

IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

FOURTH JUDICIAL DISTRICT AT FAIRBANKS

STATE OF ALASKA,)
DEPARTMENT OF ENVIRONMENTAL)
CONSERVATION)

Plaintiff,)

v.)

Andrew Straughn and Gloria Straughn,)
Defendants)

Case No. 4FA-13-01205CI

AFFIDAVIT OF ALI HAMADE

I, Ali Hamade, being first duly sworn, deposes and says:

1. My current employment is as the Environmental Public Health Program Manager for the State of Alaska, Department of Health and Social Services, Division of Public Health, Section of Epidemiology. As part of my professional duties, I have a general familiarity with the potential health effects of fine particulate air pollution, often referred to as 'PM-2.5', which is an acronym for particulate matter that is 2.5 microns or smaller in diameter.

2. PM-2.5 is a mixture of very small particles and liquid droplets in the air, and is made up of a number of components such as dust, soot, and unburned fuel suspended in the air. When breathed in, PM-2.5 can cause adverse respiratory and cardiovascular health effects, and may cause reproductive and developmental harm. The populations most susceptible to the adverse health effects of PM-2.5 exposure are infants, children, pregnant women, elderly and smokers, and those with pre-existing

heart and lung conditions, such as asthma, chronic obstructive pulmonary disease, and coronary heart disease.

3. One common source of PM-2.5 in the air is from wood smoke. Other sources include forest fires, gasoline and diesel engines, and power plants. Most fireplaces and wood stoves located indoors are not problematic if properly vented, but they can still emit over 1000 times more particulate matter into the outdoor environment than does a gas furnace. Outdoor wood boilers, or hydronic heaters, produce up to 27.5 times more PM-2.5 than do EPA-certified wood stoves.

4. Temperature inversions, such as those common in the Fairbanks North Star Borough, can compound the PM-2.5 problem by trapping these particles and other combustion byproducts within the mountains surrounding the borough. These pollutants can stay in the air for prolonged periods, and can infiltrate schools, houses, cars, buses, and other locations where people can inhale them.

5. Through my job, I have become aware of problems with smoke and haze in the vicinity of the Woodriver Elementary School in Fairbanks. In 2011, we received complaints from school staff and parents who saw and smelled smoke on a regular basis, both inside the school building and outside on school grounds, that they attributed to two outdoor wood boilers located directly across the street from the school. Because of the poor air quality, we understand that students have had more school absences, and have been kept indoors and denied recess on numerous occasions during the winter months. In October 2010, we were asked to conduct a health study (which we did not do due to lack of resources) to assess the rates of asthma and other

respiratory conditions at Woodriver Elementary, due to the large number of health complaints by students and staff from exposure to wood smoke in and outside the school.

6. In support of the state's efforts to eliminate some apparent sources of the smoke in that area, I have been asked to prepare this affidavit in order to describe some of the possible health effects that could result from exposure to the impaired air quality that has been observed and measured at that location.

7. My knowledge of the air quality issues in the Woodriver area is based on a review of air quality monitoring data by the Fairbanks North Star Borough, communications with air quality officials from the Alaska Department of Environmental Conservation and Fairbanks North Star Borough, and on reports in the local media.

8. In response to stronger and more consistent evidence that short-term exposure to PM-2.5 can cause serious health effects, the U.S. Environmental Protection Agency (EPA) strengthened its PM-2.5 air quality standards in 2012 to protect public health. Those standards are as follows: an annual average of 12 $\mu\text{g}/\text{m}^3$ (micrograms per cubic meter of air), and a daily average of 35 $\mu\text{g}/\text{m}^3$. EPA selected these PM-2.5 concentrations for the final National Ambient Air Quality Standards (NAAQS) after completing an extensive review of numerous scientific studies on the impact of particulate matter on public health and welfare. The purpose for the annual PM-2.5 standard is to protect against health effects caused by exposure ranging from

days to years, and the 24-hour standard is designed to provide additional protection on days with high peak PM-2.5 concentrations.

9. Numerous studies have shown that exposure to the concentrations of PM-2.5 that have been measured at the Woodriver School could result in the following health impacts: aggravated asthma; chronic bronchitis; reduced lung function; irregular heartbeat; increased hospitalizations and emergency room visits for respiratory and cardiovascular diseases; non-fatal heart attacks; and premature death in people with heart or lung disease. Moreover, people who become ill might be unable to go to work or school, and might need to restrict their normal, daily activities.

10. In 2010, the Alaska Section of Epidemiology conducted a study to see whether increases in ambient PM-2.5 concentrations were associated with increases in hospital visits for selected cardiac and respiratory conditions in the Fairbanks area. The study analyzed a total of 5,718 hospital visits, which consisted of 1,596 emergency room visits (from September 2003 to December 2008) and 4,122 hospitalizations (from January to December 2008), along with daily 24-hour average PM-2.5 concentrations collected from September 2003 to December 2008. The mean 24-hour PM-2.5 concentration was $20.1 \mu\text{g}/\text{m}^3$. The study revealed that each $10 \mu\text{g}/\text{m}^3$ increase in PM-2.5 concentrations resulted in a seven percent (7%) increased risk for stroke-related hospital visit for people under age 65, a six percent (6%) increased risk for a stroke-related hospital visit for people 65 years or older, and a six percent (6%) increased risk for a respiratory illness-related hospital visit for people under age 65. Thus, the results from this study showed an association between increased concentrations of PM-2.5 in

the Fairbanks area with increased hospitalizations due to stroke-related disease in all persons, and with respiratory-related illnesses in persons under age 65.

11. Although it relied on a relatively small population, this study produced results consistent with other studies in the United States, Canada, and Europe. Both short and long-term exposure to PM-2.5 can have serious health impacts on the population. Large well-conducted national studies in the U.S. (*e.g.*, Dockery *et al.*, 1993; Krewski *et al.*, 2009; Dominici *et al.*, 2006) consistently found associations between exposure to PM-2.5 and morbidity and mortality.

12. As I stated earlier, wood smoke is a common source of PM-2.5. Wood smoke air contamination is not limited to the outdoor environment, as outdoor residential wood smoke particulate matter has been shown to infiltrate houses and buildings to contribute indoor season-specific PM-2.5 concentrations that are approximately 30–60% those found in the outdoors (lower in winter, higher in summer) (Barn *et al.*, 2008).

13. Exposures to wood smoke and biomass burning have been associated with adverse health effects in several air pollution epidemiology studies. These studies show associations between wood smoke and increased asthma and cardiovascular disease-related emergency department and hospital visits (McGowan *et al.*, 2002; Schwartz *et al.*, 1993; Samat *et al.*, 2008), and decreased lung function among asthmatic school children (Koenig *et al.*, 1993). Moreover, when interventions lowered indoor wood smoke concentrations, cardiovascular health indicators improved (McCracken *et al.*, 2007; 2011).

14. Analyses of data from several stationary air monitors in the Fairbanks North Star Borough from the past three winters show that wood smoke accounted for anywhere between 63 and 81 percent of the total particulate matter measured. These data also show an increasing trend in the contribution of wood smoke to PM-2.5 during the past three winters.

15. In my opinion, removing the outdoor wood boilers near the Woodriver Elementary School would likely significantly reduce the concentration of PM-2.5 air pollution in the area and further improve the overall quality of life for all residents, but especially for the children attending the school.

16. Further your affiant sayeth naught.



Ali Hamade, PhD, DABT
Environmental Public Health Program Manager
Alaska Section of Epidemiology
Division of Public Health
Department of Health and Social Services

SUBSCRIBED AND SWORN TO before me this 22 day of January 2013, at Anchorage, Alaska.

Cheyl Patterson
Notary Public in and for Alaska
My Commission Expires: with Office



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2 IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

3 FOURTH JUDICIAL DISTRICT AT FAIRBANKS

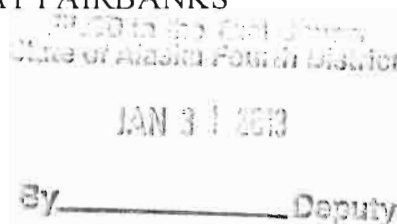
4 STATE OF ALASKA, DEPARTMENT)
5 OF ENVIRONMENTAL)
6 CONSERVATION,)

7 Plaintiff,)

8 v.)

9 Andrew Straughn and Gloria Straughn,)
10 Defendants.)

Case No. 4FA-13-01205CI



11 **AFFIDAVIT OF KRISTEN BROWN**

12 STATE OF ALASKA)
13) SS.
14 FOURTH JUDICIAL DISTRICT)

I, Kristen Brown, being first duly sworn, hereby state as follows:

15 1. I am a Environmental Program Specialist I for the Alaska
16 Department of Environmental Conservation (ADEC), where I have worked for 3 years.

17 2. I am generally familiar with the air quality problems experienced
18 in the area around the Woodriver Elementary School over the last several winters.

19 3. The following table reflects the volume of complaints that ADEC
20 has received for air quality/smoke in the Woodriver area for the past 6 years:

21

Winter	# of complaints received
2007/2008	0
2008/2009	3
2009/2010	6
2010/2011	102
2011/2012	45
2012/2013 (as of 01/18/13)	31

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1
2 4. This next table shows how many different people made those
3 complaints:

Winter	# of different complainants
2007/2008	0
2008/2009	3
2009/2010	5 plus 1 anonymous
2010/2011	19*
2011/2012	12 plus 4 anonymous
2012/2013 (as of 01/18/13)	6 plus 1 anonymous**

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9 * Woodriver teachers filed individual complaints. One 1st grade
10 teacher submitted complaints on behalf of 13 students

11 ** School Principal collects complaints from staff and submits 1
12 web complaint; therefore the number of true complaints is under-
13 represented.

14 5. The next table shows the number of complaints in which one or
15 both of Mr. Straughn's boilers were identified by the complainant as the source of the
16 smoke:

Winter	Complaints identifying Straughn's boilers
2007/2008	0
2008/2009	2
2009/2010	2
2010/2011	49
2011/2012	13
2012/2013 (as of 01/18/13)	25

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22 6. This table lists the number of investigations done by ADEC staff
23 that were not complaint-driven, but confirmed one or both of Mr. Straughn's boilers as
24 the source of the smoke:
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Winter	Straughn's boilers confirmed as source
2007/2008	0
2008/2009	0
2009/2010	0
2010/2011	6
2011/2012	1
2012/2013 (as of 01/18/13)	1

7. This table shows the total number of incidents where Mr. Straughn's boilers were confirmed as the source by ADEC staff, and/or through information received from the complainants.

Winter	Straughn's boilers confirmed as cause
2007/2008	0
2008/2009	1
2009/2010	0
2010/2011	39
2011/2012	9
2012/2013 (as of 01/18/13)	12

8. ADEC staff made the following efforts to work with Mr. Straughn to solve the problem of smoke and odor emissions from his two OWBs:

a. On February 18, 2009 ADEC staff contacted Mr. & Mrs. Straughn by phone to notify them of complaints that were received about their outdoor wood boilers on 58 Trinidad and 5055 Palo Verde and told them of Alaska Administrative Code 18 AAC 50.110 prohibiting air pollution.

b. On April 13, 2009 ADEC sent a compliance letter to Mr. & Mrs. Straughn stating that numerous complaints were received about bad air quality and smoke caused by his boilers on 58 Trinidad and 5055 Palo Verde. On May 11,

1
2 2009, ADEC staff hand delivered the compliance letter previously sent to Mr.
3 Straughn, along with information on wood heating devices and clean burning
4 techniques: EPA Hydronic Heaters Best Burn Practices. Mr. Starughn stated that the
5 post office had returned our certified letter before he was able to pick it up.

6
7 c. On February 11, 2011 ADEC staff contacted Mr. Straughn
8 by phone to notify him of complaints that were received about his outdoor wood boilers
9 on 58 Trinidad and 5055 Palo Verde and to notify him of the opacity violations
10 discovered on February 7, 2011.

11 d. On March 10, 2011 ADEC staff served Mr. & Mrs.
12 Straughn a Nuisance Abatement Order (NAO).

13 e. On June 17, 2011 ADEC staff and our attorney met with
14 Mr. Straughn to discuss the NAO.

15 f. On June 24, 2011 our attorney sent a letter to Mr. Straughn
16 regarding the meeting held on June 17, 2011 about the NAO.

17 g. On October 3, 2012 staff contacted Mr. Straughn by phone
18 to notify him of complaints that were received about his outdoor wood boilers on 58
19 Trinidad and 5055 Palo Verde.

20 h. In November 2012, ADEC staff attempted to contact Mr.
21 Straughn to set up a meeting to discuss the complaints received. Mr. Straughn did not
22 respond to the Department's phone calls.
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2 i. In December, 2012, Mr. Straughn called the office to ask
3 how many complaints about his OWBs we had received. He also described the
4 methods that he used to operate his two OWBs, and it appeared from his description
5 that he was operating them correctly.

6
7 9. To summarize: since 2008, the Alaska Department of
8 Environmental Conservation has received 187 complaints associated with the poor air
9 quality in and around the Woodriver Elementary School in Fairbanks. The Department
10 has received complaints from students and staff from the School and also from nearby
11 residents. After many onsite investigations and interviews with the complainants, the
12 Department found the outdoor wood boilers located at 58 Trinidad Drive and 5055-A
13 and 5055-B Palo Verde Avenue as the main source of nuisance smoke as prohibited by
14 18 AAC 50.110.

15
16 10. The complaints received have indicated that besides causing a
17 significant odor nuisance, the excessive smoke coming from these properties pose a
18 health threat. Coarse and fine particulate cause health problems when people are
19 exposed to harmful concentrations. Fine particulate (PM2.5) is associated with more
20 severe health consequences than coarse particulate (PM10). Fine particulate (PM2.5)
21 exposure can lead to increased respiratory symptoms (such as irritation of the airways,
22 coughing, or difficulty breathing), decreased lung function, aggravated asthma,
23 development of chronic bronchitis, irregular heartbeat, nonfatal heart attacks, and
24 premature death in people with heart or lung disease.
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11. I have examined the map attached as attachment A, and it accurately shows the location of the school, the two OWBs, and the houses of a few neighbors who have complained.

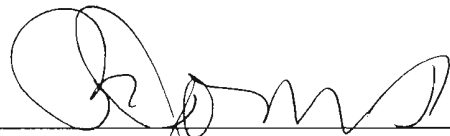
12. I have also personally observed smoke plumes coming from one or the other of the two OWB's and settling over the school grounds and nearby residents on approximately 5 occasions. In one instance, when my son, (who attends Woodriver School) complained that it even smelt like smoke inside the school building, I filed my own complaint, as a parent, with ADEC.

13. While it appears that Mr. Straughn's operation of the two OWBs has improved since he first installed them, we are still getting regular complaints from the public, and have verified that on some occasions during the current winter season his OWBs were indeed the source of nuisance smoke in the neighborhood.



Kristen Brown

SUBSCRIBED AND SWORN TO before me this 24 day of January, 2013, at Fairbanks, Alaska.



Notary Public in and for Alaska

My Commission Expires: W/O



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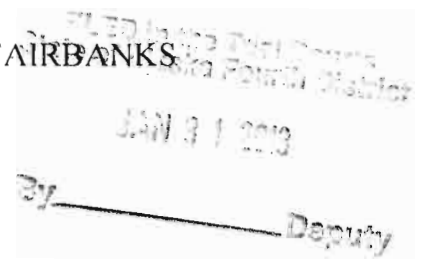
3 FOURTH JUDICIAL DISTRICT AT FAIRBANKS

4 STATE OF ALASKA, DEPARTMENT)
5 OF ENVIRONMENTAL)
6 CONSERVATION,)
7 Plaintiff,)

7 v.)

8 Andrew Straughn and Gloria Straughn,)
9 Defendants.)

Case No. 4FA-13-01205CI



10 **AFFIDAVIT OF JAMES CONNER**

11
12 STATE OF ALASKA)
13) SS.
14 FOURTH JUDICIAL DISTRICT)

15 I, James Conner, being first duly sworn, hereby state as follows:

16 1. I work for the Fairbanks North Star Borough as the Air Quality
17 Manager, and have worked for the borough's division of air quality for approximately
18 10 years.

19 2. I am generally familiar with the air quality problems that have
20 been reported in the area of the Woodriver Elementary School over the past several
21 winters, and have been involved in the borough's efforts to better understand the source
22 of the problem and to devise strategies to deal with it.

23 3. Over the last five years, the borough's air quality office has
24 received 171 complaints due to wood smoke and poor air quality in the University
25 West neighborhood at Woodriver Elementary School and the immediate area around
26 the school.

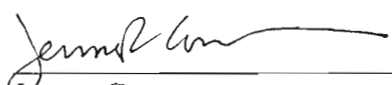
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4. Our records show that those 171 complaints were submitted by 42 different people.

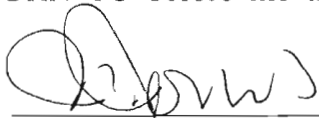
5. Our records show that 62 of the 171 complaints identify one or both of the two outdoor wood boilers owned by the Straughn's (one located at 5055 Palo Verde Ave. and the other located at 58 Trinidad Dr.) as the source of the smoke.

6. In July, 2012, the borough's air quality division notified Mr. Straughn by mail that he could apply to participate in the borough's Wood Stove Change Out program. Under that program, on that date, he could receive between \$2,500.00 and \$7,500.00 per outdoor wood boiler that he replaced or removed, respectively. Mr. Straughn has not contacted borough staff about that program.

7. During the winter of 2010 – 2011, we collected PM-2.5 data from a parking lot at the Woodriver School. That data is attached to this affidavit as Attachment A.


James Conner

SUBSCRIBED AND SWORN TO before me this 24 day of January, 2013, at Fairbanks, Alaska.


Notary Public in and for Alaska
My Commission Expires: w/d



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IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

FOURTH JUDICIAL DISTRICT AT FAIRBANKS

State of Alaska Fourth Judicial District

STATE OF ALASKA,)
DEPARTMENT OF ENVIRONMENTAL)
CONSERVATION,)
Plaintiff,)

JAN 31 2013

By _____ Deputy

v.)

Andrew Straughn and Gloria Straughn,)
Defendants.)

Case No. 4FA-13-01205CI

AFFIDAVIT OF GRANT GUY

STATE OF ALASKA)
) SS.
FOURTH JUDICIAL DISTRICT)

I, Grant Guy, being first duly sworn, deposes and says:

1. I am submitting this affidavit in support of the State's efforts to stop the operation of two outdoor wood boilers (OWBs) located near the Woodriver Elementary School, on Palo Verde Ave. in Fairbanks.

2. I am currently employed as the principal of the school, and have served in that capacity since August, 2011.

3. During my time at Woodriver, a major issue of concern to myself and the staff here has been air quality at the school. During periods of inversion, the air quality at the school grounds, and sometimes even inside the school building, suffers from smoke generated off-site by home heating systems.

4. Two major sources of the smoke we experience at the school are the OWBs located at 5055 Palo Verde Ave. and at 58 Trinidad Dr. Because of their

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OFFICE OF THE ATTORNEY GENERAL
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1
2 location close to the school, the smoke from both of these sources tends to settle over
3 the school grounds.

4 5. I have personally witnessed the smoke plumes from one or both of
5 these two OWBs settling over the school on numerous occasions. I also understand,
6 from my discussions with staff here, that this has been going on for several successive
7 winters.
8

9 6. In 2011, the school district installed an air filtration system at the
10 Woodriver School to alleviate the smoke problem, at a cost of around \$67,500.00.
11 While that system has helped to some degree, the problem with smoke infiltrating the
12 school building itself has persisted even since that system was installed.

13 7. As the principal, I hear many complaints from teachers and staff
14 here about the smoke during periods of inversion.
15

16 8. I have taken upon myself the role of reporting the complaints of
17 my teachers and staff to the ADEC and to the borough, and have been doing so since
18 November. I have done this so that teachers can focus their attention on the academic
19 and social needs of the students and not spend their time filling out complaint forms
20 with the borough and the DEC. In these complaints I have included a approximate
21 number of staff and students that can be effected by the smoke.
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23 9. From my experience and observations, the smoke coming from
24 these two OWBs has affected the teachers, staff and students here at Woodriver
25 Elementary School on a regular basis. The smoke has certainly taken away from their
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enjoyment of life, and in some cases it appears to be harming their health as well.

10. As the current principal, I fully support the State's efforts to terminate this nuisance at our school.

Grant R. Guy
Grant Guy

SUBSCRIBED AND SWORN TO before me this 24 day of January, 2013, at Fairbanks, Alaska.

Breanne Jones
Notary Public in and for Alaska
My Commission Expires: 11/10



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1
2 IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

3 FOURTH JUDICIAL DISTRICT AT FAIRBANKS

4 STATE OF ALASKA,)
5 DEPARTMENT OF ENVIRONMENTAL)
6 CONSERVATION,)

7 Plaintiff,)

8 v.)

9 Andrew Straughn and Gloria Straughn,)
10 Defendants.)

Case No. 4FA-13-01205CI

STATE OF ALASKA
JAN 31 2013
By _____ Deputy

11 **AFFIDAVIT OF DIANA HAWKINS**

12 STATE OF ALASKA)
13) SS.
14 FOURTH JUDICIAL DISTRICT)

15 I, Diana Hawkins, being first duly sworn, hereby state as follows:

16 1. I am submitting this affidavit in support of the State's efforts to
17 eliminate a public nuisance that is contributing to poor air quality at and near the
18 Woodriver Elementary School, which is located at 5000 Palo Verde Avenue in
19 Fairbanks, Alaska.

20 2. My family and I are residents of Fairbanks, and have been so for
21 approximately 7 years. I am the school nurse at Woodriver Elementary. I started this
22 position in the fall of 2010. Prior to that I was the nurse at Lathrop High School, and I
23 have been a nurse for 13 years.

24 3. I have observed and experienced problems with smoke at the
25 school for the past two years. I have filed complaints with the Alaska Department of
26 Environmental Conservation about it.

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2 4. On some days it smelled like a campfire in the hallways inside the
3 school. I went to see where the smoke was coming from and saw it coming from the
4 two Outdoor Wood Boilers (OWBs) on Palo Verde and on the corner of Trinidad
5 across the street from the School.

6
7 5. I have observed health problems for the students caused by the
8 smoke. The students have more bronchial problems than I would expect for a student
9 population of this size.

10 6. There are also more students who use and need inhalers than
11 would be normal for the size of the student population. I can monitor the students' use
12 of their inhalers because they are all kept in my office and I hand them out when
13 needed.

14
15 7. I am also concerned as a parent of a student at Woodriver. My son
16 Adam is in the fourth grade. I also have a daughter, Grace, that attends Ryan Middle
17 but was at Woodriver for two years (Aug. 2010 to May 2012).

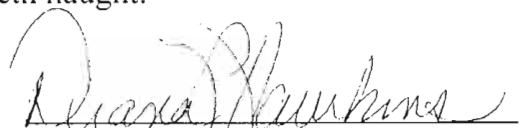
18 8. Grace has not typically had respiratory problems before but has
19 been bothered by a red and irritated throat during smoke events while attending
20 Woodriver.

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22 9. Adam has had asthma before but his breathing problems were
23 noticeably worse this past year. He gets congested more often and needs to use his
24 inhaler more often.

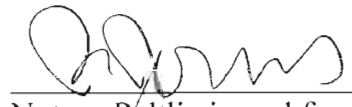
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10. Because we haven't moved, the only thing I can think of to explain our health problems this past year is the smoke we are exposed to at the school.

Further affiant sayeth naught.


Diana Hawkins

SUBSCRIBED AND SWORN TO before me this 24 day of January, 2013, at Fairbanks, Alaska.


Notary Public in and for Alaska
My Commission Expires: w/p



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IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

FOURTH JUDICIAL DISTRICT AT FAIRBANKS

STATE OF ALASKA,)
DEPARTMENT OF ENVIRONMENTAL)
CONSERVATION,)
Plaintiff,)
)
v.)
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Andrew Straughn and Gloria Straughn,)
Defendants.)

FILED in the T...
State of Alaska Fourth District
JAN 31 2013
By _____ Deputy

Case No. 4FA-13-01205CI

AFFIDAVIT OF DENNETTE MARKS

STATE OF ALASKA)
) SS.
FOURTH JUDICIAL DISTRICT)

I, Dennette Marks, being first duly sworn, deposes and says:

1. I have prepared this affidavit in support of the State's efforts to improve air quality at the Woodriver Elementary School.

2. I worked at Woodriver as the school nurse for four school years, from Fall of 2006 until Spring of 2010.

3. I also have one child who attends Woodriver: Elise is ten years old and is in the fourth grade. My other child Grace is now 12 and attends Ryan Middle but she was a student at Woodriver during the time of my employment there as school nurse.

4. My first two years at Woodriver I do not recall any problems with wood smoke or air quality. That all changed in the fall of 2008.

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DEPARTMENT OF LAW
OFFICE OF THE ATTORNEY GENERAL
100 CUSHMAN, SUITE 400
FAIRBANKS, ALASKA 99701
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FAX: (907) 451-2846

1
2 5. As I understand it, two outdoor wood boilers (OWBs) had been
3 installed in the neighborhood sometime before fall of 2008. When they began
4 operation, the air quality problems at the school began.

5 6. I recall many days during school years 2008-2009 and 2009-2010
6 when the smoke outside the school was bad enough that we cancelled outside recess for
7 all the students.
8

9 7. I personally observed on many occasions smoke from the two
10 OWBs across Palo Verde from the school drifting onto school property and directly
11 causing the smoke problems we all experienced there.


12 8. The smell I am describing as wood smoke is different from the
13 odor of an indoor wood stove. It is more caustic, foul-smelling and offensive. We burn
14 wood at home and I know the difference.
15

16 9. In the fall of 2009 I started keeping a log of asthma complaints. I
17 am attaching it as Attachment A. Many of the log entries mention smoke inside the
18 building, as well as outside. I stopped keeping the log once an on-line complaint
19 system became available through the Fairbanks North Star Borough and the State's
20 Department of Environmental Conservation.
21

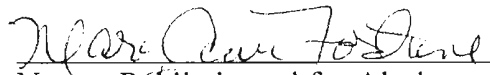
22 10. As the school nurse, I kept children's prescribed inhalers in my
23 office, which I would give to the children when they needed them. I noticed a clear
24 increase in use of inhalers by students starting in the 2008-2009 year compared to my
25 first two years at the school. That trend continued during the 2009-2010 school year.
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11. My older daughter Grace was hospitalized in April 2010 for an asthma attack. I do not know whether her attack was brought on by smoke exposure or not but as a parent and a nurse, I do worry about the health impacts the smoke is having on my two daughters and on all the other students as well.


Dennette Marks

SUBSCRIBED AND SWORN TO before me this 25th day of January, 2013, at Fairbanks, Alaska.


Notary Public in and for Alaska
My Commission Expires: W/O

STATE OF ALASKA
DEPARTMENT OF LAW
OFFICE OF THE ATTORNEY GENERAL
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FAX: (907) 451-2846

1
2 IN THE SUPERIOR COURT FOR THE STATE OF ALASKA
3 FOURTH JUDICIAL DISTRICT AT FAIRBANKS

FILED
JAN 31 2013
By _____ Deputy

4 STATE OF ALASKA,)
5 DEPARTMENT OF ENVIRONMENTAL)
6 CONSERVATION,)
7 Plaintiff,)
8 v.)
9 Andrew Straughn and Gloria Straughn,)
10 Defendants.)

Case No. 4FA-13-01205CI

11 **AFFIDAVIT OF DAWN BRASHEAR**

11 STATE OF ALASKA)
12) SS.
13 FOURTH JUDICIAL DISTRICT)

14 I, Dawn Brashear, being first duly sworn, deposes and says:

15 1. I have prepared and signed this affidavit in support of the State's
16 efforts to improve air quality at the Woodriver Elementary School, where I am
17 employed.

18 2. I am the School Counselor at Woodriver and have worked there
19 since fall of 2000. I am a resident of Fairbanks, and have been so for a total of 18
20 years.

21 3. I do not recall any air quality issues at the school prior to the fall
22 of 2008, i.e. five school years ago. While we occasionally experienced ice fog and
23 related poor air quality during extended winter inversions, we never had a problem with
24 the wood smoke at the school.

25 4. That all changed dramatically in the autumn of 2008. Two
26 different Outdoor Wood Boilers (OWBs) had been installed; one at 5055 Palo Verde

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1
2 Avenue (directly across the street from the school) and the other at the corner of Palo
3 Verde and Trinidad Drive (also across from the school and directly visible from the
4 front doors of the school).

5
6 5. One day in the fall of 2008, as cooler weather set in, I recall our
7 first bad wood smoke day. One of my duties at Woodriver is to greet students as they
8 arrive in the morning, from 8:45-9:00a.m. I recall a wall of smoke engulfing and
9 entering the school, and the staff discussing whether there was fire somewhere in the
10 building.

11
12 6. Since that day, we have had almost constant problems with smoke
13 in the air at the school. While the severity of the problem fluctuates, smoky air has
14 unfortunately become a routine fact of life for the staff and students at the school.

15
16 7. On scores of occasions I personally observed smoke from the
17 stacks of one or both of the two near-by OWBs (on Palo Verde and Trinidad) drifting
18 onto school grounds. There is no doubt in my mind that the smoke problems at the
19 school over the last five years are directly attributable to these two OWBs.

20
21 8. During the school years 2008-2009 and 2009-2010, I estimate we
22 smelled smoke inside the school every day, and two or three days per week we could
23 even see the smoke inside. Wood smoke outside the building and on the playground
24 still occurs frequently. Since the school district installed air filters in January 2011, we
25 have not had visible smoke inside the school. But the smell of wood smoke still occurs
26 regularly. Wood smoke outside the building, on school grounds, occurs frequently.

1
2 9. I have suffered health problems over the last five years that I
3 firmly believe to have been caused by my exposure to wood smoke at Woodriver.

4 10. My health problems started with a sinus infection in the 2008-
5 2009 school year that I could not shake. The next year I suffered diminished hearing in
6 my left ear as a consequence of continuing sinus problems.

7
8 11. In January 2010, I had a CT scan done that revealed polyps and a
9 large cyst (approximately 1 inch in diameter) in my left sinus. My physician
10 recommended surgery, but I tried several other treatments first, including antibiotics
11 and holistic methods.

12 12. My treating physician at that time stated that my chronic sinus
13 problems were likely caused by chronic exposure to the irritant of smoke at the school.

14 13. In October 2010 another physician, Dr. Pender, also linked my
15 respiratory problems with exposure to smoke, which she refers to as “environmental
16 irritants” in her letter attached as Attachment A.

17
18 14. Because of continuing sinus problems, including dismissed
19 hearing on my left ear, I finally had surgery on April 26, 2011, to remove the cyst and
20 polyps.

21
22 15. There is no doubt in my mind that exposure to smoke at the
23 school over the last five years is the cause of my respiratory problems. Nothing else
24 changed in my lifestyle during that time period to explain these new health problems.

1
2 16. In addition, my naturopathic physician, Dr. Beth Laughlin has
3 done 'blood work' on me which reveals a profile consistent with that of a smoker. See
4 Attachment B. I have never smoked in my life.

5 17. I have two children who attended Woodriver School during 2008-
6 2012, my daughter, Katie (age 11) and my son, Evan (age 13).

7
8 18. While Katie's reactions to the smoke are complaints about the
9 smoke stinging her nose and drying her throat on a regular basis, Evan has had sinus
10 infections and bronchitis more frequently over the last five years than he had
11 previously. His treating physician, Dr. Foote at the Tanana Valley Clinic, has
12 attributed these problems to smoke exposure.

13 19. After my sinus surgery in April 2011, I continued to have a sinus
14 infection for the entire school year from 2011-2012. I was under the care of an ENT
15 physician and was constantly taking antibiotics, Mucinex and Loratadine daily. In April
16 2012 I had a second sinus surgery. During the current school year I take Mucinex and
17 Loratadine on work days only.

18 20. Over the last five years, I have also heard countless students
19 complain about the smoke at the school on a regular basis.
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21. At my own expense I purchased and installed a HEPA air filtration system in August of 2010 for my office at Woodriver. However, as soon as I leave my office and enter the school hallway the frequent smoke exposure resumes.

Dawn Brashear
Dawn Brashear

SUBSCRIBED AND SWORN TO before me this 25th day of January, 2013, at Fairbanks, Alaska.

[Signature]
Notary Public in and for Alaska
My Commission Expires: *w/d*



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DEPARTMENT OF LAW
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IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

FOURTH JUDICIAL DISTRICT AT FAIRBANKS

STATE OF ALASKA,)
DEPARTMENT OF ENVIRONMENTAL)
CONSERVATION,)
Plaintiff,)
v.)
Andrew Straughn and Gloria Straughn,)
Defendants.)

FILED in the Fourth Judicial District
State of Alaska
JAN 31 2013
By _____ Deputy

Case No. 4FA-13-01205CI

AFFIDAVIT OF LAURA PALOMINO

STATE OF ALASKA)
) SS.
FOURTH JUDICIAL DISTRICT)

I, Laura Palomino, being first duly sworn, hereby state as follows:

1. I am submitting this affidavit in support of the State's efforts to eliminate a public nuisance that is contributing to poor air quality at and near the Woodriver Elementary School, which is located at 5000 Palo Verde Avenue in Fairbanks, Alaska.

2. I am resident of Fairbanks. I work at Woodriver Elementary School as an Attendance Secretary with reception duties. I have worked there for 12 years.

3. The smoke problem at the school began five years ago, when someone started operating two Outdoor Wood Boilers across from the school on Palo Verde Avenue and Trinidad Drive.

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OFFICE OF THE ATTORNEY GENERAL
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1
2 4. At first we thought they were simply burning green wood, and that
3 the smoke problem would diminish once they got seasoned wood. But unfortunately
4 this has not happened, and the wood smoke from those two units has continued to be a
5 problem at the school over the past five years.

6 5. I have had allergy-related asthma before but the smoke I am
7 exposed to at the school has exacerbated my problems. I developed a chronic cough,
8 sought medical treatment, and went on steroids prescribed by my treating physician at
9 Tanana Valley Clinic.
10

11 6. I am attaching a November 18th, 2010 letter from Dr. Foote, noting
12 that my symptoms escalated over the last year, and have impacted my quality of life.

13 7. There has been no other change in my life-style or residence that
14 would explain my health problems of the last five years. So I attribute them to smoke
15 exposure at the school.
16

17 8. I began treating my escalated symptoms with steroid pills that
18 have side effects of hyper-activity and insomnia.


19 9. Due to the severe side effects of the steroid treatment I am
20 currently trying a new allergy treatment called Xolair. I have to take three painful shots
21 every two weeks, at over \$40,000.00/year.
22

23 10. Before the two OWBs were installed five years ago, I don't recall
24 any problems with smoke at the school, or any complaints from students about smoke.

25 11. During the last five years, students frequently complain about the
26 smoke, both outside and inside the school.

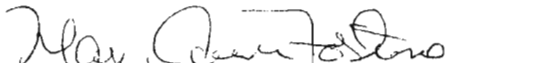
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12. I have personally observed the source of the smoke at the school:
the two OWBs across Palo Verde Drive. I took pictures with my iphone but the
resolution was not good enough so I did not keep them.



Laura Palomino

SUBSCRIBED AND SWORN TO before me this 30th day of January,
2013, at Fairbanks, Alaska.



Notary Public in and for Alaska
My Commission Expires: w/o

STATE OF ALASKA
DEPARTMENT OF LAW
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IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

FOURTH JUDICIAL DISTRICT AT FAIRBANKS

STATE OF ALASKA,)
DEPARTMENT OF ENVIRONMENTAL)
CONSERVATION,)
Plaintiff,)
)
v.)
)
Andrew Straughn and Gloria Straughn,)
Defendants.)

FILED in the Trial Courts
State of Alaska Fourth District

JAN 31 2013

By _____ Deputy

Case No. 4FA-13-01205CI

AFFIDAVIT OF SHALONDA RILEY

I, Shalonda Riley, being first duly sworn, hereby states as follows:

1. I am preparing this affidavit to support the State's efforts to improve the air quality at the Woodriver Elementary School.

2. I am concerned about potential health effects of the smoke at the school both on myself and on my four children, three of which still attend school there.

3. During the school years 2010-2011 and 2011-2012, I worked at Woodriver as a reading instructor for children who needed some extra assistance. I worked 4 days per week the first year and 5 days per week the second year.

4. I began to have some breathing problems in the fall of 2010. My doctor prescribed an inhaler. I had never had breathing problems or used an inhaler before (other than some allergies as a child). I am 33 years old.

5. I continued to have breathing problems and also suffered from low energy, even to the point of physical exhaustion by the end of the school day. Again, this was a new experience for me, as I have always been a very active and productive person.

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1
2 6. I didn't really notice the smoke smell so much myself, as I do not
3 have a very sensitive sense of smell. However, some of my co-workers at the school
4 suggested that my breathing and fatigue symptoms could be caused by exposure to
5 smoke.

6
7 7. My health problems became acute in early March of 2011. I was
8 at the Woodriver playground, where it smelled like forest fires, and I began to have
9 trouble breathing. I went home early, and used my inhaler, but was still struggling to
10 breath.

11 8. This condition persisted for a few days and I was not improving.
12 Finally, on March 6, 2011, I took three of my children to the doctor because they were
13 all complaining about sore throats. When I told the doctor about my own symptoms,
14 they checked my vital signs and became concerned. My heart rate was elevated and
15 my breathing was still impaired.

16
17 9. I ended up going from the Tanana Valley Clinic to the hospital via
18 ambulance and was put on oxygen support. They took a CT scan which revealed a
19 small blood clot in my right lung. I stayed in the hospital overnight.

20 10. The doctors concluded that my physical symptoms were a result of
21 both the blood clot and the exposure to smoke, as my impaired functions were
22 disproportional to the size of the blood-clot itself.

23
24 11. I am attaching as Attachment A some medical records describing
25 my hospitalization.

1
2 12. I went home for a day, but had another acute episode and ended up
3 back in the ER a day or so later. This time I could not move my lips, legs or fingers,
4 due to lack of oxygen in my body. They gave me a different drug and released me the
5 same day.

6
7 13. I had to take five weeks or so off from my job at Woodriver and
8 returned there on April 12, 2011.

9 14. My recovery from the episodes described above has been very
10 gradual. I am still only operating at less than my former, normal energy level.

11 15. While I don't know for sure, or at least cannot prove, that my own
12 health problems have been caused by the wood smoke at Woodriver, I believe that they
13 are since nothing else has changed in my life to explain these problems.

14
15 16. Since that acute episode in March of 2011, I have continued to
16 have health problems which I believe to have been caused, or at least triggered by my
17 exposure to wood smoke at the school. My continuing health problems include: vocal
18 chord dysfunction, Mycoplasma, Rhino-Sinusitis, post-nasal drip, and a cyst in my
19 airway.

20
21 17. I have seen several doctors in Fairbanks, Anchorage and Denver
22 for these on-going health problems. While I have voluminous medical records, I am
23 just attaching as Attachment B, three letters from doctors who have seen me, that
24 support the idea that my current health problems are associated with exposure to wood
25 smoke.

STATE OF ALASKA
DEPARTMENT OF LAW
OFFICE OF THE ATTORNEY GENERAL
100 CUSHMAN, SUITE 400
FAIRBANKS, ALASKA 99701
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2 18. My four children, the youngest three of whom are still at
3 Woodriver, are: my son Kristoffer, age 12, my son Kamreon, age 11, who is in the fifth
4 grade; my son Kristian, age 9, who is in the fourth grade and my daughter Sara, age 7,
5 who is in the second grade.

6
7 19. While I can't say for sure that any of my children's health has
8 been impaired by the smoke at Woodriver, I am concerned about the potential for such
9 harms.

10 20. All four of my children have had more problems with Strep throat
11 and sinus infections since they started attending Woodriver School. My son, Kamreon
12 in particular, has developed allergic symptoms these past three years, which we have
13 treated with Benadryl. My daughter, Sara was prescribed an inhaler during the last
14 school year.

15
16 21. During spring of 2011, shortly before my own health problems,
17 Kamreon mentioned to me that he could only run half-way across the Woodriver
18 playground before he was out of breath. This has really caused me to wonder if the
19 smoke is harming my children, as well as myself.

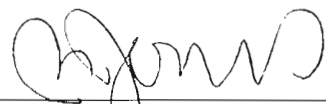
20 Further your affiant sayeth naught.

21
22 

23 Shalonda Riley

24 SUBSCRIBED AND SWORN TO before me this 23rd day of January,
25 2013, at Fairbanks, Alaska




Notary Public in and for Alaska
My Commission Expires: *with official*

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DEPARTMENT OF LAW
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IN THE SUPERIOR COURT FOR THE STATE OF ALASKA
FOURTH JUDICIAL DISTRICT AT FAIRBANKS

STATE OF ALASKA,)
DEPARTMENT OF ENVIRONMENTAL)
CONSERVATION,)
Plaintiff,)
v.)
Andrew Straughn and Gloria Straughn,)
Defendants.)

FILED in the Trial Courts
State of Alaska Fourth District
JAN 31 2013
By _____ Deputy

Case No. 4FA-13-01205CI

AFFIDAVIT OF NANCY VIALE

STATE OF ALASKA)
) SS.
FOURTH JUDICIAL DISTRICT)

I, Nancy Viale, being first duly sworn, hereby state as follows:

1. I am submitting this affidavit in support of the State's efforts to eliminate a public nuisance that is contributing to poor air quality at and near the Woodriver Elementary School, which is located at 5000 Palo Verde Avenue in Fairbanks, Alaska.

2. I am a resident of Fairbanks, and have been so for approximately 27 years. I am employed as a teacher at Woodriver Elementary School where I have worked for twenty-two years.

3. I have observed and experienced poor air quality at the school since the two Outside Wood Boilers (OWBs) were installed near the school five years ago. I had never noticed any problems with wood smoke before those two units were installed.

1
2 4. I have personally observed: students reeking of smoke; students
3 coming in from outside complaining of headaches; and students holding their T-shirts
4 over their faces in the classroom when smoke is in the building.

5 5. When the smoke at the school is bad I have personally gone
6 outside and seen it coming from the OWB across from the school on Palo Verde.

7
8 6. I would estimate that we have smoke problems at the school
9 approximately three-four times per week in mid-winter, especially when we are
10 experiencing an inversion due to cold temperatures.

11 7. The most likely times of day to notice smoke problems is morning
12 and evening. I assume this is because that is when the two OWBs are loaded, although
13 it is also common to smell it at other times of the day as well.

14 8. The smell is not typical wood smoke from an indoor woodstove or
15 campfire. It is more of a caustic or chemical smell. I suspect this is from burning
16 green wood but I'm not sure.

17
18 9. The smoke at the school has affected my health by exacerbating
19 certain allergies. When exposed to the smoke I experience headaches, burning eyes,
20 sinuses, and lungs, and my throat becomes very sore. These are new symptoms that I
21 have not had before, not like my familiar allergic reactions to cats and dogs or seasonal
22 allergies. I have begun to take steroids (eye drops, inhaler), and antihistamines on a
23 regular basis, to manage some of these symptoms. Also, because of the irritation the
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smoke causes my lungs, sinuses, and throat, I have been more susceptible to infection in these areas.

Nancy Viale
Nancy Viale

SUBSCRIBED AND SWORN TO before me this 28 day of January, 2013, at Fairbanks, Alaska.

[Signature]
Notary Public in and for Alaska
My Commission Expires: w/p



STATE OF ALASKA
DEPARTMENT OF LAW
OFFICE OF THE ATTORNEY GENERAL
100 CUSHMAN, SUITE 400
FAIRBANKS, ALASKA 99701
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FAX: (907) 451-2846

1
2 IN THE SUPERIOR COURT FOR THE STATE OF ALASKA
3 FOURTH JUDICIAL DISTRICT AT FAIRBANKS

4 STATE OF ALASKA,)
5 DEPARTMENT OF ENVIRONMENTAL)
6 CONSERVATION,)
7 Plaintiff,)
8 v.)
9 Andrew Straughn and Gloria Straughn,)
10 Defendants.)

FILED in the Trial Courts
State of Alaska Fourth District

JAN 31 2013

By _____ Deputy

Case No. 4FA-13-01205CI

11 AFFIDAVIT OF MICHELLE STEWART

12 STATE OF ALASKA)
13) SS.
14 FOURTH JUDICIAL DISTRICT)

15 I, Michelle Stewart, being first duly sworn, hereby state as follows:

16 1. I am a teacher at Wood River Elementary School, where I have
17 worked for five years.

18 2. During my five years at Woodriver, I have frequently witnessed
19 thick smoke coming from the two outdoor wood boilers (OWBs) located across Palo
20 Verde Ave. from the school. Often the smoke will cross Palo Verde and enter the
21 school grounds.

22 3. While the smoke is most noticeable outside on the playground
23 (which is between the school building and Palo Verde Ave.), sometimes it is even
24 visible, or at least noticeable by smell, inside the building. In fact, on some days the
25 smoke in the hallway was thick enough to blur my vision, and tint everything brown, as
26 well as making it hard to breathe. This happened more often during my first 3 years at
Woodriver than since then.


STATE OF ALASKA
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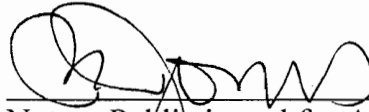
4. I have received many complaints from my students about burning eyes, throats, and headaches. I have also seen and heard students coughing from the smoke.

5. I have also experienced those same symptoms myself: chronic headaches, lung and breathing issues. Because I have not experienced these kinds of problems before, I attribute them to the smoke I was exposed to at the school.

6. I am very concerned about the health effects of this smoke on myself and my students. And even if there are no long-term health effects, the smoke definitely detracts from our enjoyment of life at the school.


Michelle Stewart

SUBSCRIBED AND SWORN TO before me this 24 day of January, 2013, at Fairbanks, Alaska.


Notary Public in and for Alaska
My Commission Expires: W/D



1
2 IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

3 FOURTH JUDICIAL DISTRICT AT FAIRBANKS, Alaska
State of Alaska Fourth District

4 STATE OF ALASKA,)
5 DEPARTMENT OF ENVIRONMENTAL)
6 CONSERVATION,)

7 Plaintiff,)

8 v.)

9 Andrew Straughn and Gloria Straughn,)
10 Defendants.)

Case No. 4FA-13-01205CI

JAN 31 2013
By _____ Deputy

11 AFFIDAVIT OF LUCILE HACKETT

12 STATE OF ALASKA)
13) SS.
14 FOURTH JUDICIAL DISTRICT)

15 I, Lucile Hackett, being first duly sworn, hereby state as follows:

16 1. I am submitting this affidavit in support of the State's efforts to
17 eliminate a public nuisance that is contributing to poor air quality at and near the
18 Woodriver Elementary School, which is located at 5000 Palo Verde Avenue in
19 Fairbanks, Alaska.

20 2. I am a resident of Fairbanks, and have been so for approximately
21 21 years. I am employed as a teacher at Woodriver Elementary School where I have
22 worked for twenty years.

23 3. I have observed and experienced poor air quality at the school
24 since the two Outside Wood Boilers (OWBs) were installed near the school five years
25 ago. I had never noticed any problems with wood smoke before those two units were
26 installed.

STATE OF ALASKA
DEPARTMENT OF LAW
OFFICE OF THE ATTORNEY GENERAL
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4. Periodically over the last five years I have smelled smoke inside the school building and in my own class room

5. When the smoke at and in the school is bad I have personally gone outside and seen it coming from the OWB across from the school on Palo Verde Ave.

6. My daughter Amara had mild asthma when she was younger, and I regularly observed that she would react to the bad smoke days at the Woodriver school. Specifically, she would complain of tightness in her chest, and she would cough much more than usual.

7. As a parent and a teacher, I am concerned about possible long-term health effects on my daughter and the other students at Woodriver from frequent exposure to the smoke from the two OWBs.

Lucile Hackett

Lucile Hackett

SUBSCRIBED AND SWORN TO before me this 29th day of January, 2013, at Fairbanks, Alaska.

Breanne Jones

Notary Public in and for Alaska
My Commission Expires: *w/d*



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IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

FOURTH JUDICIAL DISTRICT FAIRBANKS

STATE OF ALASKA,)
DEPARTMENT OF ENVIRONMENTAL)
CONSERVATION,)

Plaintiff,)

v.)

Andrew Straughn and Gloria Straughn,)
Defendant.)

FILED in the Trial Courts
State of Alaska Fourth District

JAN 31 2013

By _____ Deputy

Case No. 4FA-13-01205CI

AFFIDAVIT OF CAROLYN LEONARD

STATE OF ALASKA)
) SS.
FOURTH JUDICIAL DISTRICT)

I, Carolyn Leonard, being first duly sworn, hereby state as follows:

1. I am a second grade teacher at Wood River Elementary School. I have taught there for 15 years.

2. Over the last several years, I have frequently witnessed thick smoke coming from the two outdoor wood boilers (OWBs) located across Palo Verde Ave. from the school. Often the smoke will cross Palo Verde and enter the school grounds. I could see this happen from my classroom window.

3. While the smoke is most noticeable outside on the playground (which is between the school building and Palo Verde Ave.), sometimes it is even visible inside the building.

4. I have received many complaints from my students about burning eyes, throats, and headaches. I have also seen and heard students coughing from the smoke.

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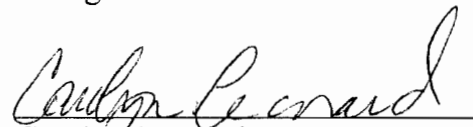
5. I have also experienced those same symptoms myself. On some bad smoke days, I have left work early with a headache that I attribute solely to the smoke.

6. We never experienced these kinds of problems before the two OWBs began operating five years ago.

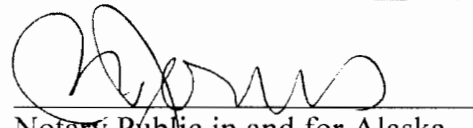
7. On one bad smoke day two years ago, I let my students write down their thoughts on the problem in their daily journals. Copies of the students' journal entries are attached to this affidavit.

8. I am very concerned about the health effects of this smoke on myself and my students. And even if there are no long-term health effects, the smoke detracts from our enjoyment of life at the school.

Further affiant sayeth naught.


Carolyn Leonard

SUBSCRIBED AND SWORN TO before me this 22 day of January, 2013, at Fairbanks, Alaska.


Notary Public in and for Alaska
My Commission Expires: with the office



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DEPARTMENT OF LAW
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1
2 IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

3 FOURTH JUDICIAL DISTRICT AT FAIRBANKS

4 STATE OF ALASKA,)
5 DEPARTMENT OF ENVIRONMENTAL)
6 CONSERVATION,)

7 Plaintiff,)

8 v.)

9 Andrew Straughn and Gloria Straughn,)
10 Defendants.)

FILED in the Trial Courts
State of Alaska Fourth District

JAN 31 2013

By _____ Deputy

Case No. 4FA- 13-01205CI

11 AFFIDAVIT OF TAMI SEEKINS

12 STATE OF ALASKA)
13) SS.
14 FOURTH JUDICIAL DISTRICT)

15 I, Tami Seekins, being first duly sworn, deposes and says:

16 1. I have prepared and signed this affidavit to support the State's
17 effort to improve air quality at the Woodriver Elementary School.

18 2. I have two children at the school: Caleb, who is 10 years old, and
19 in the fifth grade, and Larisa who is almost nine, and in the third grade.

20 3. Caleb also attended Woodriver for Kindergarten, so he has been
21 going there for six years.

22 4. I have been a volunteer parking lot helper for the school years
23 2009-2010. During these years I was outside of the school in the front parking lot
24 from 8:30-9:15 a.m., three days per week.

25 5. I don't recall any air quality problems during Caleb's first
26 (Kindergarten) year, which was 2007-2008. The problems began in the fall of 2008.

1
2 6. The problem is the frequent smell of smoke on the school grounds.
3 It was not typical wood smoke that comes from a wood stove inside a house, but rather
4 a stronger and more offensive odor.

5 7. I was bothered by the smoke frequently during the years I
6 volunteered for parking lot duty.
7

8 8. I am not positive just where the smoke is coming from, but I do
9 know that there are two outdoor wood boilers across Palo Verde from the school, and
10 that the 2008-2009 school year was the first year that they were in operation. I have
11 observed plumes of smoke coming from the direction of the OWB's.

12 9. I am concerned about the potential health effects of the smoke on
13 both my children. Caleb has always been sensitive, and has a history of colds, asthma
14 and allergies. But his symptoms have gotten worse over the last five years, including
15 frequent headaches, and I suspect that that is due to his exposure to smoke at the
16 school.
17


18 10. I coordinated closely with Dennette Marks, the former nurse at
19 Woodriver, to keep Caleb inside during recess on smoky days. I am concerned that
20 being kept inside while his school-mates go out to play will inhibit Caleb's social
21 progress as well as his opportunities for healthy exercise. He now comments upon
22 having to miss recess with his friends on smoky days.
23

24 11. As far as I am concerned, the wood smoke at Woodriver is a
25 public nuisance, simply because it limits the students' opportunity to play outside. It
26 may also be negatively impacting the health of my children and the other students, in

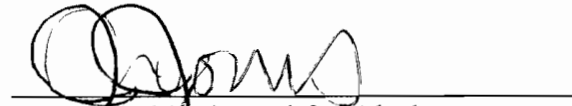
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long-term and subtle ways. As a parent, I worry about both these kinds of effects.

Further your affiant sayeth naught.


Tami Seekins

SUBSCRIBED AND SWORN TO before me this 23 day of January,
2013, at Fairbanks, Alaska.


Notary Public in and for Alaska
My Commission Expires: with office



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1
2 IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

3 FOURTH JUDICIAL DISTRICT AT FAIRBANKS

4 STATE OF ALASKA,)
5 DEPARTMENT OF ENVIRONMENTAL)
6 CONSERVATION,)

FILED in the Trial Courts
State of Alaska Fourth District

7 Plaintiff,)

JAN 31 2013

8 v.)

By _____ Deputy

9 Andrew Straughn and Gloria Straughn,)
10 Defendants.)

Case No. 4FA-13-01205CI

11 AFFIDAVIT OF CARL BENSON

12 STATE OF ALASKA)
13) SS.
14 FOURTH JUDICIAL DISTRICT)

15 I, Carl Benson, being first duly sworn, hereby state as follows:

16 1. I am submitting this affidavit in support of the State's efforts to
17 eliminate a public nuisance that I believe is contributing to poor air quality at and near
18 the Woodriver Elementary School, which is located at 5000 Palo Verde Avenue in
19 Fairbanks, Alaska.

20 2. My wife Anna-Marie and I are residents of Fairbanks, and have
21 been so together for approximately seventeen years. I have been a Fairbanks resident
22 for over 49 years. We are also the parents of two children attending Woodriver
23 Elementary School. Our daughter Sophia is in fifth grade and our daughter Juliette is
24 in third grade.

25 3. I normally drop our girls off at school in the morning. I have been
26 doing that on most school days since November 1, 2010. This has given me the
opportunity to observe and experience conditions there first-hand.

1
2 4. My wife and I are both very concerned about the effect that smoke
3 at the school may have on our daughters' health. We have filed many complaints with
4 the Alaska Department of Environmental Conservation and the Fairbanks North Star
5 Borough Air Quality programs.

6
7 5. I recall several days when the smoke was so bad at the school that
8 my daughters and I started coughing as soon as we opened our vehicle doors in the
9 morning. In fact on some days we could smell smoke before even opening the doors,
10 as it came into the vehicle through the air vents.

11 6. On several bad smoke days, I have taken pictures of the two
12 obvious sources of smoke: Outdoor Wood Boilers (OWBs) located across from the
13 school, one on Palo Verde Avenue and the other at the corner on Trinidad Drive.

14
15 7. I have also taken several photos of what I observed at those two
16 units. Attachment A is two photos I took on March 1st, 2011, one of each of the two
17 OWB stacks. Attachment B is three photos I took of the Trinidad Drive OWB on
18 March 24, 2011.

19 8. On both March 1st, 2011 and March 24th, 2011, I observed smoke
20 from one or both of the OWBs drifting onto the Woodriver School grounds. I have
21 observed the same thing on many other occasions.

22
23 9. While we cannot say for sure whether either of our daughters'
24 health has already been impaired by the smoke, we are both anxious about possible
25 long-term health effects, and that anxiety preys upon our domestic peace of mind.
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Further your affiant sayeth naught.

Carl Benson
Carl Benson

SUBSCRIBED AND SWORN TO before me this 29 day of January,
2013, at Fairbanks, Alaska.



Breanne Jones
Notary Public in and for Alaska
My Commission Expires: w/o

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DEPARTMENT OF LAW
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1
2 IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

3 FOURTH JUDICIAL DISTRICT AT FAIRBANKS

FILED In the Trial Courts
Fourth District

4 STATE OF ALASKA,)
5 DEPARTMENT OF ENVIRONMENTAL)
6 CONSERVATION,)

JAN 31 2013

By _____ Deputy

7 Plaintiff,)

8 v.)

9 Andrew Straughn and Gloria Straughn,)
10 Defendants.)

Case No. 4FA-13-01205CI

11 **AFFIDAVIT OF MICHAEL JAYNES**

12 STATE OF ALASKA)
13) SS.
14 FOURTH JUDICIAL DISTRICT)

15 I, Michael Jaynes, being first duly sworn, hereby states as follows:

16 1. I am submitting this affidavit in support of the State's efforts to
17 eliminate a public nuisance that is contributing to poor air quality at and near my home
18 which is located at 41 Trinidad Dr. in Fairbanks, Alaska. From my yard I can see the
19 Outdoor Wood Boiler (OWB) located at 58 Trinidad Drive and the OWB located on
20 5055 Palo Verde.

21 2. My wife and I have lived at this location since October, 2005.

22 3. I typically walk around the neighborhood nearly every day while
23 walking my dogs and am able to see when both OWBs are in operation as well as the
24 emissions from both OWBs.

25 4. I have noticed that since OWBs were installed over four years ago
26 on Palo Verde Avenue and Trinidad Drive, the emissions from these boilers have been
obnoxious. While there was occasionally the odor of smoke from indoor wood stoves

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1
2 before, the smell from these two OWBs is noticeably different and offensive, almost a
3 corrosive or creosote-type smell.

4 5. Initially the smoke and smells associated with the boiler were
5 offensive and irritating. As time progressed, I have noted two health effects. In 2010 I
6 had sinus surgery to correct issues due to problems with sinus irritation. I have also had
7 breathing issues since 2008; initially a slight irritation and coughing in my lungs to now
8 being diagnosed this year with adult onset asthma. A recent asthma attack appeared to
9 have reduced my lung capacity to 20% of normal.

10
11 6. Both my wife and I are active outdoors during the winter months. I
12 have now restricted activity in my neighborhood due to the poor air quality. Typically
13 I would walk my dogs daily, but have discontinued this on a regular basis due to the
14 poor air quality. There are times in the past few years where the air in my backyard or
15 front of the house has been of such poor quality that I am unable to shovel snow from
16 the driveway or play outside with my dogs. Visitors to our house complain concerning
17 the amount of smoke in the neighborhood.

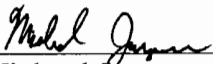
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19 7. While the 2 OWBs at Palo Verde Ave. and Trinidad Dr. are not
20 the only sources of wood smoke in the neighborhood, based on my own observations
21 and personal experience, they are major contributors to the problem.

22
23 8. I believe that if the 2 OWBs were taken out of operation, the air
24 quality at my home would improve, and the quality of life of myself and my wife
25 would also improve.

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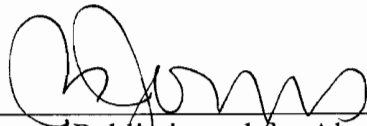
9. Our neighborhood is multi-family residential with small lots, a nearby elementary school and day care facility. These boilers are designed for homesteaders in rural areas and were not designed with the intent of installation in dense neighborhoods. We live in a geographically lower neighborhood and the amount of smoke produced by these two OWBs has exceeded the carrying capacity of our area to dissipate smoke.

10. Attached to this affidavit as Attachment A are five photos I took from my yard of a plume of smoke from the OWB on Trinidad Drive. I took these photos while the OWB was in operation from 2009-2011.


Michael Jaynes

SUBSCRIBED AND SWORN TO before me this 24th day of January, 2013, at Fairbanks, Alaska.




Notary Public in and for Alaska
My Commission Expires: W/O

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1
2 IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

3 FOURTH JUDICIAL DISTRICT AT FAIRBANKS

4 STATE OF ALASKA,)
5 DEPARTMENT OF ENVIRONMENTAL)
6 CONSERVATION,)

7 Plaintiff,)

8 v.)

9 Andrew Straughn and Gloria Straughn,)
10 Defendants.)

Case No. 4FA-13-01205CI

FILED in the Trial Courts
State of Alaska Fourth District

JAN 31 2013

By _____ Deputy

11 AFFIDAVIT OF PEGGY JOHNSON-KALU

12 STATE OF ALASKA)
13) SS.
14 FOURTH JUDICIAL DISTRICT)

15 I, PEGGY E. JOHNSON-KALU being first duly sworn, deposes and
16 says:

17 1. I am submitting this affidavit in support of the State's efforts to
18 eliminate a public nuisance that is contributing to poor air quality at and near my home
19 which is located at 1238 Kuykendall St. in Fairbanks, Alaska. From my yard I can
20 see the Outdoor Wood Boiler (OWB) located at 5055 Palo Verde Ave.

21 2. My husband and I have lived at this location since 1986.

22 3. I have noticed that since OWBs were installed over four years ago
23 on Palo Verde Avenue and Trinidad Drive, the wood smoke smell in this area has
24 become obnoxious. While there was occasionally the odor of smoke from indoor wood
25 stoves before, the smell from these two OWBs is noticeably different and offensive.

26 4. My husband, Kalu Kalu has experienced problems with his eyes

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when the OWB's are active. It is our opinion that the OWB's have caused this medical problems and antibiotic eye drops is his only form of relief.

5. While walking our two dogs both suffered from the particle pollution created by the OWB's. We have stopped walking them in that direction.

6. I personally suffer with throat irritation that I believe is created by the OWB's located in my neighborhood.

7. We can not enjoy our large enclosed porch during the fall as a result of these OWB's. We fear the strong smells, visible smoke and poor air quality in our "back yard".

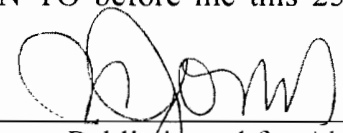
8. While the 2 OWBs at Palo Verde Ave. and Trinidad Dr. are not the only sources of wood smoke in the neighborhood, based on my own observations and personal experience, they are major contributors to the problem.

9. I believe that if those 2 OWB's were taken out of operation, the air quality at my home would improve, and the quality of life of myself and my husband would also improve.


Peggy Johnson-Kalu

SUBSCRIBED AND SWORN TO before me this 25th day of January, 2013, at Fairbanks, Alaska.




Notary Public in and for Alaska
My Commission Expires: w/o

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IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

FOURTH JUDICIAL DISTRICT AT FAIRBANKS

State of Alaska Trial Courts
State of Alaska Fourth District

JAN 31 2013

STATE OF ALASKA,)
DEPARTMENT OF ENVIRONMENTAL)
CONSERVATION,)

Plaintiff,)

v.)

Andrew Straughn and Gloria Straughn,)
Defendants.)

By _____ Deputy

Case No. 4FA-13-01205CI

AFFIDAVIT OF STEPHANIE CLYMER

STATE OF ALASKA)
) SS.
FOURTH JUDICIAL DISTRICT)

I, Stephanie Clymer, being first duly sworn, hereby states as follows:

1. I am preparing and submitting this affidavit to support the State's effort to eliminate a public nuisance that has interfered with my enjoyment of life. I am referring to the operation over the last four plus years of two Outdoor Wood Boilers (OWBs), one located at 5055 Palo Verde Avenue and the other at 58 Trinidad Drive.

2. My husband Richard and I have been residents in Fairbanks for 35 years and currently live at 1271 Kuykendall Street. We have lived there since 1999.

3. From the north side of our home we look directly at the backyard of the house at 5055 Palo Verde Avenue, where one of the two OWBs is located. Attached as attachment A is a map showing our home (marked as D), and the two OWBs. My husband and I also own the vacant lot between our home and the Palo Verde OWB which shares a property line with the Straughn's, as well as all of the lots that back up to the Palo Verde and Trinidad properties, including the OWB at 58

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OFFICE OF THE ATTORNEY GENERAL
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1
2 Trinidad, and their output and location has made it impossible to build on any of the
3 properties, especially the two closest adjoining lots as the smoke stacks would be just a
4 few feet from windows and doors, no matter what design is used.

5 4. When the owner of the houses at 5055 Palo Verde and 58 Trinidad
6 installed the OWBs in 2008, my husband and I both noticed a dramatic deterioration in
7 the air quality at our home. While we had occasionally smelled wood smoke before, it
8 was nothing like the smoke and odors we have suffered from due to the operation of the
9 two OWB's. The change in air quality, and the impact on our lives, has been marked.

10 5. On many occasions over the last four plus years I have had to go
11 inside to get away from smoke that I personally observed coming from one or both of
12 the two OWBs. Windows cannot be opened to enjoy fresh air without filling the entire
13 house with the smell of this caustic smoke. And filters for the HRV filtration system in
14 our home have had to be changed every 3 months instead of once or twice yearly.

15 6. I have always enjoyed working and recreating in my yard, and not
16 being able to do so because of a neighbor's OWBs has seriously harmed my enjoyment
17 of my own property.


18 7. The odor from the two OWBs is different from wood smoke from
19 standard indoor residential wood stoves. It is stronger and more caustic. Sometimes
20 the offensive odors are accompanied by a dense plume of smoke visible at the OWB
21 stack, or if prevailing winds or breeze blow in our direction, you can actually see the
22 layer of smoke settle over our property "socking us in", but at other times the plume is
23 lighter and the smell is still offensive.
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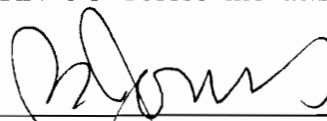
8. While there are certainly some wood stoves in our neighborhood, there is no doubt that the poor air quality that my husband and I have had to put up with for the last four going on five years have been caused by the two OWBs. We can see the smoke leaving the OWBs and drifting over to our home.

9. My husband and I have taken many pictures of plumes from the OWBs over the last four plus years, a few of which are attached as Attachment B. We have also lodged several complaints with the Alaska Department of Environmental Conservation and/or the Fairbanks North Star Borough Assembly Members as they debated this issue.

Further this affiant sayeth naught.


Stephanie Clymer

SUBSCRIBED AND SWORN TO before me this 23 day of January, 2013, at Fairbanks, Alaska.


Notary Public in and for Alaska
My Commission Expires: w/o



STATE OF ALASKA
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STATE OF ALASKA
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IN THE SUPERIOR COURT FOR THE STATE OF ALASKA
FOURTH JUDICIAL DISTRICT AT FAIRBANKS

STATE OF ALASKA,)
DEPARTMENT OF ENVIRONMENTAL)
CONSERVATION,)
Plaintiff,)
)
v.)
)
Andrew Straughn and Gloria Straughn,)
Defendants.)
) Case No. 4FA-13-01205CI

AFFIDAVIT OF WILLIAM SHECHTER

STATE OF ALASKA)
) SS.
FOURTH JUDICIAL DISTRICT)

I, William Shechter, being first duly sworn, deposes and says:

1. I am submitting this affidavit in support of the State's efforts to eliminate a public nuisance that is contributing to poor air quality at and near my home, which is located at 4910 Palo Verde Avenue in Fairbanks, Alaska. From my yard I can see the Outdoor Wood Boiler (OWB) located at 58 Trinidad Drive.

2. My wife Patricia and I are residents of Fairbanks, and have been so for approximately 45 years. I am currently retired but worked as a Firefighter, Fire Chief, and the Borough Emergency Manager for over 30 years before retiring in 2000.

3. Now that I am retired I enjoy walking our golden retrievers around the neighborhood, which I do daily. This gives me a chance to observe conditions and activities in the neighborhood on a daily basis.

4. I have noticed that since OWBs were installed five years ago at two locations – one on Palo Verde Avenue and the other on Trinidad Drive – the wood

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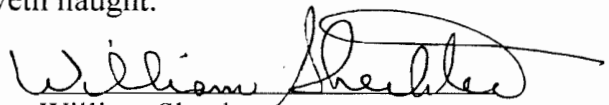
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2 smoke smell in this area has become obnoxious. While there was occasionally the odor
3 of smoke from indoor wood stoves before, the smell from these two OWBs is
4 noticeably different and offensive.

5
6 5. Attached to this affidavit as Attachment A are three photos I took
7 from my yard of a plume of smoke from the OWB on Trinidad Drive. I took these
8 photos in October 2009.

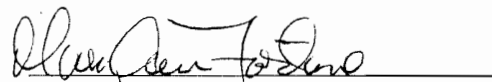
9
10 6. Those times of year when we can open our windows and the
11 OWBs are operating, many times the odor really bothers us inside our home. Obviously
12 during most of the winter we don't notice the odor inside as all windows are closed.
13 The same situation applies during days when we may be outside in our yard and the air
14 reeks with the smell coming from the OWBs.

15
16 7. The issue of lack of air movement in University West Subdivision
17 compounds the problem of the OWB exhausts. Often in the winter it is obvious where
18 the temperature inversion line is by watching the smoke plume from the OWBs and
19 other chimneys. Layers of smoke exhaust often settles back into the subdivision
20 making the OWBs odor really obnoxious – much worse than other chimneys.

21 Further affiant sayeth naught.

22 
23 William Shechter

24 SUBSCRIBED AND SWORN TO before me this 23rd day of January,
25 2013, at Fairbanks, Alaska.

26 
Notary Public in and for Alaska
My Commission Expires: 10/0

1
2 IN THE SUPERIOR COURT FOR THE STATE OF ALASKA
3 FOURTH JUDICIAL DISTRICT AT FAIRBANKS

4 STATE OF ALASKA,)
5 DEPARTMENT OF ENVIRONMENTAL)
6 CONSERVATION)
7 Plaintiff,)
8 v.)
9 Andrew Straughn and Gloria Straughn,)
10 Defendants.)

FILED in the Trial Courts
State of Alaska Fourth District
JAN 31 2013
By _____ Deputy

Case No. 4FA-13-01205CI

11 AFFIDAVIT OF GARY A. SCHULTZ

12 I, Gary Schultz, being first duly sworn, deposes and says:

- 13 1. I am submitting this affidavit in support of the State's efforts to
14 eliminate a public nuisance that is contributing to poor air quality
15 in the vicinity of the Woodriver Elementary School, in Fairbanks,
16 Alaska.
17
18 2. Until recently, I have been a long-time resident of Fairbanks. I
19 came to Fairbanks in May, 1979 to attend graduate school at the
20 University of Alaska. After grad school I worked for almost 30
21 years at the Alaska Department of Natural Resources. I retired
22 from State work in May, 2011. This past September I moved from
23 Fairbanks due to my own smoke-related health issues and to
24 protect my children from the smoke.
25
26

STATE OF ALASKA
DEPARTMENT OF LAW
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3. In the past two winters when in the area near Woodriver Elementary School I have seen thick plumes of smoke coming from the outdoor wood boilers located at 58 Trinidad and 5055 Palo Verde. When time allowed I would sit and watch the smoke for 2 hours or more to see how long the boilers would smoke, how consistent they were. Most of the time when I was there the smoke was very thick and nearly continuous from 8:30 AM until 10:30 AM or later. At times, the smoke drifted toward houses to the south, other times it would drift to the north toward Woodriver School. The smoke occasionally came toward me. It had the strong odor of wood smoke.

4. I have always been a strong, active person who spends a lot of time outdoors. I have been a dog musher, hunter, am currently a wildlife photographer, and I exercise regularly. In December 2011 I had a physical examination and was found to be healthy. However, during another doctor visit in late January, 2012 I was diagnosed with atrial fibrillation (afib). I went from being a skier with good endurance to a person who has difficulty walking down to get the mail, who sits on the sofa huffing and puffing even while resting. Afib is usually associated with folks in their 70s and 80s, not individuals in their 50s like me. However, it can be caused by PM 2.5 exposure. (See "Fine Particulate air Pollution is

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Associated with Higher Vulnerability to Atrial Fibrillation – The APACR Study” in Journal of Toxicology and Environmental Health.) I have no doubt that my afib was caused by wood smoke. In the past year my medical bills have been well over \$100,000. I have had heart surgery (cardiac ablation), and my heart is now beating properly again.

5. Fairbanks was my home for over 30 years. I love Alaska, and had no desire to leave. However, my wife and I refuse to let our children go to school in the smoke zone. The health impacts of wood smoke and PM 2.5 pollution have been well documented. Smoke has impaired my health. We will not let our daughters’ health be similarly affected. Due to a few people who refuse to heat their homes responsibly, Fairbanks is no longer a safe and healthy place to raise a family. Because of the smoke pollution, we left our home and our friends and moved to Washington.

6. Occasionally I have had a video camera with me when I observed smoke coming from the outdoor wood boilers. I have sent two excerpts of these videos to the Attorney General’s Office and understand that these will be exhibits to my affidavit.

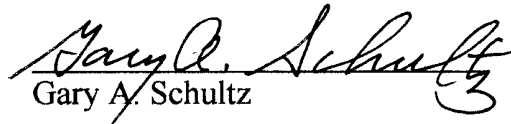
7. Following are descriptions of the two videos:

MVI_8002.MOV I took this video of the Trinidad outdoor wood boiler from Wooddriver’s southwest parking lot at 11:46 AM on

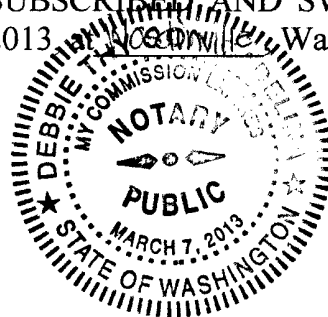
November 18, 2011. I arrived at Woodriver at approximately 7 AM. I observed the boiler smoking heavily from 7 AM until noon. The smoke in the video drifted north in the direction of Woodriver Elementary.


MVI_7966.MOV I took this video of the Palo Verde outdoor wood boiler from the public road at the intersection of Kuykendal St and Costa Ave at 11:59 AM on January 19, 2012. I arrived at this site at 11:13 AM, and the boiler smoked steadily the entire time I was there. Woodriver School is in the background, and the smoke is drifting north toward the school.

Further affiant sayeth naught.


Gary A. Schultz

SUBSCRIBED AND SWORN TO before me this 22nd day of January, 2013 at Yacoville, Washington.




Notary Public in and for Washington
My Commission Expires: 3/7/2013