was completed. On November 21 the firefighters were relocated to Station One because of health concerns and to allow completion of remediation and abatement work. Remediation and abatement began in early December and is scheduled to be completed by the second week of January. Station Four will reopen at that time.

We have been expediting the completion of the testing and remediation work. During the time Station Four has been temporarily closed, there have been 42 calls for service in the station's area. While deployed out of Station 1, Engine Four also responded to 15 additional calls for service due to their deployment location.

Steve Powers City Administrator City of Ann Arbor 734-794-6110

From: Sent: To: Subject: Powers, Steve Monday, December 23, 2013 9:50 AM Alexa, Jennifer FW: Station Four

From: Seto, John Sent: Friday, December 20, 2013 12:18 PM To: Powers, Steve; Schantz, Steven; Wondrash, Lisa Cc: Hubbard, Ollice; Taylor, Ellen Subject: Station Four

Station Four Closure Impact:

Station Four closed on November 21, 2013 at approximately 8:00 pm. From that time till 7:00 am, December 20, 2013, the following were the calls for service in Station Four's Area:

- There were 58 total calls for service in Station Four's area.
 - o 15 calls were cancelled.
 - o 1 call was non-emergent.
- Of the 42 remaining calls:
 - o 26 calls were medical related in which HVA also responded.
 - o 7 were alarm calls.
 - o 4 Motor Vehicle Accidents with Injury
 - 2 Odor Investigations
 - o 1 Electrical Wire Down
 - 1 Structure Fire Appliance Appliance electrical surge protector causing fire damage to appliance and floor. No other significant damage.
 - 1 Structure Fire Single Residence Smoke from Chimney. House ventilated with some smoke damage. No other significant damage.

Average response times for these 42 calls was 9:43. This is an increase in response time due to deployment out of Station 1. The department average response time was approximately 6:13.

While deployed out of Station 1, Engine Four also responded to 15 additional Calls for Service due to their deployment location.

From: Sent: To: Subject: Powers, Steve Monday, December 23, 2013 9:52 AM Alexa, Jennifer FW: Station #4

From: Schantz, Steven
Sent: Friday, December 20, 2013 2:35 PM
To: Crum, Lynn; Taylor, Ellen
Cc: Powers, Steve; Seto, John; Kulhanek, Matthew; Wondrash, Lisa; Wilkerson, Robyn; Niemela, Nancy; Hupy, Craig
Subject: Station #4

All,

Please find below the sequencing of events for the second round of remediation / asbestos abatement at Station #4 that has been established.

Thursday 12/26/13 – Remediation Contractor completing carpet removal and asbestos abatement Friday 12/27/13 – Remediation Contractor completing remediation and final asbestos abatement Friday 12/27/13 – HVAC cleaning contractor to sanitize HVAC system and ductwork (following remediation) Saturday 12/28/13 – Air monitoring consultant completing asbestos clearance and mold testing Monday 12/30/13 – Preliminary mold results expected from laboratory

*Please note that during the remediation / abatement process, all non-essential personnel will not be allowed within Station #4. Please remove all required personal or work related items from Station #4 prior to Thursday 12/26/13 at 8am.

*Steve Schantz will be on-site throughout the duration of the remediation / abatement process as well as during the post-remediation / abatement testing.

*I am still in support of no-pores flooring replacing the carpet to be removed in the Bunk Room.

If upon your receipt of this correspondence, you encounter questions or additional information is required, please do not hesitate to contact me.

Respectfully,

Steven E. Schantz Safety Manager City of Ann Arbor 301 E. Huron, 6th Floor Ann Arbor, MI 48107 <u>sschantz@a2gov.org</u> 734-794-6000 x43110 office 810-656-4465 cell www.A2gov.org



Think Green! Don't print this e-mail unless you need to.

CONFIDENTIALITY NOTICE: This e-mail, and any attachments, is for the sole use of the intended recipient(s) and may contain information that is confidential and protected from disclosure under the law. Any unauthorized review, use, disclosure, or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail, and delete/destroy all copies of the original message and attachments. Thank you.

From: Sent: To: Subject: Powers, Steve Monday, December 23, 2013 9:52 AM Alexa, Jennifer FW: Station 4

From: Powers, Steve Sent: Friday, December 20, 2013 8:37 AM To: Brow, Amy Subject: Station 4

Thank you for the cooperation regarding the clean-up. The clean-up is a priority.

Steve Powers City Administrator City of Ann Arbor 734-794-6110