



**Northwest
Opacity
Certification**

THE NORTHWEST'S ORIGINAL SMOKE SCHOOL
AN ENTERPRISE OF YAKIMA REGIONAL CLEAN AIR

***EPA Method 9
Actual Observation / Testing Procedures***

Completing the Field Observation Form

Carl Brookshire

Certification Test Administration



- 50 (consecutive) Plumes - 25 Black Plumes *and* 25 White Plumes
- Read in 5% Opacity Increments
- Test Readings Are Given in Random Order
- Individual Test, Using Provided Form which is 3 Part Carbonless: White, Yellow, and Pink)

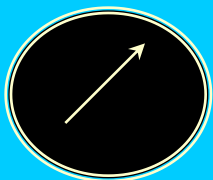
Certification Test Form



- Fill In All Observation Conditions
- Fill Out Form Completely Each Time
- Personal Form And Registration Information Should Be The Same
- Mark Only Relevant Information On The Form
- Make Sure The Form Is Completely Filled Out -Turn In Original (White) page.

Source Layout Sketch

Draw North Arrow



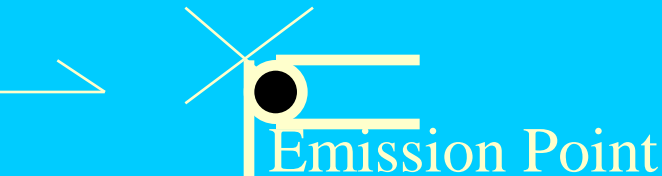
Plume



Wind



Sun



Emission Point

Observer's Position

140

Sun Location Line

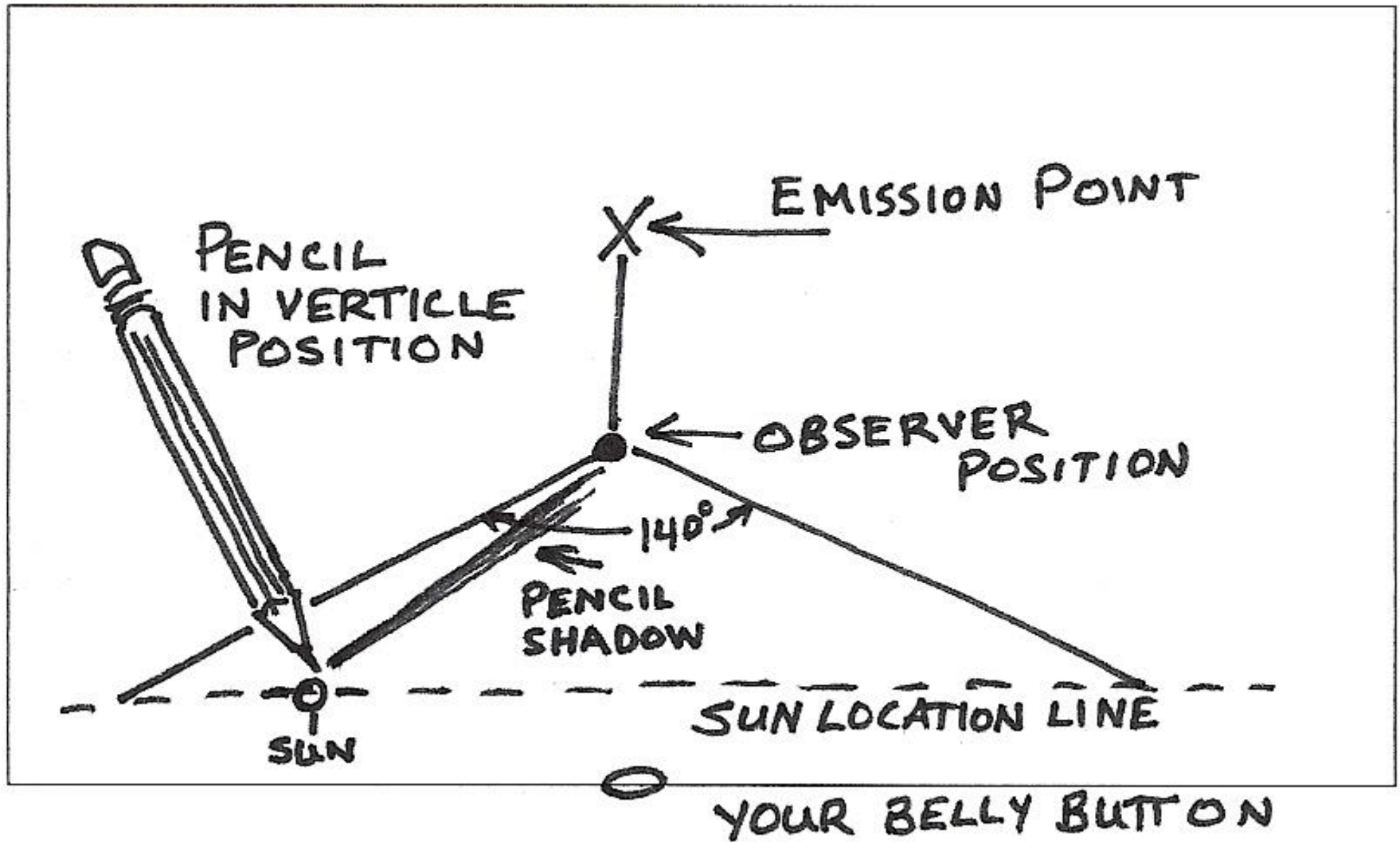


Certification Test Grading



- After Each Run Of 25 Readings We Will Provide The Actual Metered Values

Position – Sun Angle



Introduction

- Three-part, carbonless NCR form
- Fill it out completely
- Make sure your name is:
 - Printed legibly, as well as
 - *Signed*
- Double- and triple-check your calculations!
- Fill out the (green) Certification form

Preliminary Information

- Fill out the Smoke Color
- Fill out all conditions possible before the testing starts
- Enter the operator-given information (Temperature, Humidity & Start Time), and
- Start Test



NORTHWEST OPACITY CERTIFICATION

An Enterprise of Yakima Regional Clean Air

329 North 1st Street, Yakima, WA 98901
Phone: (509) 834-2050 Fax: (509) 834-2060
Website: <http://www.yakimacleanair.org>

I hereby certify that the readings are my own:

Signature _____

Observed with Naked Eye: Yes No

If No, list device type: _____

Location of Test: _____

Business Affiliation _____

and Mailing Address: _____

Observation Conditions

Background: _____

Sky Conditions: _____

Distance from Plume: _____ Color: _____

Source Height: _____

Viewing Angle: _____

Wind Speed: _____

Temperature: _____

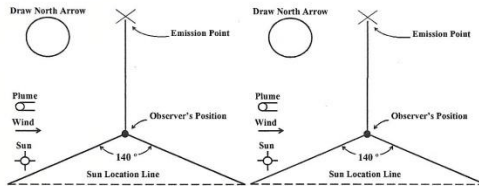
Relative Humidity: _____

Start Time: _____ End Time: _____

Circle Color : Black / White Circle Color : Black / White

Source Layout Sketch

Source Layout Sketch



Background: _____

Sky Conditions: _____

Distance from Plume: _____ Color: _____

Source Height: _____

Viewing Angle: _____

Wind Speed: _____

Temperature: _____

Relative Humidity: _____

Start Time: _____ End Time: _____

Student Observation Record

Name _____

Print Name _____

Date: _____

RUN NUMBER:				RUN NUMBER:			
Circle Color: Black / White				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1				1			
2				2			
3				3			
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			
11				11			
12				12			
13				13			
14				14			
15				15			
16				16			
17				17			
18				18			
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
Total Number of 5% _____ x .2 =				Total Number of 5% _____ x .2 =			

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I hereby certify that the readings are my own:

David Brower
 Signature

Observed with Naked Eye: Yes No

If No, list device type: _____

Location of Test: _____

Business Affiliation _____

and Mailing Address: _____

Observation Conditions

Background: _____

Sky Conditions: _____

Distance from Plume: _____ Color: _____

Source Height: _____

Viewing Angle: _____

Wind Speed: _____

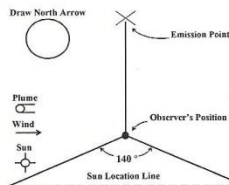
Temperature: _____

Relative Humidity: _____

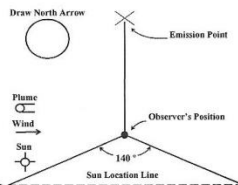
Start Time: _____ End Time: _____

Circle Color : Black / White Circle Color : Black / White

Source Layout Sketch



Source Layout Sketch



Background: _____

Sky Conditions: _____

Distance from Plume: _____ Color: _____

Source Height: _____

Viewing Angle: _____

Wind Speed: _____

Temperature: _____

Relative Humidity: _____

Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
 Print Name

Date: _____

RUN NUMBER:				RUN NUMBER:			
Circle Color: Black / White				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1				1			
2				2			
3				3			
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			
11				11			
12				12			
13				13			
14				14			
15				15			
16				16			
17				17			
18				18			
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

I hereby certify that the readings are my own:

David Brower
 Signature

Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES

Location of Test: _____

Business Affiliation: _____

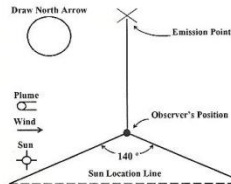
and Mailing Address: _____

Observation Conditions

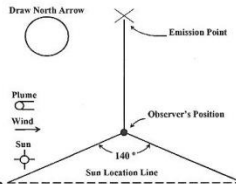
Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Circle Color : Black / White Circle Color : Black / White

Source Layout Sketch



Source Layout Sketch



Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
 Print Name

Date: _____

RUN NUMBER:				RUN NUMBER:			
Circle Color: Black / White				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1				1			
2				2			
3				3			
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			
11				11			
12				12			
13				13			
14				14			
15				15			
16				16			
17				17			
18				18			
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

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 Signature

Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES

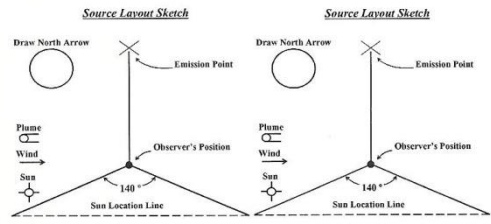
Location of Test: HILLSBORO, OR

Business Affiliation: _____
 and Mailing Address: _____

Observation Conditions

Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Circle Color : Black / White Circle Color : Black / White



Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
 Print Name

Date: _____

RUN NUMBER:				RUN NUMBER:			
Circle Color: Black / White				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1				1			
2				2			
3				3			
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			
11				11			
12				12			
13				13			
14				14			
15				15			
16				16			
17				17			
18				18			
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

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 Website: <http://www.yakimacleanair.org>

I hereby certify that the readings are my own:

David Brower
 Signature

Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

Business Affiliation: YRCAA

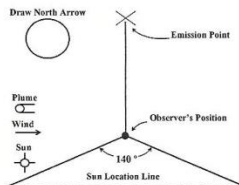
and Mailing Address: 329 N. 1ST ST.
YAKIMA, WA 98901

Observation Conditions

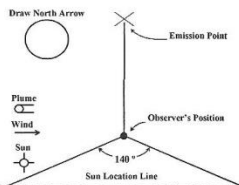
Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Circle Color : Black / White Circle Color : Black / White

Source Layout Sketch



Source Layout Sketch



Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
 Print Name

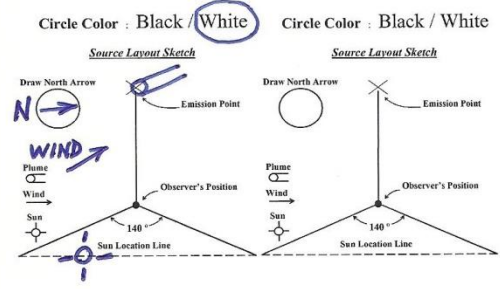
Date: _____

RUN NUMBER:				RUN NUMBER:			
Circle Color: Black / White				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1				1			
2				2			
3				3			
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			
11				11			
12				12			
13				13			
14				14			
15				15			
16				16			
17				17			
18				18			
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

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 Signature

Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES
 Location of Test: HILLSBORO, OR
 Business Affiliation: YRCAA
 and Mailing Address: 329 N. 1ST ST.
YAKIMA, WA 98901

Observation Conditions
 Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____



Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

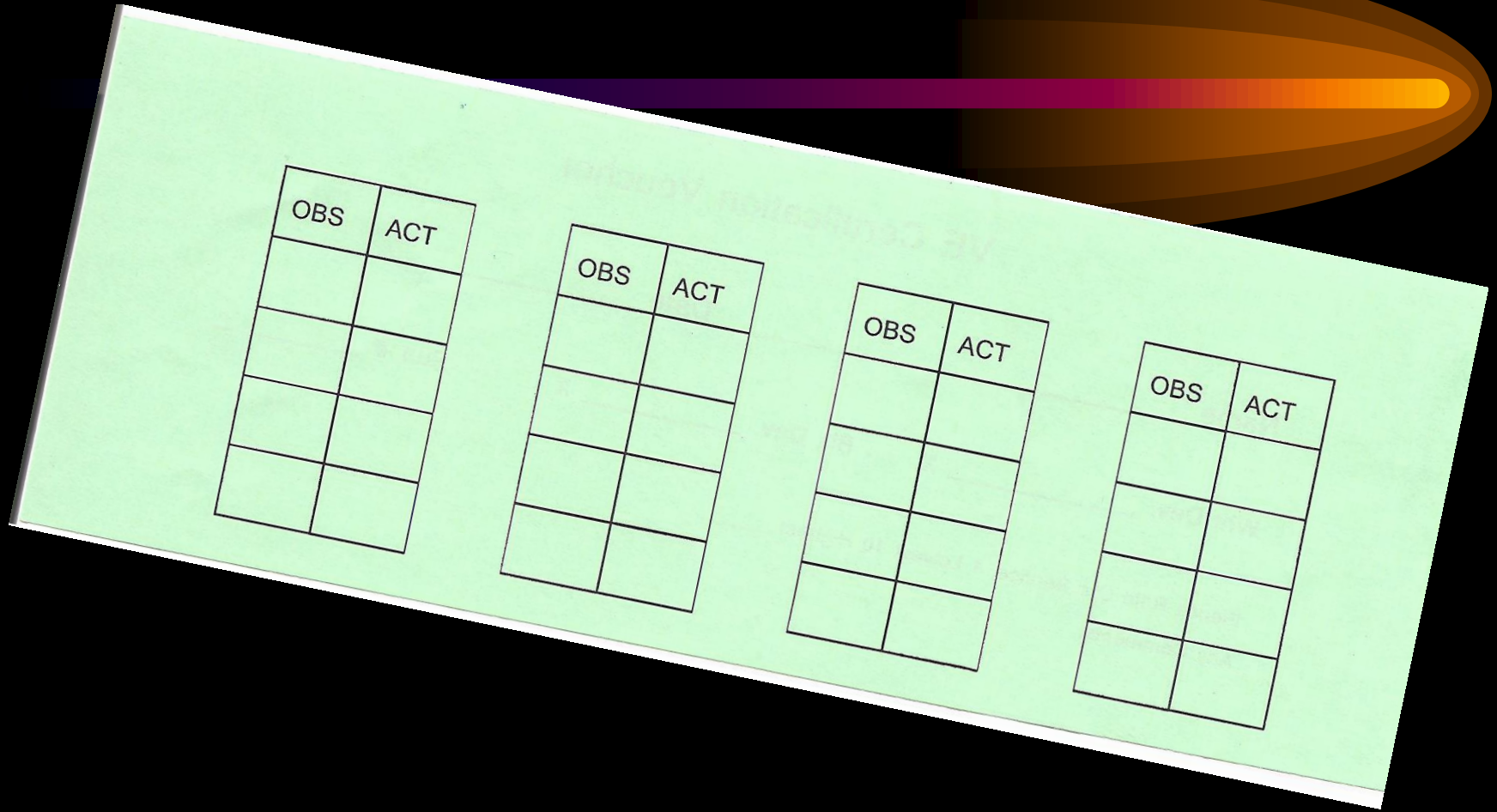
Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

RUN NUMBER:				RUN NUMBER:			
Circle Color: Black / White				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1				1			
2				2			
3				3			
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			
11				11			
12				12			
13				13			
14				14			
15				15			
16				16			
17				17			
18				18			
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

Remember not to put your Practice Sheet on top of your Observation Sheet, or it will transfer through!





25 Percent White



50 Percent White



75 Percent White

OBS	ACT
5	
20	
50	
75	

OBS	ACT

OBS	ACT

OBS	ACT

OBS	ACT
5	5
20	25
50	55
75	80

OBS	ACT

OBS	ACT

OBS	ACT



25 Percent Black



50 Percent Black



75 Percent Black

NOC
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Signature

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If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

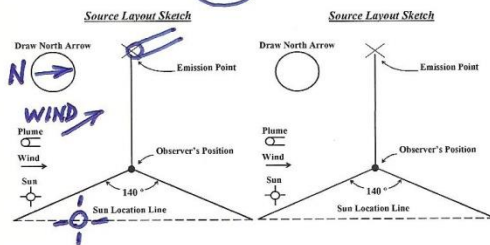
Business Affiliation: YRCAA

and Mailing Address: 329 N. 1ST ST.
YAKIMA, WA 98901

Observation Conditions

Background: TREES
Sky Conditions: CLEAR
Distance from Plume: 45 FEET Color: WHITE
Source Height: 15 FEET
Viewing Angle: 12°
Wind Speed: 1-2 MPH
Temperature: 72°F
Relative Humidity: 40
Start Time: 0900 End Time: _____

Circle Color : Black / White Circle Color : Black / White



Background: _____
Sky Conditions: _____
Distance from Plume: _____ Color: _____
Source Height: _____
Viewing Angle: _____
Wind Speed: _____
Temperature: _____
Relative Humidity: _____
Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
Print Name

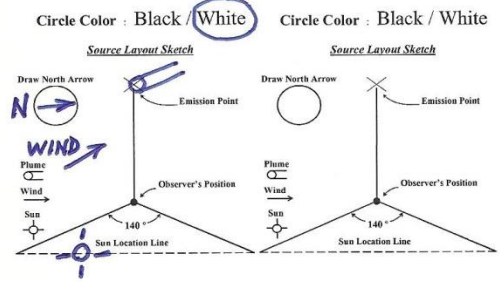
Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER:			
Circle Color: Black / <u>White</u>				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1				1			
2				2			
3				3			
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			
11				11			
12				12			
13				13			
14				14			
15				15			
16				16			
17				17			
18				18			
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

I hereby certify that the readings are my own:
David Brower
 Signature

Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES
 Location of Test: HILLSBORO, OR
 Business Affiliation: YRCAA
 and Mailing Address: 329 N. 1ST ST.
YAKIMA, WA 98901

Observation Conditions
 Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: _____



Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER:			
Circle Color: Black / <u>White</u>				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	<u>50</u>			1			
2	<u>75</u>			2			
3	<u>5</u>			3			
4	<u>20</u>			4			
5	<u>10</u>			5			
6	<u>50</u>			6			
7	<u>5</u>			7			
8	<u>25</u>			8			
9				9			
10				10			
11				11			
12				12			
13				13			
14				14			
15				15			
16				16			
17				17			
18				18			
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

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 If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

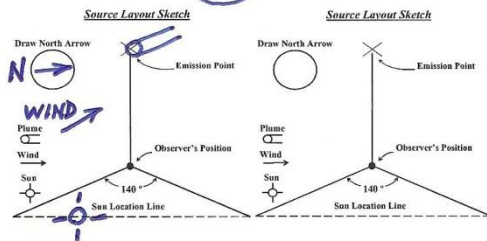
Business Affiliation: YRCAA

and Mailing Address: 329 N. 1ST ST.
YAKIMA, WA 98901

Observation Conditions

Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: _____

Circle Color : Black / White Circle Color : Black / White



Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER:			
Circle Color: Black / <u>White</u>				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	<u>50</u>			1			
2	<u>75</u>			2			
3	<u>5</u>			3			
4	<u>20</u>			4			
5	<u>10</u>			5			
6	<u>50</u>			6			
7	<u>5</u>			7			
8	<u>25 45</u>			8			
9				9			
10				10			
11				11			
12				12			
13				13			
14				14			
15				15			
16				16			
17				17			
18				18			
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

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David Brower
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 If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

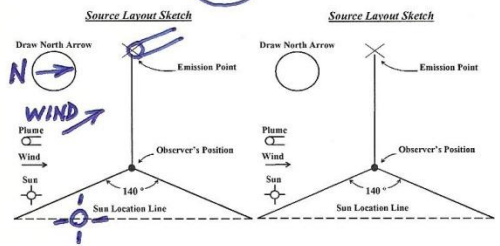
Business Affiliation: YRCAA

and Mailing Address: 329 N. 1ST ST.
YAKIMA, WA 98901

Observation Conditions

Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: 0915

Circle Color: Black / White Circle Color: Black / White



Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER:			
Circle Color: Black / <u>White</u>				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	<u>50</u>			1			
2	<u>75</u>			2			
3	<u>5</u>			3			
4	<u>20</u>			4			
5	<u>10</u>			5			
6	<u>50</u>			6			
7	<u>5</u>			7			
8	25 <u>45</u>			8			
9	<u>80</u>			9			
10	<u>25</u>			10			
11	<u>5</u>			11			
12	<u>10</u>			12			
13	<u>25</u>			13			
14	<u>20</u>			14			
15	<u>5</u>			15			
16	<u>15</u>			16			
17	<u>75</u>			17			
18	<u>85</u>			18			
19	<u>100</u>			19			
20	<u>10</u>			20			
21	<u>25</u>			21			
22	<u>20</u>			22			
23	<u>5</u>			23			
24	<u>15</u>			24			
25	<u>0</u>			25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

Completing 50 Consecutive Readings



- After completing 25 readings on the first color, hand in the top (white) copy.
- Record metered values for your first run on second (yellow) copy & compute your score
- If you passed the first color, continue testing the next color on the yellow sheet.
- (If you did not pass the first color, **discard** test and begin next color on a **new** test form.)

NOC
NORTHWEST OPACITY CERTIFICATION
 An Enterprise of Yakima Regional Clean Air

329 North 1st Street, Yakima, WA 98901
 Phone: (509) 834-2050 Fax: (509) 834-2060
 Website: <http://www.yakimacleanair.org>

I hereby certify that the readings are my own:

David Brower
 Signature

Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES

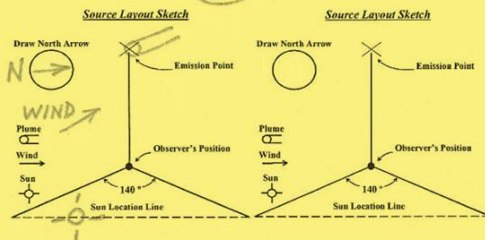
Location of Test: HILLSBORO, OR

Business Affiliation: YRCAA
 and Mailing Address: 329 N. 1ST ST
YAKIMA, WA 98901

Observation Conditions

Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: 0915

Circle Color: Black / White Circle Color: Black / White



Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER:			
Circle Color: Black / <u>White</u>				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	<u>50</u>	<u>50</u>		1			
2	<u>75</u>	<u>75</u>		2			
3	<u>5</u>	<u>10</u>		3			
4	<u>20</u>	<u>15</u>		4			
5	<u>10</u>	<u>10</u>		5			
6	<u>50</u>	<u>45</u>		6			
7	<u>5</u>	<u>5</u>		7			
8	<u>25</u>	<u>45</u>	<u>50</u>	8			
9	<u>80</u>	<u>75</u>		9			
10	<u>25</u>	<u>25</u>		10			
11	<u>5</u>	<u>5</u>		11			
12	<u>10</u>	<u>15</u>		12			
13	<u>25</u>	<u>25</u>		13			
14	<u>20</u>	<u>20</u>		14			
15	<u>5</u>	<u>5</u>		15			
16	<u>15</u>	<u>10</u>		16			
17	<u>75</u>	<u>70</u>		17			
18	<u>85</u>	<u>80</u>		18			
19	<u>100</u>	<u>100</u>		19			
20	<u>10</u>	<u>5</u>		20			
21	<u>25</u>	<u>15</u>		21			
22	<u>20</u>	<u>10</u>		22			
23	<u>5</u>	<u>5</u>		23			
24	<u>15</u>	<u>15</u>		24			
25	<u>0</u>	<u>0</u>		25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

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David Brower
Signature

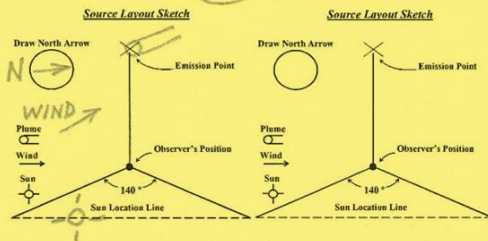
Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR
 Business Affiliation: YRCAA
 and Mailing Address: 329 N. 1ST ST.
YAKIMA, WA 98901

Observation Conditions

Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: 0915

Circle Color : Black / White Circle Color : Black / White



Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER:			
Circle Color: Black / <u>White</u>				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	<u>50</u>	<u>50</u>		1			
2	<u>75</u>	<u>75</u>		2			
3	<u>5</u>	<u>10</u>	<u>1</u>	3			
4	<u>20</u>	<u>15</u>	<u>1</u>	4			
5	<u>10</u>	<u>10</u>		5			
6	<u>50</u>	<u>45</u>	<u>1</u>	6			
7	<u>5</u>	<u>5</u>		7			
8	<u>25</u>	<u>45</u>	<u>50</u>	8			
9	<u>80</u>	<u>75</u>	<u>1</u>	9			
10	<u>25</u>	<u>25</u>		10			
11	<u>5</u>	<u>5</u>		11			
12	<u>10</u>	<u>15</u>	<u>1</u>	12			
13	<u>25</u>	<u>25</u>		13			
14	<u>20</u>	<u>20</u>		14			
15	<u>5</u>	<u>5</u>		15			
16	<u>15</u>	<u>10</u>	<u>1</u>	16			
17	<u>75</u>	<u>70</u>	<u>1</u>	17			
18	<u>85</u>	<u>80</u>	<u>1</u>	18			
19	<u>100</u>	<u>100</u>		19			
20	<u>10</u>	<u>5</u>	<u>1</u>	20			
21	<u>25</u>	<u>15</u>	<u>2</u>	21			
22	<u>20</u>	<u>10</u>	<u>2</u>	22			
23	<u>5</u>	<u>5</u>		23			
24	<u>15</u>	<u>15</u>		24			
25	<u>0</u>	<u>0</u>		25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

NOC
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Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

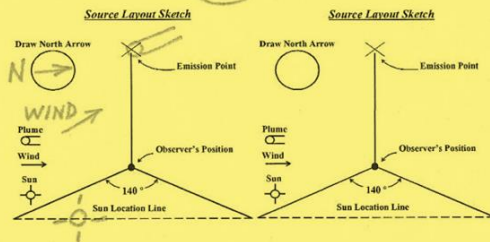
Business Affiliation: YRCAA

and Mailing Address: 329 N. 1ST ST.
YAKIMA, WA 98901

Observation Conditions

Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: 0915

Circle Color : Black / White Circle Color : Black / White



Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER:			
Circle Color: Black / <u>White</u>				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No of 5%	No.	Obs.	Met.	Eq.No of 5%
1	50	50		1			
2	75	75		2			
3	5	10	1	3			
4	20	15	1	4			
5	10	10		5			
6	50	45	1	6			
7	5	5		7			
8	25	45	50	1	8		
9	80	75	1	9			
10	25	25		10			
11	5	5		11			
12	10	15	1	12			
13	25	25		13			
14	20	20		14			
15	5	5		15			
16	15	10	1	16			
17	75	70	1	17			
18	85	80	1	18			
19	100	100		19			
20	10	5	1	20			
21	25	15	2	21			
22	20	10	2	22			
23	5	5		23			
24	15	15		24			
25	0	0		25			
Total Number of 5% <u>14</u> x .2 =				Total Number of 5% _____ x .2 =			

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 If No, list device type: CONTACT LENSES

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Business Affiliation: YRCAA

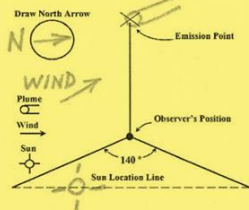
and Mailing Address: 329 N. 1st ST.
YAKIMA, WA 98901

Observation Conditions

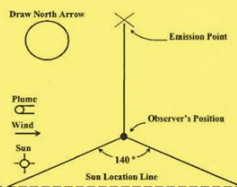
Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: 0915

Circle Color: Black / White Circle Color: Black / White

Source Layout Sketch



Source Layout Sketch



Background: _____
 Sky Conditions: _____
 Distance from Plume: _____ Color: _____
 Source Height: _____
 Viewing Angle: _____
 Wind Speed: _____
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER:			
Circle Color: Black / <u>White</u>				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	<u>50</u>	<u>50</u>		1			
2	<u>75</u>	<u>75</u>		2			
3	<u>5</u>	<u>10</u>	<u>1</u>	3			
4	<u>20</u>	<u>15</u>	<u>1</u>	4			
5	<u>10</u>	<u>10</u>		5			
6	<u>50</u>	<u>45</u>	<u>1</u>	6			
7	<u>5</u>	<u>5</u>		7			
8	25	45	<u>50</u>	<u>1</u>	8		
9	<u>80</u>	<u>75</u>	<u>1</u>	9			
10	<u>25</u>	<u>25</u>		10			
11	<u>5</u>	<u>5</u>		11			
12	<u>10</u>	<u>15</u>	<u>1</u>	12			
13	<u>25</u>	<u>25</u>		13			
14	<u>20</u>	<u>20</u>		14			
15	<u>5</u>	<u>5</u>		15			
16	<u>15</u>	<u>10</u>	<u>1</u>	16			
17	<u>75</u>	<u>70</u>	<u>1</u>	17			
18	<u>85</u>	<u>80</u>	<u>1</u>	18			
19	<u>100</u>	<u>100</u>		19			
20	<u>10</u>	<u>5</u>	<u>1</u>	20			
21	<u>25</u>	<u>15</u>	<u>2</u>	21			
22	<u>20</u>	<u>10</u>	<u>2</u>	22			
23	<u>5</u>	<u>5</u>		23			
24	<u>15</u>	<u>15</u>		24			
25	<u>0</u>	<u>0</u>		25			
Total Number of 5% <u>14</u> x .2 = <u>2.8</u>				Total Number of 5% _____ x .2 = _____			

Test Scoring



- Average Deviation must be 7.4% or less (37 or fewer increments of 5%)
- No single answer can be off by 20% or more (4 increments of 5%)

I hereby certify that the readings are my own:

David Brower
 Signature

Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

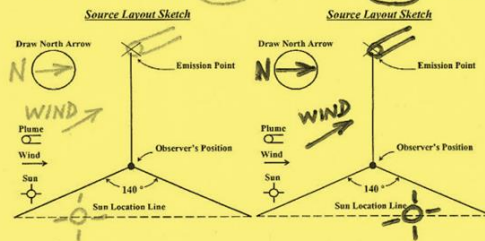
Business Affiliation: YRCAA

and Mailing Address: 329 N. 1ST ST
YAKIMA, WA 98901

Observation Conditions

Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: 0915

Circle Color: Black / White Circle Color: Black / White



Background: BLUE SKY
 Sky Conditions: SCATTERED CLOUDS
 Distance from Plume: 45 FEET Color: BLACK
 Source Height: 15 FEET
 Viewing Angle: 15°
 Wind Speed: 5 mph
 Temperature: _____
 Relative Humidity: _____
 Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER:			
Circle Color: Black / <u>White</u>				Circle Color: <u>Black</u> / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	50	50		1			
2	75	75		2			
3	5	10	1	3			
4	20	15	1	4			
5	10	10		5			
6	50	45	1	6			
7	5	5		7			
8	25	45	50	8			
9	80	75	1	9			
10	25	25		10			
11	5	5		11			
12	10	15	1	12			
13	25	25		13			
14	20	20		14			
15	5	5		15			
16	15	10	1	16			
17	75	70	1	17			
18	85	80	1	18			
19	100	100		19			
20	10	5	1	20			
21	25	15	2	21			
22	20	10	2	22			
23	5	5		23			
24	15	15		24			
25	0	0		25			
Total Number of <u>14</u> x .2 = <u>2.8</u>				Total Number of 5% _____ x .2 = _____			



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If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

Business Affiliation: YRCAA

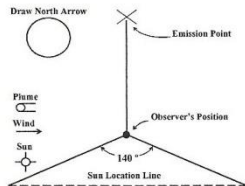
and Mailing Address: 329 N. 1ST ST.
YAKIMA, WA 98901

Observation Conditions

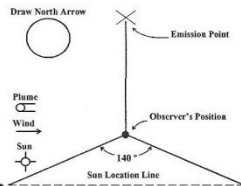
Background: _____
Sky Conditions: _____
Distance from Plume: _____ Color: _____
Source Height: _____
Viewing Angle: _____
Wind Speed: _____
Temperature: _____
Relative Humidity: _____
Start Time: _____ End Time: _____

Circle Color : Black / White Circle Color : Black / White

Source Layout Sketch



Source Layout Sketch



Background: _____
Sky Conditions: _____
Distance from Plume: _____ Color: _____
Source Height: _____
Viewing Angle: _____
Wind Speed: _____
Temperature: _____
Relative Humidity: _____
Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
Print Name

Date: 03-16-2015

RUN NUMBER:				RUN NUMBER:			
Circle Color: Black / White				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1				1			
2				2			
3				3			
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			
11				11			
12				12			
13				13			
14				14			
15				15			
16				16			
17				17			
18				18			
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

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 If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

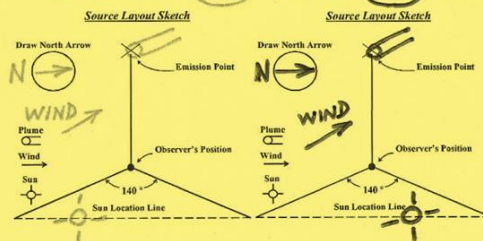
Business Affiliation: YRCAA

and Mailing Address: 329 N. 1ST ST
YAKIMA, WA 98901

Observation Conditions

Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: 0915

Circle Color : Black / White Circle Color Black / White



Background: BLUE SKY
 Sky Conditions: SCATTERED CLOUDS
 Distance from Plume: 45 FEET Color: BLACK
 Source Height: 15 FEET
 Viewing Angle: 15°
 Wind Speed: 5 mph
 Temperature: 71°F
 Relative Humidity: 42%
 Start Time: 0920 End Time: _____

Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER: <u>1B</u>			
Circle Color: Black / <input checked="" type="checkbox"/> White				Circle Color: <input checked="" type="checkbox"/> Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	50	50		1			
2	75	75		2			
3	5	10	1	3			
4	20	15	1	4			
5	10	10		5			
6	50	45	1	6			
7	5	5		7			
8	25	45	50	1			
9	80	75	1	9			
10	25	25		10			
11	5	5		11			
12	10	15	1	12			
13	25	25		13			
14	20	20		14			
15	5	5		15			
16	15	10	1	16			
17	75	70	1	17			
18	85	80	1	18			
19	100	100		19			
20	10	5	1	20			
21	25	15	2	21			
22	20	10	2	22			
23	5	5		23			
24	15	15		24			
25	0	0		25			
Total Number of 5% <u>14</u> x .2 = <u>2.8</u>				Total Number of 5% _____ x .2 = _____			

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David Brower
 Signature

Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

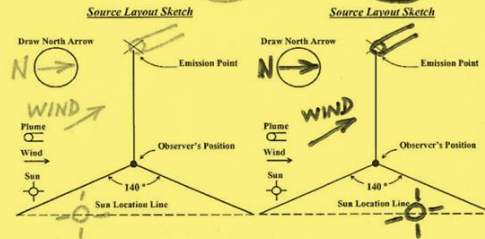
Business Affiliation: YRCAA

and Mailing Address: 329 N. 1ST ST
YAKIMA, WA 98901

Observation Conditions

Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: 0915

Circle Color: Black / White Circle Color: Black / White



Background: BLUE SKY
 Sky Conditions: SCATTERED CLOUDS
 Distance from Plume: 45 FEET Color: BLACK
 Source Height: 15 FEET
 Viewing Angle: 15°
 Wind Speed: 5 mph
 Temperature: 71°F
 Relative Humidity: 42%
 Start Time: 0920 End Time: 0935

Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER: <u>1B</u>			
Circle Color: Black / <input checked="" type="checkbox"/> White				Circle Color: <input checked="" type="checkbox"/> Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	50	50		1	25		
2	75	75		2	10		
3	5	10	1	3	25		
4	20	15	1	4	5		
5	10	10		5	35		
6	50	45	1	6	45		
7	5	5		7	80		
8	25	45	50	1	60		
9	80	75	1	9	30		
10	25	25		10	0		
11	5	5		11	10		
12	10	15	1	12	20		
13	25	25		13	5		
14	20	20		14	55		
15	5	5		15	90		
16	15	10	1	16	0		
17	75	70	1	17	5		
18	85	80	1	18	25		
19	100	100		19	35		
20	10	5	1	20	5		
21	25	15	2	21	5		
22	20	10	2	22	0		
23	5	5		23	15		
24	15	15		24	20		
25	0	0		25	10		
Total Number of 5% <u>14</u> x .2 = <u>2.8</u>				Total Number of 5% _____ x .2 = _____			

Completing 50 Consecutive Readings



- After completing 25 readings on the second color, hand in the top (**yellow**) copy.
- Record metered values for second run on the last (**pink**) copy & compute your score
- If you passed the second color, you're done!
- Retain **pink** copy for your own record.
- (If you did not pass the second color, discard test and begin again on **new** test form.)

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David Brower
 Signature

Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

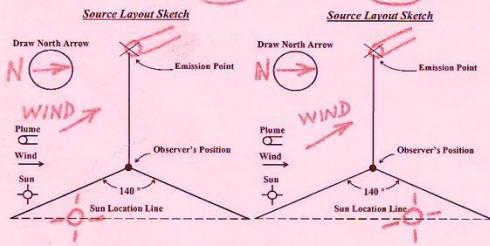
Business Affiliation: YRCAA

and Mailing Address: 329 N. 1st ST
YAKIMA, WA 98901

Observation Conditions

Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: 0915

Circle Color: Black / White Circle Color: Black / White



Background: BLUE SKY
 Sky Conditions: SCATTERED CLOUDS
 Distance from Plume: 45 FEET Color: BLACK
 Source Height: 15 FEET
 Viewing Angle: 15°
 Wind Speed: 5 mph
 Temperature: 71°F
 Relative Humidity: 42%
 Start Time: 0920 End Time: 0935

Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

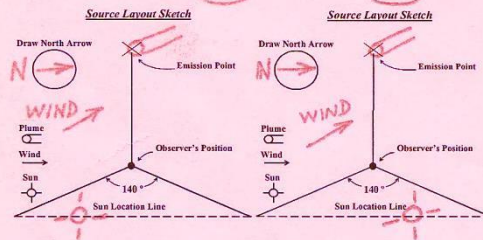
RUN NUMBER: <u>1W</u>				RUN NUMBER: <u>1B</u>			
Circle Color: Black / <u>White</u>				Circle Color: <u>Black</u> / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	<u>50</u>	<u>50</u>		1	<u>25</u>	<u>25</u>	
2	<u>75</u>	<u>75</u>		2	<u>10</u>	<u>5</u>	
3	<u>5</u>	<u>10</u>	<u>1</u>	3	<u>25</u>	<u>10</u>	
4	<u>20</u>	<u>15</u>	<u>1</u>	4	<u>5</u>	<u>5</u>	
5	<u>10</u>	<u>10</u>		5	<u>35</u>	<u>20</u>	
6	<u>50</u>	<u>45</u>	<u>1</u>	6	<u>45</u>	<u>55</u>	
7	<u>5</u>	<u>5</u>		7	<u>80</u>	<u>65</u>	
8	<u>25</u>	<u>45</u>	<u>50</u>	<u>1</u>	8	<u>60</u>	<u>50</u>
9	<u>80</u>	<u>75</u>	<u>1</u>	9	<u>30</u>	<u>30</u>	
10	<u>25</u>	<u>25</u>		10	<u>0</u>	<u>0</u>	
11	<u>5</u>	<u>5</u>		11	<u>10</u>	<u>10</u>	
12	<u>10</u>	<u>15</u>	<u>1</u>	12	<u>20</u>	<u>25</u>	
13	<u>25</u>	<u>25</u>		13	<u>5</u>	<u>10</u>	
14	<u>20</u>	<u>20</u>		14	<u>55</u>	<u>50</u>	
15	<u>5</u>	<u>5</u>		15	<u>90</u>	<u>75</u>	
16	<u>15</u>	<u>10</u>	<u>1</u>	16	<u>0</u>	<u>0</u>	
17	<u>75</u>	<u>70</u>	<u>1</u>	17	<u>5</u>	<u>5</u>	
18	<u>85</u>	<u>80</u>	<u>1</u>	18	<u>25</u>	<u>15</u>	
19	<u>100</u>	<u>100</u>		19	<u>35</u>	<u>20</u>	
20	<u>10</u>	<u>5</u>	<u>1</u>	20	<u>5</u>	<u>5</u>	
21	<u>25</u>	<u>15</u>	<u>2</u>	21	<u>5</u>	<u>10</u>	
22	<u>20</u>	<u>10</u>	<u>2</u>	22	<u>0</u>	<u>0</u>	
23	<u>5</u>	<u>5</u>		23	<u>15</u>	<u>15</u>	
24	<u>15</u>	<u>15</u>		24	<u>20</u>	<u>25</u>	
25	<u>0</u>	<u>0</u>		25	<u>10</u>	<u>10</u>	
Total Number of 5% <u>14</u> x .2 = <u>2.8</u>				Total Number of 5% _____ x .2 = _____			

NOC**NORTHWEST OPACITY CERTIFICATION**

An Enterprise of Yakima Regional Clean Air

329 North 1st Street, Yakima, WA 98901
Phone: (509) 834-2050 Fax: (509) 834-2060
Website: <http://www.yakimacleanair.org>

I hereby certify that the readings are my own:

David Brower
SignatureObserved with Naked Eye: Yes NoIf No, list device type: CONTACT LENSESLocation of Test: HILLSBORO, ORBusiness Affiliation: YRCAAand Mailing Address: 329 N. 1st ST.
YAKIMA, WA 98901Observation ConditionsBackground: TREES
Sky Conditions: CLEAR
Distance from Plume: 45 FEET Color: WHITE
Source Height: 15 FEET
Viewing Angle: 12°
Wind Speed: 1-2 MPH
Temperature: 72°F
Relative Humidity: 40
Start Time: 0900 End Time: 0915Circle Color - Black / White Circle Color Black / WhiteBackground: BLUE SKY
Sky Conditions: SCATTERED CLOUDS
Distance from Plume: 45 FEET Color: BLACK
Source Height: 15 FEET
Viewing Angle: 15°
Wind Speed: 5 mph
Temperature: 71°F
Relative Humidity: 42%
Start Time: 0920 End Time: 0935**Student Observation Record**Name DAVID BROWER
Print NameDate: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER: <u>1B</u>			
Circle Color: Black / <input checked="" type="checkbox"/> White				Circle Color: <input checked="" type="checkbox"/> Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	<u>50</u>	<u>50</u>		1	<u>25</u>	<u>25</u>	
2	<u>75</u>	<u>75</u>		2	<u>10</u>	<u>5</u>	<u>1</u>
3	<u>5</u>	<u>10</u>	<u>1</u>	3	<u>25</u>	<u>10</u>	<u>3</u>
4	<u>20</u>	<u>15</u>	<u>1</u>	4	<u>5</u>	<u>5</u>	
5	<u>10</u>	<u>10</u>		5	<u>35</u>	<u>20</u>	<u>3</u>
6	<u>50</u>	<u>45</u>	<u>1</u>	6	<u>45</u>	<u>55</u>	<u>2</u>
7	<u>5</u>	<u>5</u>		7	<u>80</u>	<u>65</u>	<u>3</u>
8	<u>25</u>	<u>45</u>	<u>50</u>	8	<u>60</u>	<u>50</u>	<u>2</u>
9	<u>80</u>	<u>75</u>	<u>1</u>	9	<u>30</u>	<u>30</u>	
10	<u>25</u>	<u>25</u>		10	<u>0</u>	<u>0</u>	
11	<u>5</u>	<u>5</u>		11	<u>10</u>	<u>10</u>	
12	<u>10</u>	<u>15</u>	<u>1</u>	12	<u>20</u>	<u>25</u>	<u>1</u>
13	<u>25</u>	<u>25</u>		13	<u>5</u>	<u>10</u>	<u>1</u>
14	<u>20</u>	<u>20</u>		14	<u>55</u>	<u>50</u>	<u>1</u>
15	<u>5</u>	<u>5</u>		15	<u>90</u>	<u>75</u>	<u>3</u>
16	<u>15</u>	<u>10</u>	<u>1</u>	16	<u>0</u>	<u>0</u>	
17	<u>75</u>	<u>70</u>	<u>1</u>	17	<u>5</u>	<u>5</u>	
18	<u>85</u>	<u>80</u>	<u>1</u>	18	<u>25</u>	<u>15</u>	<u>2</u>
19	<u>100</u>	<u>100</u>		19	<u>35</u>	<u>20</u>	<u>3</u>
20	<u>10</u>	<u>5</u>	<u>1</u>	20	<u>5</u>	<u>5</u>	
21	<u>25</u>	<u>15</u>	<u>2</u>	21	<u>5</u>	<u>10</u>	<u>1</u>
22	<u>20</u>	<u>10</u>	<u>2</u>	22	<u>0</u>	<u>0</u>	
23	<u>5</u>	<u>5</u>		23	<u>15</u>	<u>15</u>	
24	<u>15</u>	<u>15</u>		24	<u>20</u>	<u>25</u>	<u>1</u>
25	<u>0</u>	<u>0</u>		25	<u>10</u>	<u>10</u>	
Total Number of 5% <u>14</u> x .2 = <u>2.8</u>				Total Number of 5% _____ x .2 = _____			

NOC
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Website: <http://www.yakimacleanair.org>

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David Brower
Signature

Observed with Naked Eye: Yes No
If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

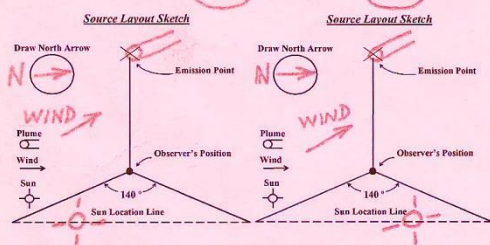
Business Affiliation: YRCAA

and Mailing Address: 329 N. 1ST ST.
YAKIMA, WA 98901

Observation Conditions

Background: TREES
Sky Conditions: CLEAR
Distance from Plume: 45 FEET Color: WHITE
Source Height: 15 FEET
Viewing Angle: 12°
Wind Speed: 1-2 MPH
Temperature: 72°F
Relative Humidity: 40
Start Time: 0900 End Time: 0915

Circle Color : Black / White Circle Color Black / White



Background: BLUE SKY
Sky Conditions: SCATTERED CLOUDS
Distance from Plume: 45 FEET Color: BLACK
Source Height: 15 FEET
Viewing Angle: 15°
Wind Speed: 5 mph
Temperature: 71°F
Relative Humidity: 42%
Start Time: 0920 End Time: 0935

Student Observation Record

Name DAVID BROWER
Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER: <u>1B</u>			
Circle Color: Black / <u>White</u>				Circle Color: <u>Black</u> / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	<u>50</u>	<u>50</u>		1	<u>25</u>	<u>25</u>	
2	<u>75</u>	<u>75</u>		2	<u>10</u>	<u>5</u>	<u>1</u>
3	<u>5</u>	<u>10</u>	<u>1</u>	3	<u>25</u>	<u>10</u>	<u>3</u>
4	<u>20</u>	<u>15</u>	<u>1</u>	4	<u>5</u>	<u>5</u>	
5	<u>10</u>	<u>10</u>		5	<u>35</u>	<u>20</u>	<u>3</u>
6	<u>50</u>	<u>45</u>	<u>1</u>	6	<u>45</u>	<u>55</u>	<u>2</u>
7	<u>5</u>	<u>5</u>		7	<u>80</u>	<u>65</u>	<u>3</u>
8	<u>25</u>	<u>45</u>	<u>50</u>	8	<u>60</u>	<u>50</u>	<u>2</u>
9	<u>80</u>	<u>75</u>	<u>1</u>	9	<u>30</u>	<u>30</u>	
10	<u>25</u>	<u>25</u>		10	<u>0</u>	<u>0</u>	
11	<u>5</u>	<u>5</u>		11	<u>10</u>	<u>10</u>	
12	<u>10</u>	<u>15</u>	<u>1</u>	12	<u>20</u>	<u>25</u>	<u>1</u>
13	<u>25</u>	<u>25</u>		13	<u>5</u>	<u>10</u>	<u>1</u>
14	<u>20</u>	<u>20</u>		14	<u>55</u>	<u>50</u>	<u>1</u>
15	<u>5</u>	<u>5</u>		15	<u>90</u>	<u>75</u>	<u>3</u>
16	<u>15</u>	<u>10</u>	<u>1</u>	16	<u>0</u>	<u>0</u>	
17	<u>75</u>	<u>70</u>	<u>1</u>	17	<u>5</u>	<u>5</u>	
18	<u>85</u>	<u>80</u>	<u>1</u>	18	<u>25</u>	<u>15</u>	<u>2</u>
19	<u>100</u>	<u>100</u>		19	<u>35</u>	<u>20</u>	<u>3</u>
20	<u>10</u>	<u>5</u>	<u>1</u>	20	<u>5</u>	<u>5</u>	
21	<u>25</u>	<u>15</u>	<u>2</u>	21	<u>5</u>	<u>10</u>	<u>1</u>
22	<u>20</u>	<u>10</u>	<u>2</u>	22	<u>0</u>	<u>0</u>	
23	<u>5</u>	<u>5</u>		23	<u>15</u>	<u>15</u>	
24	<u>15</u>	<u>15</u>		24	<u>20</u>	<u>25</u>	<u>1</u>
25	<u>0</u>	<u>0</u>		25	<u>10</u>	<u>10</u>	

Total Number of 5% 14 x .2 = 2.8 Total Number of 5% 27 x .2 = 5.4

NOC
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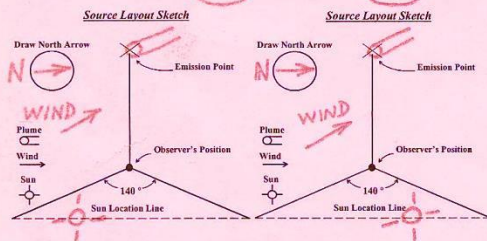
Business Affiliation: YRCAA

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Observation Conditions

Background: TREES
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 Relative Humidity: 40
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Background: BLUE SKY
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Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER: <u>1B</u>				
Circle Color: Black / <u>White</u>				Circle Color: <u>Black</u> / White				
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%	
1	<u>50</u>	<u>50</u>		1	<u>25</u>	<u>25</u>		
2	<u>75</u>	<u>75</u>		2	<u>10</u>	<u>5</u>	<u>1</u>	
3	<u>5</u>	<u>10</u>	<u>1</u>	3	<u>25</u>	<u>10</u>	<u>3</u>	
4	<u>20</u>	<u>15</u>	<u>1</u>	4	<u>5</u>	<u>5</u>		
5	<u>10</u>	<u>10</u>		5	<u>35</u>	<u>20</u>	<u>3</u>	
6	<u>50</u>	<u>45</u>	<u>1</u>	6	<u>45</u>	<u>55</u>	<u>2</u>	
7	<u>5</u>	<u>5</u>		7	<u>80</u>	<u>65</u>	<u>3</u>	
8	<u>25</u>	<u>45</u>	<u>50</u>	<u>1</u>	8	<u>60</u>	<u>50</u>	<u>2</u>
9	<u>80</u>	<u>75</u>	<u>1</u>	9	<u>30</u>	<u>30</u>		
10	<u>25</u>	<u>25</u>		10	<u>0</u>	<u>0</u>		
11	<u>5</u>	<u>5</u>		11	<u>10</u>	<u>10</u>		
12	<u>10</u>	<u>15</u>	<u>1</u>	12	<u>20</u>	<u>25</u>	<u>1</u>	
13	<u>25</u>	<u>25</u>		13	<u>5</u>	<u>10</u>	<u>1</u>	
14	<u>20</u>	<u>20</u>		14	<u>55</u>	<u>50</u>	<u>1</u>	
15	<u>5</u>	<u>5</u>		15	<u>90</u>	<u>75</u>	<u>3</u>	
16	<u>15</u>	<u>10</u>	<u>1</u>	16	<u>0</u>	<u>0</u>		
17	<u>75</u>	<u>70</u>	<u>1</u>	17	<u>5</u>	<u>5</u>		
18	<u>85</u>	<u>80</u>	<u>1</u>	18	<u>25</u>	<u>15</u>	<u>2</u>	
19	<u>100</u>	<u>100</u>		19	<u>35</u>	<u>20</u>	<u>3</u>	
20	<u>10</u>	<u>5</u>	<u>1</u>	20	<u>5</u>	<u>5</u>		
21	<u>25</u>	<u>15</u>	<u>2</u>	21	<u>5</u>	<u>10</u>	<u>1</u>	
22	<u>20</u>	<u>10</u>	<u>2</u>	22	<u>0</u>	<u>0</u>		
23	<u>5</u>	<u>5</u>		23	<u>15</u>	<u>15</u>		
24	<u>15</u>	<u>15</u>		24	<u>20</u>	<u>25</u>	<u>1</u>	
25	<u>0</u>	<u>0</u>		25	<u>10</u>	<u>10</u>		
Total Number of 5% <u>14</u> x .2 = <u>2.8</u>				Total Number of 5% <u>27</u> x .2 = <u>5.4</u>				



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An Enterprise of Yakima Regional Clean Air

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If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

Business Affiliation: YRCAA

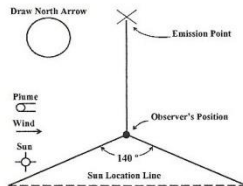
and Mailing Address: 329 N. 1ST ST.
YAKIMA, WA 98901

Observation Conditions

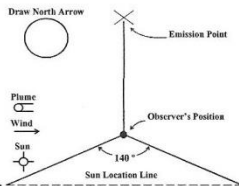
Background: _____
Sky Conditions: _____
Distance from Plume: _____ Color: _____
Source Height: _____
Viewing Angle: _____
Wind Speed: _____
Temperature: _____
Relative Humidity: _____
Start Time: _____ End Time: _____

Circle Color : Black / White Circle Color : Black / White

Source Layout Sketch



Source Layout Sketch



Background: _____
Sky Conditions: _____
Distance from Plume: _____ Color: _____
Source Height: _____
Viewing Angle: _____
Wind Speed: _____
Temperature: _____
Relative Humidity: _____
Start Time: _____ End Time: _____

Student Observation Record

Name DAVID BROWER
Print Name

Date: 03-16-2015

RUN NUMBER:				RUN NUMBER:			
Circle Color: Black / White				Circle Color: Black / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1				1			
2				2			
3				3			
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			
11				11			
12				12			
13				13			
14				14			
15				15			
16				16			
17				17			
18				18			
19				19			
20				20			
21				21			
22				22			
23				23			
24				24			
25				25			
Total Number of 5% _____ x .2 = _____				Total Number of 5% _____ x .2 = _____			

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Student Observation Record

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Date: 03-16-2015

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Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR

Business Affiliation: YRCAA

and Mailing Address: 329 N. 1ST ST.
YAKIMA WA

RUN NUMBER: <u>1W</u>				RUN NUMBER: <u>1B</u>			
Circle Color: Black / <u>White</u>				Circle Color: <u>Black</u> / White			
No.	Obs.	Met.	Eq.No.of 5%	No.	Obs.	Met.	Eq.No.of 5%
1	<u>50</u>	<u>50</u>		1	<u>25</u>	<u>25</u>	
2	<u>75</u>	<u>75</u>		2	<u>10</u>	<u>5</u>	<u>1</u>
3	<u>5</u>	<u>10</u>	<u>1</u>	3	<u>25</u>	<u>10</u>	<u>3</u>
4	<u>20</u>	<u>15</u>	<u>1</u>	4	<u>5</u>		
5	<u>10</u>	<u>10</u>					

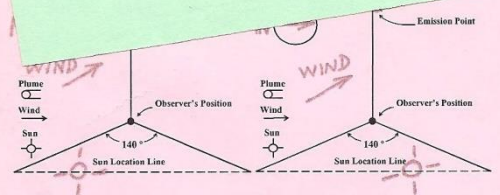
VE Certification Voucher

Name DAVID BROWER Date 03-16-2015

Wht Dev. 2.8 % Blk Dev. 5.4 % Run # 1W, 1B

Please Rate Our Service, 1 Lowest 10 Highest _____

Any Comments:



Background: BLUE SKY
 Sky Conditions: SCATTERED CLOUDS
 Distance from Plume: 45 FEET Color: BLACK
 Source Height: 15 FEET
 Viewing Angle: 15°
 Wind Speed: 5 mph
 Temperature: 71°F
 Relative Humidity: 42%
 Start Time: 0920 End Time: 0935

					<u>90</u>	<u>75</u>	<u>3</u>
	<u>15</u>	<u>10</u>	<u>1</u>	16	<u>0</u>	<u>0</u>	
17	<u>75</u>	<u>70</u>	<u>1</u>	17	<u>5</u>	<u>5</u>	
18	<u>85</u>	<u>80</u>	<u>1</u>	18	<u>25</u>	<u>15</u>	<u>2</u>
19	<u>100</u>	<u>100</u>		19	<u>35</u>	<u>20</u>	<u>3</u>
20	<u>10</u>	<u>5</u>	<u>1</u>	20	<u>5</u>	<u>5</u>	
21	<u>25</u>	<u>15</u>	<u>2</u>	21	<u>5</u>	<u>10</u>	<u>1</u>
22	<u>20</u>	<u>10</u>	<u>2</u>	22	<u>0</u>	<u>0</u>	
23	<u>5</u>	<u>5</u>		23	<u>15</u>	<u>15</u>	
24	<u>15</u>	<u>15</u>		24	<u>20</u>	<u>25</u>	<u>1</u>
25	<u>0</u>	<u>0</u>		25	<u>10</u>	<u>10</u>	

Total Number of 5% 14 x .2 = 2.8 Total Number of 5% 27 x .2 = 5.4

NOC
NORTHWEST OPACITY CERTIFICATION
 An Enterprise of Yakima Regional Clean Air

329 North 1st Street, Yakima, WA 98901
 Phone: (509) 834-2050 Fax: (509) 834-2060
 Website: <http://www.yakimacleanair.org>

I hereby certify that the readings are my own:

David Brower
 Signature

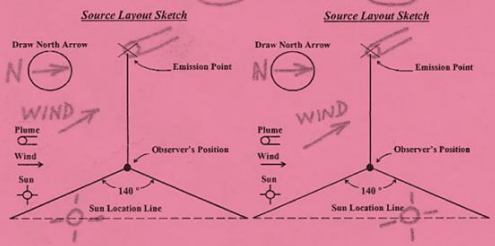
Observed with Naked Eye: Yes No
 If No, list device type: CONTACT LENSES

Location of Test: HILLSBORO, OR
 Business Affiliation: YRCAA
 and Mailing Address: 329 N. 1ST ST
YAKIMA, WA 98901

Observation Conditions

Background: TREES
 Sky Conditions: CLEAR
 Distance from Plume: 45 FEET Color: WHITE
 Source Height: 15 FEET
 Viewing Angle: 12°
 Wind Speed: 1-2 MPH
 Temperature: 72°F
 Relative Humidity: 40
 Start Time: 0900 End Time: 0915

Circle Color: Black / White Circle Color: Black / White



Background: BLUE SKY
 Sky Conditions: SCATTERED CLOUDS
 Distance from Plume: 45 FEET Color: BLACK
 Source Height: 15 FEET
 Viewing Angle: 15°
 Wind Speed: 5 mph
 Temperature: 71°F
 Relative Humidity: 42%
 Start Time: 0920 End Time: 0935

Student Observation Record

Name DAVID BROWER
 Print Name

Date: 03-16-2015

RUN NUMBER: <u>1W</u>				RUN NUMBER: <u>1B</u>			
Circle Color: Black / <u>White</u>				Circle Color: <u>Black</u> / White			
No.	Obs.	Met.	Eq.No of 5%	No.	Obs.	Met.	Eq.No of 5%
1	50	50		1	25	25	
2	75	75		2	10	5	1
3	5	10	1	3	25	10	3
4	20	15	1	4	5	5	
5	10	10		5	35	20	3
6	50	45	1	6	45	55	2
7	5	5		7	80	65	3
8	25	45	50	1	60	50	2
9	80	75	1	9	30	30	
10	25	25		10	0	0	
11	5	5		11	10	10	
12	10	15	1	12	20	25	1
13	25	25		13	5	10	1
14	20	20		14	55	50	1
15	5	5		15	90	75	3
16	15	10	1	16	0	0	
17	75	70	1	17	5	5	
18	85	80	1	18	25	15	2
19	100	100		19	35	20	3
20	10	5	1	20	5	5	
21	25	15	2	21	5	10	1
22	20	10	2	22	0	0	
23	5	5		23	15	15	
24	15	15		24	20	25	1
25	0	0		25	10	10	
Total Number of 5% <u>14</u> x .2 = <u>2.8</u>				Total Number of 5% <u>27</u> x .2 = <u>5.4</u>			

VE Certification Voucher

Name DAVID BROWER Date 03-16-2015

Wht Dev. 2.8 % Blk Dev. 5.4 % Run # 1W, 1B

Please Rate Our Service, 1 Lowest 10 Highest _____

Any Comments:

Summary – To Certify

- 50 *CONSECUTIVE* readings
- 25 Black, 25 White (or vice-versa)
- No 4's or above
- Maximum of 37 total, or 7.4%
- Triple check your calculations
- Turn in with Signature & Green Slip

Your Certification Card

- Will arrive in the mail within 2 weeks
- If not → call our office
- Certificate is only valid for **6 months** from the date on your card.
- To be current, you must re-certify **every 6 months.**

Good Luck!!!

- See you on the field!!